READING COMPREHENSION RESEARCH GRANTS

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Institute of Education Sciences
http://www.ed.gov/offices/IES/funding.html

LETTER OF INTENT RECEIPT DATE: January 30, 2003

APPLICATION RECEIPT DATE: March 21, 2003

THIS REQUEST FOR APPLICATIONS CONTAINS THE FOLLOWING INFORMATION:

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Request for Applications

The Institute of Education Sciences invites applications for research projects that will contribute to its research program on Reading Comprehension. For this competition, the Institute will consider only applications that meet the requirements outlined below under the section on Requirements of the Proposed Research.

Purpose of the Research Program

The purpose of the program of research on Reading Comprehension is to: (a) understand factors in reading comprehension that contribute to the achievement gap for students; (b) build on that understanding by developing targeted interventions and teaching practices designed to eliminate the achievement gap; and (c) develop assessments that are not only reliable and valid for diverse students of different ages, but that also efficiently identify weaknesses in comprehension that can be addressed through instruction. The Institute intends this program to establish a scientific foundation for educational practice by supporting high quality research on reading comprehension that is likely to produce substantial gains in academic achievement.

Background

Thirty-eight percent of 4th graders nationally cannot read at the basic level, which means they cannot read and understand a paragraph from an age-appropriate children's book (National Assessment of Educational Progress (NAEP), 2000). In some school districts, this figure rises to 70 percent (NAEP, 2000). Reading comprehension remains a challenge for many adolescents despite mastery of basic literacy skills. Unable to understand school texts, these students fall behind in achievement across the curriculum. Very few students with serious reading difficulties ever graduate from college. They suffer disproportionately from social ills such as delinquency and drug abuse. Their job prospects, and their ability to fully participate in a democracy in which voting requires basic levels of reading comprehension, are limited. Millions of adults in the U.S. suffer such limitations; their levels of literacy are so low that they cannot read a newspaper (National Adult Literacy Survey, 1999). Reading is the keystone for academic and life success in our country. Although earlier decoding problems and later comprehension problems are correlated (and decoding problems lead inevitably to comprehension problems), comprehension problems can occur even for children who are good decoders because of lack of background knowledge, vocabulary, and instruction on how to read for meaning. Thus, many students who master initial reading skills are challenged by the more complex tasks of reading comprehension, which are required for subject-area texts introduced in later grades.

Requirements of the Proposed Research

Research projects funded under the research program on Reading Comprehension are expected to contribute to one or more of the following outcomes:

1. Clear and specific sources of difficulty in reading comprehension are identified that are empirically linked to low levels of academic achievement in reading and other academic subjects;
2. Valid and reliable assessments of reading comprehension are developed for grades 1-12 and adult learners; these assessments provide timely and informative feedback that can be used to adjust instructional practices to the needs of learners; and
3. Instructional interventions for comprehension difficulties are developed and confirmed against valid and reliable measures of academic achievement.

The research resulting from this research program should provide guidance to practitioners, product developers, and policy makers concerning practices and programs that are effective for achieving high levels of comprehension for readers of different ages, cultural and linguistic backgrounds, knowledge levels, and subject matter. Consistent with the three goals previously described, the Institute intends to fund research that identifies the major sources of difficulty that readers experience in comprehending written material, that develops assessments of reading comprehension that are sensitive to the comprehension difficulties that readers experience and that can be used to drive instruction, and that identifies interventions in the form of approaches, programs, and materials that result in higher levels of reading comprehension.

Research that is relevant to these general goals could address a variety of specific questions, such as the following:

1. Can a reliable categorization scheme that can inform instruction be developed for different types of reading comprehension failure among late elementary and middle school readers? For instance, do children with low levels of decoding skill but high levels of oral comprehension constitute a different subgroup from children with the opposite profile, i.e., low levels of oral comprehension abilities but high levels of decoding skill? Can these two profiles be distinguished from children who have low levels of both decoding and oral comprehension skills, or from children who have high levels of decoding or oral comprehension skills in a native language but not in English?
2. Given the ability to identify subtypes of children in early adolescence with reading comprehension difficulties, are there early indicators that can be used to identify children in early elementary school who would benefit most from preventive interventions?
3. Given the ability to identify subtypes of children with comprehension problems, what are the interventions and approaches that are best suited to each problem type?
4. What are the principal types of comprehension errors made by readers and how do these errors covary with characteristics of text and characteristics of readers?
5. Can direct teaching of vocabulary and background knowledge make up for deficits in opportunities for children to acquire such knowledge through informal learning and interactions with parents, and if so, what forms of such direct teaching are most effective and efficient?
6. What experiences and teaching approaches best support the development of active comprehension strategies for children who have the decoding and background knowledge to support comprehension? What should those strategies be, and how might they differ across different content domains and across individual and cultural differences in children?
7. What types of textbook design features support the development of reading comprehension?
8. What are best practices in reading comprehension (teachers or schools that "beat the odds") and what are the distinctive features of these approaches?
9. How are international comparisons of instructional approaches to reading comprehension, and respective differences in outcomes, informative with respect to best practices?
10. Can computer software be developed that detects and corrects known types of errors in reading comprehension in real time?
11. Are there community, school, and classroom programs that can increase the motivation

for children to engage in the forms of reading that increase vocabulary and background knowledge, and thereby increase children's comprehension abilities?

12. How can assessment of reading comprehension be driven down to the classroom level to inform instruction and improve achievement?
13. What professional development or training do teachers require to provide effective instruction on reading comprehension?

These questions are presented as illustration of the types of research of interest to the Institute. The questions are not intended to be exhaustive, or to prevent applicants from addressing other questions that fall within the three broad goals of the research program on Reading Comprehension identified at the outset.

Research proposed under this competition must be motivated by a theoretical framework and relevant prior empirical evidence, both of which must be well articulated. Research questions or hypotheses must be clearly specified. In the description of the design of the studies (e.g., experimental, quasi-experimental, correlational, descriptive), independent and dependent, or predictor and criterion, or descriptive and explanatory variables should be distinguished and methods for providing reliable measures of each variable should be detailed. It is essential that the research methods be appropriate to the specified research questions or hypotheses. For example, where causal connections are to be tested, studies incorporating experimental designs with randomized assignment generally provide the strongest tests of the hypotheses. Descriptions of the design and data analysis strategies must provide sufficient detail for reviewers to determine if the research questions are appropriately addressed. In addition, if the research is intended to test hypotheses, the design should make it possible, in principle, to obtain results that disconfirm the hypotheses. Any approach must incorporate a valid process that allows for generalizations beyond the study participants. For research including interventions conducted in education settings, methods and measures for tracking implementation of the intervention should also be described.

Applications Available

Application forms and instructions for the electronic submission of applications will be available for this program of research no later than February 21, 2003, from the following web site:

http://ies.asciences.com

Mechanism of Support

The Institute intends to award grants for periods up to 36 months pursuant to this request for applications.

Funding Available

The Institute may award up to 20 grants as a result of this competition and expects that the typical award will range from $250,000 to $500,000 per year for 3 years. Although the plans of the Institute include this program of research, awards pursuant to this request for applications are

contingent upon the availability of funds and the receipt of a sufficient number of meritorious applications.

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.

Special Requirements

Applicants should budget for two meetings each year in Washington, DC, with other grantees and Institute staff. At least one project representative should attend each one-day meeting.

Letter of Intent

A letter indicating a potential applicant's intent to submit an application is optional, but encouraged, for each application. The letter of intent is to be sent by the date listed at the beginning of this document and should indicate -- in the email subject line -- the title of the program of research covered by this request for applications and the number of the request. The title and number of this request for applications are also specified at the beginning of this document. Receipt of the letter of intent will be acknowledged by e-mail.

The letter of intent should not exceed one page in length and should include a descriptive title and brief description of the research project; the name, institutional affiliation, address, telephone number and e-mail address of the principal investigator(s); and the name and institutional affiliation of any key collaborators. The letter of intent should indicate the duration of the proposed project and provide an estimated budget request by year, and a total budget request. Although the letter of intent is optional, is not binding, and does not enter into the review of subsequent applications, the information that it contains allows Institute staff to estimate the potential workload to plan the review. The letter of intent should be submitted by e-mail to:

IES-LOI@asciences.com

Submitting an Application

Applications must be submitted electronically by the application receipt date, using the ED standard forms and the instructions provided at the following web site:

http://ies.asciences.com

Potential applicants should check this site as soon as possible after February 21, 2003, when application forms and instructions first become available, for information about the electronic submission procedures that must be followed and the software that will be required.

The application form approved for this program is OMB Number 1890-0009.

Contents and Page Limits of Application

The application must include the following sections: (1) title page form (ED 424); (2) budget summary form (ED 524); (3) one-page abstract; (4) research narrative; (5) references; (6) curriculum vitae for principal investigators(s) and other key personnel (limited to 3 pages each and including only information sufficient to demonstrate that personnel possess training and expertise commensurate with their duties); (7) narrative budget justification; and (8) appendix.

The one-page *abstract* must include: The title of the project and brief descriptions of (1) the purpose of the project or the educational problem that will be addressed; (2) the population(s) from which the participants of the study(ies) will be sampled (age groups, race/ethnicity, SES); (3) the proposed research method(s); and (4) the proposed intervention if one has been proposed.

Incorporating the requirements outlined under the section on Requirements of the Proposed Research, the *research narrative* provides the majority of the information on which reviewers will evaluate the proposal and should:

(a) Significance of the Project
  (1) Identify the educational problem that will be addressed by the study and describe the contribution the study will make to a solution to that problem.
(b) Approach
  (1) Provide a theoretical framework and review relevant prior empirical evidence supporting the proposed project. For projects in which an intervention is proposed, include a description of the intervention along with the conceptual rationale and empirical evidence supporting the intervention;
  (2) Include clear, concise hypotheses or research questions;
  (3) Present a clear description of, and a rationale for, the sample or study participants, including justification for exclusion and inclusion criteria and, where groups or conditions are involved, strategies for assigning participants to groups;
  (4) Provide clear descriptions of, and rationales for, data collection procedures and measures to be used; and
  (5) Present a detailed data analysis plan that justifies and explains the selected analytic strategy, shows clearly how the measures and analyses relate to the hypotheses or research questions, and indicates how the results will be interpreted. Quantitative studies should, where sufficient information is available, include a power analysis to provide some assurance that the sample is of sufficient size.
(c) Personnel
  (1) Include brief descriptions of the qualifications of key personnel (information on personnel should also be provided in their curriculum vitae).
(d) Resources
  (1) Provide a description of the resources available to support the project at the applicant's institution and in the field settings in which the research will be conducted.

The research narrative (text plus all figures, charts, tables, and diagrams) is limited to the equivalent of 25 pages, where a "page" is 8.5 in. x 11 in., on one side only, with 1 inch margins

at the top, bottom, and both sides. Double space (no more than 3 lines per vertical inch) all text in the research narrative. Use a font that is either 12-point or larger, or no smaller than 10 pitch (i.e., 10 characters per inch).

The 25-page limit does not apply to the title page form, the one-page abstract, the budget summary form and narrative budget justification, the curriculum vitae, references, or the assurances and certifications.

Reviewers are able to conduct the highest quality review when applications are concise and easy to read, with pages numbered consecutively.

The *budget justification* must provide sufficient detail to allow reviewers to judge whether reasonable costs have been attributed to the project. It must include the time commitments and brief descriptions of the responsibilities of key personnel.

The *appendix* must include letters of agreement from all partners (e.g., schools) and consultants. Each letter 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 appendix is limited to 15 pages.

Application Processing

Applications must be received by 11:59 p.m. Eastern time on the application receipt 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. Incomplete applications and applications that do not address specific requirements of this request will be returned to the applicants without further consideration.

Peer Review Process

Applications that are complete 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.

Each application will be assigned to at least two primary reviewers who 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 prepared before the full peer review panel convenes to complete the review of applications.

The 30 applications deemed to have the highest merit, as reflected by the preliminary rank order, will be reviewed by a full panel of approximately 20 individuals who have substantive and methodological expertise appropriate to the program of research and request for applications, and who served as primary reviewers for individual applications. An individual reviewer may propose to the full panel that a particular application that does not score among the top 30 in the

preliminary scoring but which the reviewer believes merits consideration should also be reviewed. The panel will decide whether to review any such application.

All members of the peer review panel will be expected to review the 30 applications being considered by the panel. Following presentations by the primary reviewers and discussion by the full panel, each member of the peer review panel will score each application, assigning a score for each criterion, as well as an overall score. In addition, reviewers will indicate whether or not an application is recommended for funding.

Review Criteria

The goal of Institute-supported research is to contribute to the solution of educational problems and to provide reliable information about the educational practices that support learning and improve academic achievement and access to educational opportunities for all students. Reviewers will be expected to assess the following aspects of an application in order to judge the likelihood that the proposed research will have a substantial impact on the pursuit of that goal. Information pertinent to each of these criteria is also described above in the section on Requirements of the Proposed Research and in the description of the research narrative, which appears in the section on Contents and Page Limits of Application.

- Significance (importance of the addressed problem, contribution of project to solution of the problem)
- Approach (conceptual rationale, hypotheses or research questions, measures, research design, analytic methods)
- Personnel (qualifications of project staff)
- Resources (support of applicant's institution and at field settings)

Strong applications for Reading Comprehension Research Grants clearly address each of the review criteria. They make a well-reasoned and compelling case for the significance of the project and the problems or issues that will be the subject of the proposed research. They present a research design (approach) that is complete and clearly delineated, and that incorporates sound research methods. In addition, the personnel descriptions included in strong applications make it apparent that the project director, principal investigator, and other key personnel possess training and experience commensurate with their duties. Descriptions of facilities, equipment, supplies, and other resources demonstrate that they are adequate to support the proposed activities. Commitments of each partner show support for the implementation and success of the project.

Receipt and Review Schedule

Letter of Intent Receipt Date: January 30, 2003
Application Receipt Date: March 21, 2003
Peer Review Date: May 15-16, 2003
Earliest Anticipated Start Date: August 1, 2003

Award Decisions

The following will be considered in making award decisions:

- Scientific merit as determined by the 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

Direct your questions to:

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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.

APPLICABLE REGULATIONS: The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 77, 80, 81, 82, 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 75.102, 75.103, 75.105, 75.109(a), 75.200, 75.201, 75.209, 75.210, 75.211, 75.217, 75.219, 75.220, and 75.230.