INSTITUTE OF EDUCATION SCIENCES

Procedures for Peer Review of Grant Applications

Adopted by the National Board for Education Sciences on January 24, 2006

INSTITUTE OF EDUCATION SCIENCES

GRANT APPLICATION REVIEW

Under the Education Sciences Reform Act, activities of the Institute of Education Sciences (Institute) that are carried out through grants, contracts, or cooperative agreements, at a minimum, shall be awarded on a competitive basis and, when practicable, through a process of peer review. Further, the Director is required to establish a peer review system, involving highly qualified individuals with an in-depth knowledge of the subject to be investigated, for reviewing and evaluating all applications for grants and cooperative agreements that exceed $100,000, and for evaluating and assessing the products of research by all recipients of grants and cooperative agreements under this Act.

See Appendix A for relevant sections of the legislation.

Overview

The Standards and Review Office is responsible for the Institute's scientific peer review process. Standards and Review staff work with a contractor that handles the logistics and manages the electronic system for grant application submission and review. The review process includes (a) pre-submission procedures that enable the Institute to plan for specific review sessions, (b) application processing procedures, (c) panel selection and appointment, (d) pre-review panel procedures, (e) panel meeting, and (f) post-review process.

Pre-Submission Procedures

Letters of Intent

In the Request for Applications, the Institute encourages potential applicants to send a letter indicating their intent to submit an application. As described in the Request for Applications, 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 must be submitted electronically by the date listed at the beginning of the Request for Applications, using the instructions provided at the submission web site listed in the Request for Applications.

The Letter of Intent includes a descriptive title, the goal that the application will address, and a 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 indicates the duration of the proposed project and provides an estimated budget request by year, and a total budget request.

Letters of Intent Receipt and Report

The contractor provides a report on the Letters of Intent. This report details the number of Letters of Intent received for each competition and includes a .pdf file containing the letters received for each competition.

Review of Letters of Intent

Institute staff members review the Letters of Intent to estimate the numbers of applications within each competition and the distribution of applications across goals. Institute staff members also check the letters to identify particular applications that may require additional expertise on the review panel.

The Letters of Intent are examined to identify potential applicants who may be considering the submission of applications that are likely to be non-responsive to the Request for Applications (e.g., individuals seeking support to implement a program in their school or individuals seeking scholarship funds to support their education). Program officers contact these individuals to clarify the Request for Applications and, when appropriate, to suggest alternative sources of funding.

Processing Applications

Submission of Applications

Application forms and instructions for the electronic submission of applications are available at the web site identified in the Request for Applications approximately one month prior to the application due date. This date is announced in the Request for Applications. Information about the electronic submission procedures that must be followed and the software that will be required are available on the web site.

Receipt of Applications

Applicants must submit their application electronically by 8:00 p.m. Eastern time on the application receipt date announced in the Request for Applications, using the ED standard forms and the instructions provided on the application submission web site.

Screening of Applications

Applications are screened for compliance with the application rules (e.g., page length and formatting requirements, completion of all parts of the application), responsiveness to the Request for Applications, and identification of resubmissions.

Compliance. Each application is screened for compliance with the application rules. Staff record when the application was submitted and verify that the required applicants components have been submitted and that each component meets format requirements and length restrictions.

Responsiveness. Institute staff members screen each application for responsiveness to the Request for Applications. Applications are identified (a) that may have been submitted to the wrong competitions or to the wrong goal; (b) in which text in the abstract or narrative suggest that the applicant meant to submit to a particular goal but the application is currently listed under a different goal; or (c) that may be non-responsive.

Staff members identify applications that may have been submitted to the wrong competition or to the wrong goal and send a report to the Senior Review Officer. If the Senior Review Officer concurs, then the applicant is contacted to verify the competition or goal to which the application has been submitted. On occasion, the Institute suggests that the application is more appropriate for a different competition or goal (e.g., in instances in which an application would be non-responsive for a particular competition but responsive for an alternate competition). In such cases, the Institute contacts the applicant to discuss the appropriate placement of the application.

The review for responsiveness is not an evaluation of the quality of the proposal or of a component of the proposal. Non-responsive applications are those that do not meet the basic requirements with respect to restrictions on the target sample, type of intervention or assessment, and provision of detailed descriptions of research and data analytic procedures. Staff members identify applications that may be non-responsive and send reports to the Senior Review Officer. The Senior Review Officer reviews each identified application and makes a final determination of the responsiveness of the application. The Institute takes a conservative approach to responsiveness screening, and relatively few applications are judged to be non-responsive.

Resubmission. Institute staff members screen each application for text in the abstract, narrative, or Appendix A that indicates that the applicant meant the application to be a resubmission but did not

check the appropriate resubmission box on the application form. Applications classified as possible resubmissions that do not appear on the resubmission report for the competition are marked and a report is sent to the Senior Review Officer for review. The Senior Review Officer reviews each identified application, and for those appearing to be resubmissions, the applicant is contacted. If the applicant confirms that the application is a resubmission, reviews from the previous year are sent along with the application to reviewers.

Assignment of Applications to Panel

Applications are assigned to panel according to the match between the overall expertise of reviewers on each panel and the content and methodological approach proposed in each application.

Assignment of Applications to Reviewers within Panels

Initial Conflict of Interest Determination. Prior to assignment of applications, Institute staff review each application to identify possible conflicts of interest by comparing the individuals associated with each application (principal investigator, key personnel, consultants, advisory board members) against the individuals on each panel and the applicant institutions with the organizational affiliations of each panel member. In addition, any obvious professional collaboration between individuals associated with each application and panel members is noted. Further discussion of conflict of interest, including definitions of types of conflicts of interest, appears in the section below on Appointing Scientific Review Panels.

Assignment of Applications. Applications are assigned to reviewers according to the match between the expertise of each reviewer and the content and methodological approach proposed in each application, with consideration given to the balance of applications across reviewers.

Number and Type of Reviewers. Each application is assigned to at least 2 reviewers. Applications to conduct randomized trials submitted to Goal 3 (efficacy evaluations) or Goal 4 (effectiveness evaluations) have 3 reviewers, one of which is an experienced methodologist in the implementation and evaluation of randomized trials. Applications to conduct studies implementing single-subject methodologies are assigned at least one reviewer who is experienced in the implementation and analysis of single-subject studies.

Selection and Appointment of Scientific Review Panels

Overview of Panel Composition and the Roles of Panel Members

Panels are composed of a Panel Chair, a Scientific Review Administrator, and panel members. The Deputy Director for Science appoints the Panel Chair from among the members of the panel. The Scientific Review Administrator is a non-voting member of the panel and is typically a Standards and Review staff member or contractor staff member. The Scientific Review Administrator understands the peer review process and is familiar with all of the procedural rules governing the process. The Panel Chair and Scientific Review Administrator work together to facilitate an orderly peer review meeting and ensure that all applications receive a fair review by the panel.

Selection of Panel Members

The Institute identifies highly qualified potential reviewers who have the scientific expertise to evaluate the proposals on the criteria listed in the Request for Applications. Potential reviewers are identified primarily on the basis of quality of the research they have conducted and published in scientific peer-reviewed journals and the degree to which they are an in-depth expert in the research methods and subject matter that are relevant to the applications dealt with by any given panel. The diversity that individuals will bring to a panel on disciplinary, institutional, and other dimensions is also considered. The Institute uses 3 types of reviewers on its panels: principal panel members, rotating panel members, and ad hoc panel members.

Principal panel member. Principal panel members serve 1 to 3 year terms on a review panel or until the specific research grant competition assigned to the panel is discontinued. Only standing panels (see below) have principal panel members. The Director reviews and approves all appointments of principal panel members.

For a particular panel review meeting, the Institute may assign a principal panel member to serve on an alternate peer review panel as a principal panel member rather than on the principal panel member's regular panel. Such actions would occur, for example, if the scientist's expertise were needed on the alternate panel for that meeting.

Rotating panel member. Rotating panel members are appointed to a particular panel (standing panel or single session panel) for one review session and serve as full members of the panel, receiving a full assignment of applications to review, attending the panel review meeting, and scoring all applications considered by the panel except those for which the individual has a conflict of interest.

Ad hoc panel member. Ad hoc panel members are appointed to a particular panel (standing panel or single session panel) for one review session and are typically assigned 2 to 4 applications to review. Ad hoc panel members participate in the full panel review meeting on those applications for which they served as a primary reviewer. They do not participate in and are not present for the discussion and scoring of any application for which they were not a primary reviewer. Their participation is typically via teleconference. Ad hoc reviewers are recruited when the number of applications received is greater than what a panel can efficiently handle or when particular expertise is needed for a specific application.

Types of Panels

The Institute has two types of Scientific Review Panels: standing panels and single session panels. In Appendix B are lists of the Institute's initial standing panels and single session panels for the fall 2005 review session.

Standing panels. Standing panels are scientific review panels to which panel members may be appointed for multiple, consecutive review sessions.

Standing panels may be composed of principal panel members, rotating panel members, and ad hoc panel members. To promote continuity in standards and procedures across review sessions, at least 50 percent and up to 100 percent of the members of a full panel are principal panel members. A typical full panel is limited to 15 to 20 members, in order to facilitate discussion of the applications. The remaining members of the full panel are rotating panel members or ad hoc panel members who serve on a panel for a specific grant review session. Generally, no more than 3 or 4 ad hoc panel members are used to supplement a panel.

For each meeting of a peer review panel, the Deputy Director for Science shall appoint an individual to serve as chair of the panel.

Single session panels. Single session panels are appointed for one review meeting. These panels may be composed of rotating panel members and ad hoc panel members. A typical full panel is limited to 15 to 20 members, in order to facilitate discussion of the applications. Generally, no more than 3 or 4 ad hoc panel members are used to supplement a panel.

Recruitment of Panel Members

The identification of potential panel members is a continuous process involving an annual call for nominations from the IES Board, consideration of IES report external reviewers, solicitation of suggestions from IES and Center experts, literature review, and networking with known experts in relevant fields. After receiving the Director's approval (for potential principal panel members), the

Deputy Director for Science generally sends the initial letter (electronic mail) of invitation to all potential reviewers (including rotating and ad hoc). This contact is followed by phone calls and electronic mail to the potential reviewer from the Institute staff member responsible for the panel.

Appointment letters. Following the acceptance of panel members to standing panels, the Deputy Director for Science sends appointment letters to panel members indicating the term of their appointment.

Conflicts of Interest

The Institute is concerned with three types of conflicts of interest, which are described below: (a) personal financial interest, (b) personal or professional relationship, and (c) professional relationship with the applicant's institution.

Personal financial interest. The Institute considers reviewers to be in conflict if they can benefit financially from the outcome of the review. An individual may not serve on a panel if the individual is part of an application that is being considered by the panel, regardless of the scope of the individual's role on the application (e.g., principal investigator, consultant, advisory board member). An individual may not serve on a panel if his or her spouse or partner, child, household member, or other relative with whom he or she has a close relationship has a financial interest in the outcome of the review. An individual may not serve on a panel if he or she has a financial interest in a for-profit organization that has an application being considered by the panel.

For principal panel members, this means that the individual would not serve as a reviewer for that peer review session, but could serve on the panel for future sessions and could serve on an alternate panel for that particular peer review session.

Personal or professional relationship. Reviewers may not serve as a primary reviewer for and must recuse themselves from participating in the panel discussion and scoring of any application from individuals with whom they have a close personal or professional relationship (e.g., collaborators on current projects, recent students, recent professors, personal friends). Judgments are determined on the basis of recency, frequency, and strength of the working relationship between the member and the applicant as reflected, for example, in co-authored publications. If the close personal relationship is one that constitutes a potential personal financial interest, then the individual may not serve on the panel as described in the previous section.

Reviewers may not participate in the review (either as primary reviewers or as part of the panel discussion and scoring) of applications from individuals with whom they have professional differences that could reasonably be viewed as affecting the objectivity of their review.

For conflicts of interest falling under this category, staff at the panel meeting records the reviewer's absence from the panel discussion. The reviewer does not receive access to the application or to the reviews of the application.

Professional relationship with an applicant's institution. Reviewers may not serve as a primary reviewer for and must recuse themselves from participating in the panel discussion and scoring of any application submitted by other individuals from the institution or organization that employs them.

For conflicts of interest falling under this category, staff at the panel meeting records the reviewer's absence from the panel discussion. The reviewer does not receive access to the application or to the reviews of the application.

Pre-Panel Meeting Process

Contact with Panel Members

After individuals have agreed to participate on a panel, their names are given to the logistics contractor so that all necessary forms are completed (e.g., Conflict of Interest, Consulting Agreement) prior to the release of applications to the panel and travel arrangements can be made in a timely fashion.

Introduction to Contractor. Following an individual's acceptance to participate in a panel review, the Institute staff member responsible for the panel sends an acknowledgement letter (electronic mail) to the panel member that includes an introduction to the logistics contractor.

Initial Contact from Contractor. The logistics contractor sends an introductory letter (electronic mail) to each panel member. The contractor provides information on the electronic peer review system and sends all forms that need to be completed by the reviewers (e.g., Conflict of Interest).

Instructions to Panel Members

There are two primary means for providing guidance to panel members prior to the actual panel review session – the pre-meeting orientation teleconference and the peer reviewer handbook.

Pre-Meeting Orientation Teleconference. Approximately 6 to 7 weeks before the panel review session, a pre-meeting orientation teleconference is conducted with Institute staff, the logistics contractor, and the panel members. Generally 2 to 3 teleconference times are offered for each panel so that panel members may participate at a convenient time. The purpose of the pre-meeting orientation is to provide reviewers with an overview of the peer review process, identify key points in the relevant Requests for Applications, familiarize the reviewers with the scoring system, emphasize the need for looking over the applications as soon as they receive them to identify any conflicts of interest with assigned applications, and stress the importance of completing reviews by the due date so that we can triage the applications in time for reviewers to familiarize themselves with all of the applications to be discussed at the review session.

Peer Review Handbook. Each panel member receives a Peer Review Handbook. The Handbook provides detailed information about the responsibilities of the panel members and the panel chair.

Release of Applications to Reviewers

About 6 to 7 weeks prior to the panel meeting, each reviewer receives hard copies of the applications that have been assigned to the reviewer. At this time, each reviewer is also given access to those applications that have been assigned to him or her through the electronic peer review system. In addition, if any of the assigned applications are resubmissions, the reviewer will receive the previous year's reviews for that application.

Review Criteria

All of the Institute's regular research competitions have a common goal structure that categorizes the types of research projects the Institute funds and the requirements for projects submitted under each goal. These requirements are in the Requests for Applications. The research standards of the Institute are, in part, embodied in the articulation of specific methodological requirements in the Requests for Applications. The standards are also enacted through the judgments of the scientific reviewers. As such, the standards of the Institute are reflected in the quality and type of scientists selected for the scientific review panels.

The review criteria are described in each Request for Applications. With some exceptions (e.g., training grants, research and development centers), the criteria are the same. Reviewers are 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:

Significance. Does the applicant make a compelling case for the potential contribution of the project to the solution of an education problem? For development projects, does the applicant present a strong rationale – including a theoretical foundation and prior empirical evidence – justifying the development of the selected intervention or assessment? For cases in which the applicant proposes to evaluate an intervention, does the applicant present a strong rationale justifying the need to evaluate the selected intervention (e.g., does prior evidence suggest that the intervention is likely to substantially improve student learning and achievement)?

Research Plan. The primary methodological issue is whether the research plan is appropriate for answering the research questions or testing the proposed hypotheses. Reviewers are asked to consider whether the applicant presents (a) clear hypotheses or research questions; (b) clear descriptions of and strong rationales for the sample, the measures (including information on the reliability and validity of measures), data collection procedures, and research design; and (c) a detailed and well-justified data analysis plan.

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?

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?

Review of Applications by the Primary Reviewers

Typically, each panel member is assigned to be a primary reviewer for about 8 applications. The primary reviewers prepare written critiques of the applications to which they have been assigned, addressing the strengths and weaknesses of each application. Reviews are submitted electronically through the electronic peer review system.

Scoring of Applications

Primary reviewers assign a score for each review criterion (significance, research plan, personnel, and resources) and an overall quality score for each application. Reviewers are asked to score each application against an ideal application, as opposed to evaluating applications against the other applications submitted to a competition.

Criteria Scores. Each criterion is rated on a 7-point scale from 1 (poor) to 7 (excellent), where intermediate values are treated as equal steps along the scale.

Overall Scores. Each reviewer rates the overall quality of the application on a scale from 5.0 (poor) to 1.0 (outstanding). Reviewers are given the adjectival equivalents listed below to help anchor their scores:

Overall Score Range	Adjectival Equivalent
1.0 to 1.5	Outstanding
1.6 to 2.0	Excellent
2.1 to 2.5	Very Good
2.6 to 3.0	Good
3.1 to 4.0	Fair
4.1 to 5.0	Poor

The overall score is not an average of the criterion scores or a mathematical derivative of the criterion scores. Each scientific reviewer is asked to thoughtfully consider each aspect of the application and make a determination of the overall quality of the proposal.

Triage of Applications

To facilitate the discussion by the full panel of the most competitive applications, the Institute generally employs a system of triaging applications so that only the most competitive applications are discussed and scored by the full panel at the panel review meeting. Determination of the most competitive applications is based on the preliminary rank order of the average overall scores of the applications.

Average Overall Score Report. Based on the overall scores assigned by primary reviewers, an average overall score for each application is calculated and is used to generate a preliminary rank order of applications. The Institute asks all reviewers to submit their scores and critiques of the applications 10 business days prior to the panel meeting so that the determination of the applications to be considered at the panel meeting is completed with sufficient time for reviewers to become familiar with any of the applications for which they were not a primary reviewer.

Triage Cut Point. In general, the triage cut point is set so that the full panel discusses about 25 applications. Triage cut points may vary across competitions when a panel reviews applications for more than one competition.

Panel Nominations of Applications to be Considered by the Full Panel. At the beginning of each panel meeting, panel members are given the opportunity to nominate for consideration by the full panel any application that they reviewed and judged to be of equal merit to the applications being considered by the full panel on the basis of their average overall score. This process is described in the section on the procedures of the panel meeting.

Discrepant Scores. Primary reviewers may reach different judgments (i.e., scores) about the merit of a particular application. Institute staff members calculate the difference in overall scores between reviewers for each application and then the average of the differences between scores across applications. For applications receiving only 2 primary reviews, applications that have widely discrepant scores are identified and a third review by a panel member is obtained. All three reviewers' scores are then used to calculate the average overall scores of such applications.

Applications to be Discussed by the Full Panel

After the triage has been determined, panel members are notified of the applications to be discussed and scored by the full panel. Notification is done as soon as possible to allow panel members sufficient time to become familiar with the applications that will be discussed by the full panel.

Panel Meeting

Review of Procedures

The evening before a panel review session, the Deputy Director for Science meets with the panel chairpersons to go over the panel meeting procedures and discuss any issues that have arisen during the application review period.

Plenary Session

Typically the panel sessions begin with a short plenary session during which members of all of the panels meet together. The Deputy Director for Science provides a brief overview of the competitions for the

panel members. At the end of the Plenary Session, panels are dismissed to convene their separate review meetings.

Panel Orientation

Each panel review session begins with a brief introduction and orientation. Panel members and all observers introduce themselves. The order of procedures for the panel and materials in the panel notebook are reviewed.

Nomination of Triaged Applications for Discussion by the Full Panel

The panel chair begins by asking panel members if anyone wishes to nominate for consideration by the full panel any applications that they reviewed that did not survive triage but in their opinion were of equal scientific and technical merit to applications that are being considered by the full panel.

If a panel member chooses to nominate an application, he or she is given 2 minutes to present the case for including the application in the panel review. A vote of the full panel occurs and a simple majority vote determines whether the application is added to the panel's agenda.

Order of Review

Institute staff determines the order of review before the panel meeting. Typically, applications are first sorted by competition goal (e.g., Development, Efficacy, Effectiveness), and then, within each goal, applications are sorted by competition (e.g., Reading and Writing Education Research, Reading and Writing Special Education Research). Within each goal and competition category, applications are randomly ordered to the extent possible (e.g., consideration is generally given to arranging the order so that the same reviewer is not a primary reviewer on consecutive applications).

Primary reviewers. In the Order of Review, the primary reviewers are assigned to be Reviewer 1, Reviewer 2, or Reviewer 3. In the panel meeting, Reviewer 1 presents a short overview of the application in addition to his or her critique of the application. Reviewers 2 and 3 are asked not to repeat what Reviewer 1 has said, but to provide additional comments and to note where they might disagree with Reviewer 1.

Note Taker. For each application, a panel member other than one of the primary reviewers for an application is assigned the task of being the note taker who provides a summary of the panel discussion.

Review of Applications

The review of applications begins when the chair identifies the application to be reviewed and asks anyone who has a conflict of interest to leave the room.

Scores of Primary Reviewers

The scores of the Primary Reviewers are presented to the panel.

Presentation of Application and Critiques by Primary Reviewers

Reviewer 1 presents a brief description of the application and his or her critique of the application. Reviewer 2 then provides any additional comments about the application. If there is a third reviewer, Reviewer 3 also gives his or her critique.
During these presentations the primary reviewers are invited to express any strong personal points of view or personal perspectives, positive or negative, with respect to the application.

Panel Discussion

After the presentations of the primary reviewers, the entire panel discusses the merits of the application. Any panelist intending to comment is invited to express any strong points of view or personal perspectives, positive or negative, with respect to the application being discussed. The chair and the Scientific Review Administrator are responsible for ensuring that the discussion focuses on the scientific

and technical merit of the application. The chair is responsible for ensuring that the application is reviewed according to the criteria described in the Request for Applications.

Comments on Budget

After the discussion of the scientific and technical merit of the application, the primary reviewers may offer comments on the appropriateness of the budget.

Summary of Panel Discussion by Note Taker

The note taker reads his or her summary of the panel discussion. The chair is responsible for ensuring that the summary reflects the issues that were raised by the panel. After hearing the summary, the chair asks panel members if they concur with the summary as presented or if any additions or corrections are necessary.

Minority report. On occasion, 2 or more panel members disagree with the majority view of the application as presented by the note taker. In such instances, these reviewers may submit a comment reflecting their view of the application.

Revisit Scores of Primary Reviewers

After the panel discussion, the primary reviewers are given the opportunity to change any of their original scores.

Revision of reviews. If a primary reviewer substantially changes his or her scores based on the panel discussion, the reviewer is asked to make any necessary revisions to his or her written review so that the scores are aligned with the review.

Confidential Scoring by All Panel Members

After the primary reviewers have indicated any changes in their scores, all panel members, acting independently and individually, score the application. A scoring sheet is provided in the review panel notebook with applications listed in order of review. At the end of each day, the scoring sheets are collected.

Funding Enthusiasm Scores

After all of the applications have been discussed and scored, reviewers are asked to give each application a funding recommendation: (a) highly recommend funding, (b) recommend funding, or (c) do not recommend funding.

Post-Review Session Procedures

Summary Reports

The Standards and Review Office provides two basic reports to the program officers after each panel meeting.

Overall score report. The Final Scientific Merit Report includes average criteria and average overall scores for each application. The averages are based on the scores provided by the full panel, excluding any members who were in conflict.

Funding enthusiasm report. The Funding Enthusiasm Ratings Report is the average of the funding enthusiasm ratings provided by the full panel, excluding any members who were in conflict.

Feedback to Applicants

All applicants receive copies of the primary reviewers' critiques. For applications receiving full panel discussion, a summary of those comments about the application is also sent. These materials are sent to the principal investigator and to the applicant institution's authorized representative.

Procedures for Responding to Applicant Inquiries

Applicants who have questions regarding the review of their application are directed first to the cognizant program officer. If an applicant questions whether his or her proposal received appropriate treatment and is not satisfied with the program officer's feedback, the inquiry is directed to the Deputy Director for Science. The Deputy Director for Science reviews the process under which the proposal was handled to determine if there was anything irregular or inappropriate in the handling of the application, which is the only basis on which the results of a grant competition review can be put aside. A re-review of an application is the only remedy available for an application that the Deputy Director for Science judges to have been mishandled. A re-review consists of a review of the same application, not a revised version, during the next scheduled panel review meeting for recurring competitions. The re-review will occur without panel access to the reviews from the contested review session. In instances where competitions occur infrequently, the application will be re-reviewed during the fiscal year when the next competition to which the application was submitted occurs.

Appendix A

Legislation Relevant to Scientific Peer Review

Legislation Relevant to Scientific Peer Review
20 U.S.C. 9501 et. seq.
Education Sciences Reform Act of 2002

SECTION 102. DEFINITIONS

(18) Scientifically based research standards.

(A) The term "scientifically based research standards" means research standards that—

(i) apply rigorous, systematic, and objective methodology to obtain reliable and valid knowledge relevant to education activities and programs; and

(ii) present findings and make claims that are appropriate to and supported by the methods that have been employed.

(B) The term includes, appropriate to the research being conducted—

(i) employing systematic, empirical methods that draw on observation or experiment;

(ii) involving data analyses that are adequate to support the general findings;

(iii) relying on measurements or observational methods that provide reliable data;

(iv) making claims of causal relationships only in random assignment experiments or other designs (to the extent such designs substantially eliminate plausible competing explanations for the obtained results);

(v) ensuring that studies and methods are presented in sufficient detail and clarity to allow for replication or, at a minimum, to offer the opportunity to build systematically on the findings of the research;

(vi) obtaining acceptance by a peer-reviewed journal or approval by a panel of independent experts through a comparably rigorous, objective, and scientific review; and

(vii) using research designs and methods appropriate to the research question posed.

(19) Scientifically valid education evaluation. The term "scientifically valid education evaluation" means an evaluation that—

(A) adheres to the highest possible standards of quality with respect to research design and statistical analysis;

(B) provides an adequate description of the programs evaluated and, to the extent possible, examines the relationship between program implementation and program impacts;

(C) provides an analysis of the results achieved by the program with respect to its projected effects;

(D) employs experimental designs using random assignment, when feasible, and other research methodologies that allow for the strongest possible causal inferences when random assignment is not feasible; and

(E) may study program implementation through a combination of scientifically valid and reliable methods.

(20) Scientifically valid research. The term "scientifically valid research" includes applied research, basic research, and field-initiated research in which the rationale, design, and interpretation are soundly developed in accordance with scientifically based research standards.

PART A – THE INSTITUTE OF EDUCATION SCIENCES

SECTION 114. OFFICE OF THE DIRECTOR

(f) DUTIES. The duties of the Director shall include the following:

(2) To ensure the methodology applied in conducting research, development, evaluation, and statistical analysis is consistent with the standards for such activities under this title.

(7) To ensure that activities conducted or supported by the Institute are objective, secular, neutral, and nonideological and are free of partisan political influence and racial, cultural, gender, or regional bias.

(g) EXPERT GUIDANCE AND ASSISTANCE. The Director may establish technical and scientific peer-review groups and scientific program advisory committees for research and evaluations that the Director determines are necessary to carry out the requirements of this title. The Director shall appoint such personnel, except that officers and employees of the United States shall comprise no more than ¼ of the members of any such group or committee and shall not receive additional compensation for their service as members of such a group or committee. The Director shall ensure that reviewers are highly qualified and capable to appraise education research and development projects. The Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to a peer-review group or an advisory committee established under this subsection.

SECTION 116. NATIONAL BOARD FOR EDUCATION SCIENCES.

(b) DUTIES. The duties of the Board shall be the following:

(3) To review and approve procedures for the technical and scientific peer review of the activities of the Institute.

SECTION 120. COMPETITIVE AWARDS.

Activities carried out under this Act through grants, contracts, or cooperative agreements, at a minimum, shall be awarded on a competitive basis and, when practicable, through a process of peer review.

PART B – NATIONAL CENTER FOR EDUCATION RESEARCH

SECTION 134. STANDARDS FOR CONDUCT AND EVALUATION OF RESEARCH.

(a) GENERAL. In carrying out this part, the Research Commissioner shall—

(1) ensure that all research conducted under the direction of the Research Center follows scientifically based research standards;

(2) develop such other standards as may be necessary to govern the conduct and evaluation of all research, development, and wide dissemination activities carried out by the Research Center to assure that such activities meet the highest standards of professional excellence;

(3) review the procedures utilized by the National Institutes of Health, the National Science Foundation, and other Federal departments or agencies engaged in research and development, and actively solicit recommendations from research organizations and members of the general public in the development of the standards described in paragraph (2); and

(4) ensure that all research complies with Federal guidelines relating to research misconduct.

b) PEER REVIEW.

(1) In General. The Director shall establish a peer review system, involving highly qualified individuals with an in-depth knowledge of the subject to be investigated, for reviewing and evaluating all applications for grants and cooperative agreements that exceed $100,000, and for evaluating and assessing the products of research by all recipients of grants and cooperative agreements under this Act.

(2) Evaluation. The Research Commissioner shall

(A) develop the procedures to be used in evaluating applications for research grants, cooperative agreements, and contracts, and specify the criteria and factors (including, as applicable, the use of longitudinal data linking test scores, enrollment, and graduation rates over time) which shall be considered in making such evaluations.

PART E – NATIONAL CENTER FOR SPECIAL EDUCATION RESEARCH

SECTION 175. ESTABLISHMENT

(c) APPLICABILITY OF EDUCATION SCIENCES REFORM ACT OF 2002. Parts A and F, and the standards for peer review of applications and for the conduct and evaluation of research under sections 133(a) and 134, respectively, shall apply to the Secretary, the Director, and the Commissioner in carrying out this part.