

NSF RESPONSE TO COV REPORT

RESEARCH IN DISABILITIES EDUCATION

Division of Human Resource Development
Directorate for Education and Human Resources Directorate

Committee of Visitors, September 10-11, 2009

The Directorate for Education and Human Resources Directorate (EHR), together with the Division of Human Resource Development (HRD) and the Research in Disabilities Education (RDE) program, thank the members of the Committee of Visitors (COV) for their detailed and constructive program evaluation and thoughtful recommendations for the coming years. The COV recommendations offer the NSF valuable feedback to improve the RDE program administration and community impact. The NSF will address the COV's concerns and will seek to implement or address all recommendations. The following information summarizes specific COV recommendations and the NSF's responses.

PART A. INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

A.1 Questions about the quality and effectiveness of the program's use of merit review process.

The COV found the program's use of the merit review process to be appropriate and adequate. They found the reviewers and panelists clearly present information about both review criteria and the panel summaries offer clear overviews of panel recommendations with rationales to support NSF funding decisions. However, the COV suggested the following: (1) Increase the representation of reviewers and panelists from US plains and mountain west states; (2) Track the participation of reviewers and panelists from rural areas of the US; (3) Provide a model to expert reviewers demonstrating written summaries of the merit review process; and (4) Track the number and percentage of declined proposals that are resubmitted and subsequently awarded or declined again.

[Program's Response] The RDE program appreciates the COV feedback regarding the inclusion of reviewers and panelists from rural regions of the country, plains states and mountain west states; the program will begin addressing this concern for the FY2009 panels and will continue to attend to this concern. Likewise, in FY2009 the program began tracking the number and percentage of declined proposals submitted and subsequent award or decline status. We appreciate the recommendation to provide sample models of merit review summaries for proposals and will create the models for FY2010 reviews and panels.

A.2 Questions concerning the selection of reviewers.

The COV noted the program's use of reviewers with appropriate qualifications. They found the reviewers to constitute a balanced diversity with a good mix of experts from underrepresented groups, varied types of institutions and geographic distribution. The COV recommended the program describe the reviewer selection process for future reviewers and panelists, and find "more innovative ways" to encourage reviewers to disclose demographic data, adding "age" to the information collected. They also suggest the NSF adjust the COI form to remind reviewers to be mindful of potential rivalries or negative relationships.

[Program's Response] We appreciate the COV's observations regarding reviewer selection for the RDE program. The program will describe the expert reviewer selection process for future COVs. We will explore innovative strategies to encourage the disclosure of demographic data by reviewers. The program will explore options within the NSF for possible adjustments to the COI form.

A.3 Questions concerning the resulting portfolio of awards under review.

The COV reported there has been "considerable growth and (an) increase in quality" of the projects supported by the program since the last COV in 2006. They found the program's portfolio promoting the integration of research and education, and directly relevant to national priorities and the NSF's mission. The COV noted the RDE program is engaging new investigators with appropriate participation from underrepresented groups, "almost maximally dispersed" geographically, and ensuring a high level of inter- and multi-disciplinary participation. However, the COV suggested the program do the following: (1) "Require" the Regional Alliances for Persons with Disabilities in STEM Education and the Enrichment awards to integrate findings from the Focused Research Initiatives to support "evidence-based" activities and interventions; (2) Track the proportion of awardees granted extensions, the duration of the extensions, the rationales for extensions and the use of supplements to complete project work; (3) Communicate to proposers and awardees how the foundation operationally defines "transformative;" (4) Expand co-funding opportunities to continue facilitating inter- and multi-disciplinary projects; (5) Document the breadth of research methodologies used by awardees and target improving methodologies in relation to disability access; (6) Track the participation of awardees from rural areas of the US; (7) Develop and strengthen partnerships across post-secondary research universities, community colleges and institutions "sensitive to the needs of students with disabilities;" (8) Report data about whether investigators are new to any federal funding or just to NSF; (9) Consider a program evaluation component to include indicators of institutional attention to disability; (10) Track the specific STEM disciplines targeted by awards; and (11) Report aggregate PI, Co-PI and reviewer demographic data that includes disability status.

[Program's Response] The FY2009 and FY2010 Program Solicitation (NSF 09-508) includes language to encourage collaborations and data sharing between the Alliances for Students with Disabilities in STEM (Alliances) and the Research awards. However,

revisions can be suggested for the FY2011 Program Solicitation to encourage proposers of Alliance and Enrichment proposals to integrate findings from RDE-funded Research awards. The Program Solicitation also encourages partnerships and collaborations across a variety of post-secondary institutions, with a clear priority for the inclusion of institutions sensitive to the needs of students with disabilities, as well as institutions with a strong record of graduating underrepresented minorities. These partnerships will continue to be encouraged in future Program Solicitations. An additional revision to the Program Solicitation, and information for reviewers and awardees, can include the NSF's definition of "transformative" as defined in the FY2010 budget request: "Transformative research involves ideas, discoveries, or tools that radically change our understanding of existing scientific or engineering concepts or educational practices. Such research is risky but can be high-reward if it leads to breakthroughs or creates new paradigms or fields."

Award co-funding opportunities have become increasingly available for the RDE program in recent years, thus facilitating inter- and multi-disciplinary projects. 12% of current RDE awards are co-funded by the other NSF programs, including co-funding with EHR's Division of Research on Learning in Formal and Informal Settings, with the Directorate for Social, Behavioral and Economic Sciences' Science of Learning Centers, with the Directorate for Computer and Information Science and Engineering's Information and Intelligent Systems program, and with the Office of Integrative Activities' Office of Experimental Program to Stimulate Competitive Research (EPSCoR). Co-funding opportunities will continue as they leverage fiscal resources and facilitate inter- and multi-disciplinary research project and implementation awards.

While the current RDE program evaluation does include some indicators of awardee institutional attention to disability, future evaluation has the potential to include more robust measures of institutional attention to disability and the interaction between those measures and the work being completed by the awardees affiliated with the institutions. These options will be explored by the program, division and directorate for future evaluation efforts.

The program will take actions to track the data recommended by the COV, including data about award extensions; the rural, suburban or urban location of the awardee; aggregate demographic data of PIs, Co-PIs and reviewers to include disability and "new investigator" status. Likewise, data can be tracked about the specific STEM disciplines and research methodologies for the awards.

A.5 Management of the program under review.

The COV indicated the program management of RDE is "excellent" with a full-time permanent program director able to provide long-term strategic planning and continuity. They note the RDE program is keenly responsive to emerging research and education opportunities, as well as to the recommendations from previous COV reports. The COV reported the anticipated benefits of the recently created project data management system and pilot program evaluation.

The COV recommends funding and assignment of additional dedicated staff to the RDE program, given the considerable turnover of clerical and technical staff assigned to RDE and the current assignment of staff who share responsibilities across HRD programs.

[Program's Response] The RDE, HRD and EHR appreciates the COV's recognition of the program staff's high standards of program management. NSF recognizes the need for effective management and has already addressed the staffing issue in the RDE program by hiring an additional Program Officer in FY2009.

PART B. RESULTS OF NSF INVESTMENTS

B.1 OUTCOME GOAL for Discovery: “Foster research that will advance the frontier of knowledge, emphasizing areas of greatest opportunity and potential benefit and establishing the nation as a global leader in fundamental and transformational science and engineering.”

The COV reported the program has done an increasingly effective job of selecting awards with intellectual merit and the likelihood for broader impact. They note projects are innovative and integrative, using solid research designs and following established standards for evaluation of results.

[Program's Response] These comments are duly acknowledged and every effort will be made to sustain program management in order to support research and education that will advance the frontier of knowledge, emphasizing areas of greatest opportunity and potential benefit and establishing the nation as a global leader in fundamental and transformational science and engineering.

B.2 OUTCOME GOAL for Learning: “Cultivate a world-class, broadly inclusive science and engineering workforce, and expand the scientific literacy of all citizens.”

The COV indicated there is significant evidence showing the RDE program's progress toward increasing the accessibility of science careers for individuals with disabilities and supporting the NSF's mission to develop a diverse workforce of competitive scientists and engineers. The COV recommended placing additional attention on expanding scientific literacy of those who may or may not enter careers in science and engineering.

[Program's Response] NSF will continue supporting the progress to broaden the participation of people with disabilities in STEM education and the STEM workforce. The NSF is also committed to “...expand (ing) the scientific literacy of all citizens” and does so through informal science learning opportunities as well as encouraging outreach efforts by awardees.

B.3 OUTCOME GOAL for Research Infrastructure: “Build the nation's research capability through critical investments in advanced instrumentation, facilities, cyberinfrastructure and experimental tools.”

The COV reported the RDE program has provided evidence that advanced instrumentation, facilities, and experimental tools have been created for persons with disabilities. They note

the technology being developed advances the infrastructure and access for people with disabilities in science and engineering.

[Program's Response] The RDE program appreciates the COV's recognition of the program's efforts to contribute to building the nation's research capability through critical investments in advanced instrumentation, facilities, cyberinfrastructure and experimental tools.

PART C. Summary of OTHER TOPICS

C.1 Please comment on any program areas in need of improvement or gaps (if any) within program areas.

The COV commended the RDE program's efforts and encouraged the program leadership to respond to emerging technical, economic, and political opportunities; and to changing national educational needs for the future. The COV recommended the program expand the geographic distribution of awards, increase the participation of varied awardee institution types, and broaden the participation of investigators from underrepresented groups. Three primary recommendations were suggested: (1) Target awards with a priority of improving accessible research techniques to allow fuller participation of researchers and study participants with disabilities; (2) Highlight awards using methodological research to create and test innovative ways to design samples adequately representing specific impairment and disability categories with low prevalence and geographic distribution; and (3) Seek mechanisms for greater involvement of social scientists in the RDE program.

[Program's Response] The RDE program appreciates the COV's recommendations and will explore efforts to address each of the recommendations. The RDE program remains strongly committed to diversifying the geographic location of awards, the types of awardee institutions and the participation of investigators. The three primary recommendations relate to the inclusion of social scientists in the RDE program and efforts are being taken to engage more social scientists in the proposal submission process and in the merit review process.

C.2 Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

The COV concluded the RDE program has gone beyond the call of duty to meet and exceed program goals. They noted the gains made over the past review period and urge further improvements in the same direction. For example, they emphasized continuing to improve linkages across funding tracks. The COV reported one specific suggestion to facilitate further gains in the reviewers and panelists written reviews of proposals: Provide 2-3 "model" reviews demonstrating a variety of reporting styles while maintaining proper tone for critiques, appropriate level of detail and suitable review length.

[Program's Response] These comments are duly acknowledged and every effort will be made to continue to improve the program's performance. Linkages across program tracks have been initiated in the FY2009 and FY2010 Program Solicitation (NSF 09-508) and will receive greater emphasis in the FY2011 Program Solicitation. Additionally, the models recommended will be created and shared with reviewers and panelists engaged in the merit review process.

C.3 Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

The COV recommended the NSF modify the current Conflict of Interest Form, and the instructions to reviewers and panelists, to include conflicts that arise from rivalry, competition, or spite. They also recommended the "NSF give RDE responsibility to serve as intra-agency contact point for all disability-related projects."

[Program's Response] These recommendations to the RDE program will be shared and explored with the NSF administration.

C.4 Please provide comments on any other issues the COV feels are relevant.

The COV concluded the RDE program seemed to be "extremely valuable." They noted interest in knowing about efforts to increase program visibility and partnerships with other programs to expand impact and increase awareness of inclusiveness in science. The COV indicated the need for more specific information about project and award monitoring. They were "a little unclear on item A.3.1" noting the need for a fully complete and objective independent program evaluation, and clearer guidelines to COV members for making this determination.

[Program's Response] NSF appreciates the COV's observations about the value of the program. The additional information the COV would like NSF to provide will be gathered for future COV panels.

C.5 NSF would appreciate your comments on how to improve the COV review process, format and report template.

The COV recommended three suggestions for improvement: (1) Provide more comprehensive instructions to COV panelists in advance; (2) Have a separate chair for each subpanel who has subject matter expertise relevant to the program; and (3) double the size of the COV panel so there is equal distribution of workload and sufficient review.

[Program's Response] The RDE program values these suggestions to improve the COV review process and will take the necessary actions to implement these recommendations for future COVs.