National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

SUBJECT: Dear Colleague Letter - Research and Evaluation on Education in Science and Engineering (REESE): A Message to Graduate Education Researchers

Dear Colleagues:

On behalf of the Division of Graduate Education (DGE) in the Directorate for Education and Human Resources (EHR) we call your attention to this opportunity to request support for research and evaluation projects focused on graduate education through the Research and Evaluation on Education in Science and Engineering (REESE) program. REESE is managed by the Division of Research on Learning in Formal and Informal Settings (DRL) in EHR. The REESE Program Solicitation (NSF 09-601) can be viewed at: http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=13667&ods_key=nsf09601 .

DGE seeks proposals that have the potential to strengthen research on graduate education in science, technology, engineering, and mathematics (STEM). As examples, we encourage proposals that can contribute to our knowledge about how to successfully broaden participation in graduate-level education programs and proposals that investigate the effectiveness of new trends and challenges in graduate STEM education. Successful proposals will demonstrate expertise in both the disciplines being studied and research methodology. In principle this can be achieved by selecting a team of co-PIs that bridge knowledge of STEM disciplines with expertise in education research or social science research methods.

We do not encourage proposals that seek to evaluate our programs wholly or in part because all DGE programs are on a schedule to be evaluated regularly.

We seek to build a research community that can more effectively address current issues, trends, and questions in STEM graduate education, such as:

- What factors are most important in a student's decision to undertake STEM graduate study?
- What factors are most important in persisting through graduate school and completion of the dissertation? How can we improve retention and graduation rates?
- What is the impact of increased mentoring on the success of graduate students?
- What are the implications for student learning that emerge from STEM research fields, particularly cross-disciplinary ones?
- What are the differences in the cognitive skills required for doctoral level work in the various STEM disciplines?
- What changes in skills are expected for STEM professionals and how do graduate programs learn about them?
- How do advanced degree earners make career choices within academia, industry, government sectors, and entrepreneurial endeavors?
- What are the effects on graduate education of growing international cooperation in research and education?
- What is the value of international experience to the excellence of the dissertation research?
- What are valuable uses of new technologies (including new cyber infrastructure developments) in both education and research?
- What factors influence the speed of diffusion of new methods of graduate education or the diffusion of new programs in emerging STEM disciplines?
- How can we advance the understanding of the causes and effects of progress in and barriers to broadening participation in STEM graduate education?

Recent examples of REESE awards can be found by following the link to awards in the program announcement.

We encourage knowledge diffusion proposals (e.g., research syntheses) for durations of one to two years not to exceed

$250,000, empirical research projects for durations of up to three years with project budgets up to $1.5 million, and large empirical projects for durations of up to five years with project budgets up to $2.5 million. The synthesis projects will permit investigators to develop rigorous research designs, techniques, and methods and to forge partnerships with researchers representing appropriate disciplines and areas of expertise. The solicitation now also includes a new proposal type, Pathways, which provides opportunities for exploratory work to pilot new research questions and approaches and to conduct feasibility studies prior to submitting a full proposal.

Applicants should review the REESE Program Solicitation to ensure that eligibility requirements are met. For further information: please contact REESE staff at (703) 292-8650 or DRLREESE@nsf.gov or DGE staff at 703-292-8630.

We look forward to reviewing innovative and competitive proposals.

Sincerely,

Carol Van Hartesveldt, Acting Director
Division of Graduate Education
National Science Foundation