

Overview of IES Cognition and Student Learning Program

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- Overview of the Institute of Education Sciences
- Overview of the Cognition and Student Learning Program
- Goal Structure
- Preparing and Submitting an Application
- What Happens Next?



Overview of the Institute of Education Sciences

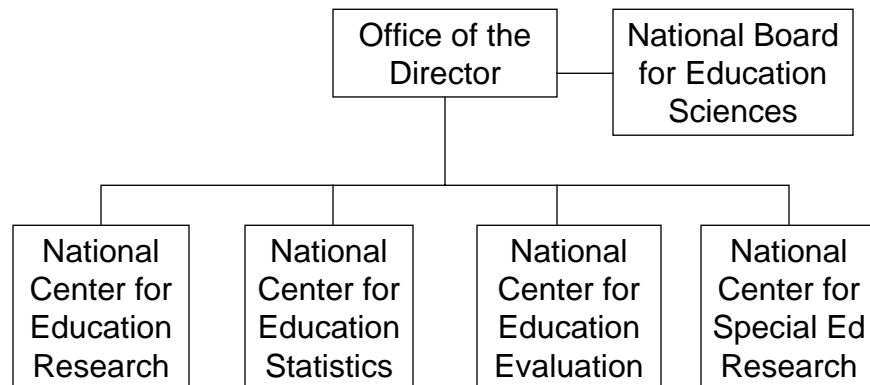


Legislative Mission

- Describe the condition and progress of education in the United States.
- Identify education practices that improve academic achievement and access to education opportunities.
- Evaluate the effectiveness of Federal and other education programs.



Organizational Structure



Long-Term Research Goals

- Develop or identify programs, practices, policies, and approaches that enhance academic achievement.
- Identify what does not work and thereby encourage innovation and further research.
- Explain variations in effectiveness of education programs, practices, policies, and approaches.
- Develop delivery systems for the results of education research.

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CENTERS & PROGRAMS

National Center for Education Research (NCER)
Supports rigorous, scientifically based research that is intended to improve student outcomes and the quality of education in the U.S. through its research initiatives and the national research and development centers.

National Center for Education Statistics (NCEES)
is the primary federal provider of statistics on the condition of education at preschool, elementary, secondary, postsecondary, and adult levels, including education data from other nations.

National Center for Education Evaluation & Regional Assistance (NCEE)
Conducts rigorous evaluations of the impact of federal programs, synthesizing and disseminating information from evaluation & research, and providing technical assistance to improve student achievement.

National Center for Special Education Research (NCSE)
Sponsors a comprehensive program of special education research designed to expand the knowledge and understanding of infants, toddlers and children with disabilities.

IES Headlines

- New Quick Review Released
- IES 2009 Biennial Report to Congress
- Public Elementary/Secondary School Student Enrollment and Staff
- New Publication, Enhanced Reading Opportunities

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Research and Research Training Grant Programs

- Education and Special Education Research Grant Programs
- Postdoctoral Research Training Grant Programs
- National Research and Development Centers
- Statistical and Research Methodology in Education
- Evaluation of State and Local Education Programs and Policies

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Education Research Programs – NCER

- Reading and Writing
- Mathematics and Science Education
- Cognition and Student Learning
- Teacher Quality
- Social and Behavioral Context for Academic Learning
- Education Leadership
- Education Policy, Finance, and Systems
- Postsecondary Education



Education Research Programs - NCER (cont.)

- Interventions for Struggling Adolescent and Adult Readers and Writers
- Middle and High School Reform
- Early Childhood Programs and Policies
- Education Technology



Special Education Research Programs – NCSER

- 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



Special Education Research Programs (cont.)

- Cognition and Student Learning in Special Education
- Teacher Quality
- Related Services
- Systemic Interventions and Policies for Special Education
- Autism Spectrum Disorders



Education Research Training Grant Program

- **Postdoctoral Program:** supports the training of postdoctoral fellows interested in conducting applied education research (NCER and NCSE)



Overview of the Cognition and Student Learning Program



Purpose of the Cognition Research Program

- NCER Cognition - To improve student learning by applying recent advances in cognitive science to education practice.
- NCSEER Cognition - To improve developmental outcomes for infants and toddlers with disabilities and learning for students with disabilities by bringing recent advances in cognitive science to special education practice.



Long-Term Research Goals

- An array of tools and strategies (e.g., instructional approaches, computer tutors) that are based on principles of learning and information processing gained from cognitive science and that have been documented to be efficacious for improving learning.



Sample Requirements

- NCER – PK through 12th grade students in regular education programs;
or, students in vocational or adult *basic* education
or, developmental (remedial)/bridge programs for under-prepared college students
- NCSEER - infants, toddlers, and children with disabilities or at risk for disabilities;
secondary students with disabilities



Conditions of Education (Independent Variables)

- Curriculum
- Instruction
- Assessment



Outcomes of Interest (Dependent Variables)

Prekindergarten

- Readiness for schooling (communication, language, pre-reading, pre-writing, early mathematics, early science, or study skills)
- Developmental outcomes for infants and toddlers with disabilities



Outcomes of Interest (Dependent Variables)

Kindergarten through Grade 12

- Reading and writing
- Mathematics and science
- Study skills
- Transitional skills that support independent living, employment, or further education for secondary students with disabilities



Outcomes of Interest (Dependent Variables)

Post-secondary (NCER only)

- Vocational or adult basic education or developmental (remedial)/bridge programs for under-prepared college students focused on basic reading, basic writing, basic mathematics, and study skills

Goal Structure

Submission to a Specific Research Goal

- IES has organized the submission of its applications under five goals.
- For Cognition program, applicants must submit under *either* Goal One *or* Goal Two *or* Goal Three *or* Goal Five.
- The Institute does *not* accept applications under Goal Four (Scale-up Evaluations) for the Cognition program.
- Applicants proposing projects under Cognition Goals One, Two, and Five may include experimental work that is conducted in laboratory settings.



Goal One - Exploration

- Examine/explore malleable factors (i.e., factors that can be changed and are potential targets of interventions, such as child characteristics or education practices) predictive of achievement and potentially amenable to intervention.
- Examine/explore factors and conditions that may mediate or moderate the relations between these malleable factors and education outcomes.



Goal One - Exploration Activities

- Use existing **longitudinal** datasets to capitalize on natural experiments or natural variation in education practices or policies.
- Conduct small-scale descriptive studies with primary data collection.
- **Conduct experimental studies in laboratory settings.**
- Conduct meta-analyses to explore malleable factors associated with positive education outcomes.



Goal One - Exploration Activities

- Explore the underlying processes that explain learning problems (difficulties) that occur in authentic education settings.
- Begin by identifying a constellation of observed behaviors indicating an academic learning problem; then systematically explore possible causal explanations for that problem.



Goal One - Exploration Activities

- What cognitive processes underlie the acquisition of reading, writing, mathematics knowledge and skills, science knowledge and skills, or general study skills?
- How can principles and knowledge emerging from research in cognitive science be used to better understand teacher knowledge and classroom practice?



Goal One - Exploration

- Award amount per year: \$100,000 — \$400,000
- Maximum number of years: 4
 - Secondary data analysis or meta-analysis - the maximum duration of the award is 2 years; typical awards are \$100,000 to \$350,000 per year
 - Primary data collection – the maximum duration of the award is 4 years; typical awards are \$100,000 to \$400,000 per year



Goal Two - Development

- Develop new interventions (e.g., curricula, instructional approaches, technology, programs).
- Gather pilot data to demonstrate :
 - the feasibility of the intervention for implementation in authentic education delivery settings,
 - and the promise of the intervention for generating outcomes the intervention is designed to effect.



Goal Two - Development

- *Majority* of the proposed work should be conducted in authentic education settings; however, some work may be conducted in laboratory settings.
- Laboratory and classroom research with college students may be proposed as a means to identifying underlying principles or testing critical components of an intervention that is being developed.
- Interventions must be tested for use with the student population for which the intervention is intended.



Goal Two - Development

- Methodological approaches appropriate for developing interventions under Goal Two include observations, interviews, think-aloud protocols, small experiments, single-case experimental designs, and surveys.
- Describe the iterative development process to be used in the design and refinement of the proposed intervention.



Goal Two - Development

- Award amount per year: \$150,000 — \$500,000
- Maximum number of years: 3



Goal Three – Efficacy and Replication

- Test the efficacy of fully developed interventions that are ready to be implemented in authentic education settings.
- Efficacy = the degree to which an intervention has a net positive impact on the outcomes of interest relative to the program/practice to which it is being compared under limited or ideal conditions.



Goal Three – Efficacy and Replication

- The Institute does *not* support laboratory research under Goal Three projects.



Goal Three – Efficacy and Replication

- Award amount per year: \$250,000 — \$750,000
- Maximum number of years: 4



Goal Five - Measurement

- Develop/validate screening, diagnosis, progress monitoring, and outcome assessments.
- Develop/validate assessments of teachers, other service providers, education leaders, and assessment of education systems.



Goal Five - Measurement

- Award amount per year: \$150,000 — \$400,000
- Maximum number of years: 4



Preparing and Submitting an Application



Finding Program Announcements

FY 2010 Program Announcements are available on:

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

Sign up for the IES Newsflash:

<http://ies.ed.gov/newsflash/>



A screenshot of the IES website homepage. The page has a green header with the U.S. Department of Education logo. Below the header is a navigation menu with links for "Centers", "Publications & Products", "Data Files and Tools", "Featured Sites", "Funding Opportunities", "Events", "What's New", and "About Us". The "Funding Opportunities" link is circled in red. The main content area is titled "What's New" and contains several news items with "more info" links. On the right side, there is a "Welcome to IES" section and a graphic titled "the condition of education Find Trends in Education". At the bottom of the page, the IES logo is repeated on the left, and the URL "http://ies.ed.gov" is displayed on the right. The browser's address bar shows "http://ies.ed.gov/jpubsearch/jpubinfo.asp?pubid=2009001".

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FUNDING OPPORTUNITIES

The FY 2009 application deadlines were June 26, 2008 and October 2, 2008. To see the FY 2009 Request for Applications, [click here](#). Applicants interested in Future Competitions [click here](#).

➤ Research and Research Training Programs

The Institute of Education Sciences' overarching 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.

Please read the [Overview of IES research and research training grant programs before continuing](#).

The Institute supports the following research and research training programs:

<ul style="list-style-type: none"> Education Research Programs Special Education Research Programs Postdoctoral Research Training Program in the Education Sciences Postdoctoral Research Training Program in Special Education Predoctoral Interdisciplinary Research Training Programs in the Education Sciences 	<ul style="list-style-type: none"> National Research and Development Centers Special Education Research and Development Centers Statistical and Research Methodology in Education Evaluation of State and Local Education Programs and Policies
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➤ IES Research Funding Opportunities Webinars

The Institute of Education Sciences hosted a series of webinars related to research funding opportunities at the National Center for Special Education Research and the National Center for Education Research. To view slides from the webinar sessions discussing research funding opportunities at the National Center for Special Education Research and the National Center for Education Research, [browse here](#).

Please register for the [IES Newsflash](#) for information about future webinars and upcoming funding opportunities.

➤ Unsolicited Grant Opportunities

The Institute of Education Sciences accepts unsolicited applications for research, evaluation, statistics, and dissemination projects that would make significant contributions to the mission of the Institute. [a more info](#)

➤ Statewide Longitudinal Data Systems Grant Program

The purpose of this program is to provide grants to SEAs to enable such agencies to design, develop, and implement statewide longitudinal data systems to efficiently and accurately manage, analyze, disaggregate, and use individual student data, consistent with the Elementary and Secondary Education Act of 1965. The long term goal of this program is to increase the number and capacity of comprehensive statewide longitudinal data systems, thereby permitting States to generate accurate and timely data to meet reporting requirements: support evidence-based education decision-making and increase the efficiency and organization of transferring

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FUNDING OPPORTUNITIES

➤ Education Research Grant Programs

The Institute of Education Sciences has established 13 long-term programs of research under its Education Research Grant Programs. Each of these research programs accepts applications twice a year. Application deadlines are announced in the Federal Register and on the [IES web site](#).

<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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
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IES Headlines

<ul style="list-style-type: none"> ▪ Epidemics in Postsecondary Institutions, Fall 2007 ▪ Preparing Teachers in the Southeast Region 	<ul style="list-style-type: none"> ▪ Two New Quick Reviews Released ▪ New NCEE Technical Methods Report
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FUNDING OPPORTUNITIES

Special Education Research Grant Programs

The Institute of Education Sciences (IES) has established 10 long-term programs of research under its Special Education Research Grant Programs. Each of these research grant programs accepts applications twice a year. Application deadlines are announced in the Federal Register and on the IES website.

- [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](#)

IES Headlines

- [Research Teachers in the Southeast Region](#)
- [New NCEE Technical Methods Report](#)

- [Updated Reading Recovery Report Released](#)
- [More Information on the NAEP HST2 Now Available](#)

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Finding Application Packages

- FY 2010 Application Packages will be available on www.grants.gov.
- Anticipated due dates for FY 2010:
 - June 25, 2009
 - October 1, 2009

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Help Us Help You

- Read the Program Announcements and Application Instructions carefully.
- Call or email IES program officers early in the process.
- IES program staff can review draft proposals, and provide feedback.

Don't be afraid to contact us!

The IES logo consists of three green dots of varying sizes to the left of the text 'ies INSTITUTE OF EDUCATION SCIENCES'.

Follow Directions and Attend to Details

Read Program Announcements and Application Instructions carefully

- Eligible Applicants
- Special Requirements
- Content and Formatting Requirements
- Application Submission and Processing
- Application Due Dates



What Happens Next?



Peer Review

- Proposal is reviewed for compliance.
- Compliant proposals are assigned to a review panel.
- Two or three panel members conduct primary review of each application.
- Most competitive applications are reviewed by full panel at the panel meeting.



Notification

- All applicants will receive email notification of the status of their application.
- All applicants receive copies of reviewer comments.
- If you are not granted an award the first time, consider resubmitting, and talk to your program officer.



Program Officers for Cognition Program

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

