



NATIONAL SCIENCE FOUNDATION  
4201 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22230

Dear Colleague:

The National Science Foundation (NSF) has recently launched the new Math and Science Partnership (MSP) Program. The MSP Program ([NSF 02-061](#)) is part of the President's initiative -- No Child Left Behind -- which states that "...we have fallen short in meeting our goals for educational excellence." The MSP partnerships are intended to increase the capacity of preK-12 educational systems and institutions of higher education to provide the requisites for learning to high standards in mathematics and science, and particularly to reduce the achievement gaps among student populations.

The purpose of this letter is to highlight opportunities for researchers, evaluators, and technical assistance providers to submit proposals under the MSP Program announcement ([NSF 02-061](#)). This will be accomplished through a set of grants for research, evaluation, and technical assistance. NSF does not consider it necessary or even optimal for all studies to fall into a single category of research, evaluation, or technical assistance design. Some proposals may cross all three of these categories, and others only one or two.

MSP awards for FY 2002 are expected to be announced by October 2002. Awards made in response to Goal 3 of the MSP solicitation will use data generated and provided by the MSP projects funded in FY 2002. MSP proposals are expected to include an extensive set of baseline information in the narrative and required appendices. A summary of the information that each MSP must provide appears in [NSF 02-061](#).

**By awarding Goal 3 grants concurrently with the MSP partnerships, NSF expects to mobilize critical evaluation and research components of the MSP program at the very outset of the program, and to begin immediate design of a technical assistance structure that is based on the needs of the funded partnerships.** All proposals responding to Goal 3 should provide evidence of a thorough understanding of the MSP Program, and a command of the research and evaluation literature on large-scale education reform and change. Proposals responding **ONLY to Goal 3** of the MSP solicitation have a **revised deadline of June 17, 2002**. All other proposals under that solicitation are due by the original deadline of April 30, 2002.

Two types of awards are anticipated: one-year design studies, and multi-year empirical studies. Most grants funded under Goal 3 are expected to be one-year design grants.

#### Design Studies

NSF intends that the *research and evaluation design grants* will generate and effectively communicate frameworks for collecting both formative and summative insights and understandings about the MSP partnerships. These research design studies should produce comprehensive interdisciplinary research agendas that will 1) help funded and potential MSP partnerships and NSF continuously improve their preK-12 education efforts, and 2) encourage the use of scientific design principles in identifying creative and innovative techniques and approaches for informing the nation on what works in schools, colleges and universities regarding teaching and learning.

Rigorous evaluation design grants may focus on developing a) models that individual MSPs may use for their own evaluations; b) models for evaluating a sample of MSPs; or c) models for evaluating the full MSP Program. (NSF expects that a later competition may provide opportunities to pursue the research agendas and evaluation models that these design grants develop.)

NSF intends that the *technical assistance design grants* will develop and test models by which NSF and other organizations can help MSPs meet strategic technical needs. **Technical assistance proposals under this competition should not seek to provide immediate assistance to newly funded MSPs, but rather to formulate designs for such assistance.** Initial grants in response to Goal 3 of [NSF 02-061](#) should design targeted approaches to provide tools and practical solutions to partnerships as they develop new infrastructures for education improvement. Such tools should help NSF and the MSPs adapt approaches developed elsewhere, disseminate their own work, where appropriate, and create a credible body of evidence that will demonstrate the efficacy of their respective approaches. **Technical assistance design grants will be required to submit their formal initial recommendations as soon as possible but no later than March 1, 2003 and final reports by July 31, 2003.** A later competition may solicit proposals to provide direct technical assistance to MSP sites.

### Empirical Studies

NSF expects to fund a limited set of multi-year research and evaluation empirical studies for Goal 3 of [NSF 02-061](#). Proposals for multi-year studies should have advanced designs that can be readily adapted to the MSP projects that are funded, and should demonstrate capacity to proceed without a design grant stage. Empirical studies are intended to enhance the theoretical and empirical knowledge base of the implementation and the assessment of MSP, with an emphasis on communicating and using research and evaluation findings to inform practice. NSF anticipates that the evaluative studies will focus on evaluating a sample of MSPs rather than the full MSP Program, or a single MSP Project.

### Examples

The following broad examples for design and empirical studies are provided for illustrative purposes only:

- *Comparative analysis of MSP partnerships*, including the development of classification frameworks for the partnerships that NSF funds. Such frameworks would include analysis of the different partnership strategies, logic models or structural features across a sample of MSP projects.
- *Outcome measures studies* that involve analysis of the measures of student achievement outcomes or teacher-related outcomes that MSP projects expect to use to define and demonstrate success of their respective partnerships.
- *Studies of institutional change* created and sustained by partnership models. For example, a study may examine how pre-service teacher education programs in colleges of education change or how other higher education sub-units change as a result of participation in the MSP Program. These studies could analyze how MSP fits into the spectrum of activities that merge university talent into preK-12 reform efforts, and they could provide theoretical frameworks or analytic models for MSP.
- *Longitudinal studies* across a sample of MSP efforts may include, but are not limited to, changes in teacher skills, instructional practices, or preparation and induction processes; changes in assessment practices; or changes in other policy structures.

- *Knowledge management centers* to organize, synthesize, and potentially engage in research and evaluation related to MSPs, to position that work in relation to other developments in research (including by centers funded by NSF and other federal agencies) on learning and education, and to communicate important findings to the MSP community in a usable or adaptable form.
- *Instrumentation studies* including the development and deployment of reliable and valid tools to measure more effectively traditional and non-traditional indicators of MSP partnership progress and success. Proposals may consider the development of problem-solving toolkits for progress indicators, or for other challenges that MSP participants may be expected to encounter.

The merit review criteria for guiding funding decisions, award administration for grants, proposal preparation and submission are all addressed in [NSF 02-061](#). Only proposals responding to Goal 3 of the MSP solicitation will be accepted through June 17, 2002. The deadline for proposals submitted for the other goals of the MSP solicitation ([NSF 02-061](#)) remains April 30, 2002. In addition to the eligible organizations identified in [NSF 02-061](#), proposals responding to Goal 3 will be accepted from individual institutions.

Empirical studies for Goal 3 may receive up to \$500,000 annually for three years or less. The one-year design studies for Goal 3 may receive up to \$250,000. Cost sharing is not required. NSF expects to award up to 25 design studies and up to 5 empirical studies in FY 2002.

The PIs for these studies funded under Goal 3 will attend annual meetings to discuss findings and assist in the dissemination and transfer of research to practice. Funds to attend the meeting(s) should be included in the budget.

General inquires regarding Goal 3 of the MSP solicitation ([NSF 02-061](#)) or this letter may be made to: [goal3-msp@nsf.gov](mailto:goal3-msp@nsf.gov).

Sincerely,

Judith A. Ramaley  
Assistant Director