

NSF Proposal Writing

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December 4, 2007

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National Science Foundation

Adapted from slides developed by:

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Step 1 - Before You Write

- Getting started
 - Have a clear idea of the goals of your project
 - Envision improvements your project will make
 - Identify resources necessary (people, time, equipment, technical support)
 - Identify preliminary work which demonstrates planning and commitment

Step 1 - Before You Write

- Assemble team
 - Determine areas of expertise needed
 - Assign areas of responsibility
 - Consider personalities
 - Develop clear understanding of the role of each team member on the project

Step 1 - Before You Write

- Program Solicitation and Guidelines
 - Identify program or programs which best fit your goals
 - Read Program Solicitation and Guidelines carefully
 - Contact a Program Officer in the targeted program

Step 1 - Before You Write

- Prepare a short concept paper with the general plan for project
- Discuss your ideas with an appropriate program officer
 - Send email message to begin conversation
 - Set time for telephone appointment or
 - Schedule a visit
 - Send copy of concept paper prior to appointment

Step 1 - Before You Write

- Building coalitions
 - Involve all parties in planning process
 - Consider advisory board of outside experts
 - Obtain letters of *commitment* from all parties

Step 1 - Before You Write

- Other considerations
 - Organize a good working team
 - Develop schedule of activities to meet proposal deadline
 - Allow time for review of proposal by a third party
 - Allow time for obtaining internal approval and external commitment and permission letters

Step 1 - Before You Write

- Alert sponsored programs officer early
 - Special rules and regulations, allowable costs
 - Allow time for budget review
- Electronic submission
 - Allow sufficient time to submit electronically
 - Be prepared for problems

Preliminary Proposals

- Required by some programs
- May be reviewed externally or internally
- The NSF response may be binding or only advisory
- Usually the response is advisory and is seen as a vehicle to improve proposals

Preliminary Proposals

- View this as motivation to start early on proposal preparation
- Be as explicit as possible about your ideas
- Minimize the description of the problem; focus on what you plan to do, who will do it, and what will be produced
- The project description is limited to 5 pages

Step 2 -Writing the Proposal

- Consider prelim reviewers' suggestions in developing the full proposal
- Follow guidelines carefully in content and length
- Pay attention to details
- Know current research and funded projects in the field and related areas

Step 2 -Writing the Proposal

- Proposal narrative
 - Be specific about proposed activities
 - Be explicit about how program will make an improvement
 - Demonstrate a broad knowledge of current scholarship and activities in your field and relevance to project design

Step 2 -Writing the Proposal

- Proposal Narrative
 - Principal investigator(s) should write narrative
 - Show timeline
 - Provide examples that illustrate activities or exercises
 - Provide evidence of institutionalizing project beyond funding period, if appropriate

Step 2 -Writing the Proposal

■ EVALUATION

- There is an increased emphasis in the Federal Government on the evaluation of education programs.
- The Academic Competitiveness Council and the Office of Management and Budget call for rigorous evaluations
- An external evaluator is recommended

What is “Rigorous Evaluation”?

- The methodology aligns with the goals of the project being evaluated and the claims the evaluation proposes to make.
- The evaluation strictly adheres to professionally accepted protocols of design, data collection, and data analysis.
- The data collection instruments are appropriate, reliable, and valid.
- The statistical analyses are appropriate and done correctly.
- The conclusions drawn are supported by the data and its analysis.

Step 2 -Writing the Proposal

- Budget Information
 - Make request realistic and reflective of project goals
 - Provide complete and unambiguous information
 - Do not include ineligible items

Step 2 -Writing the Proposal

- PI and other staff credentials
 - Write curriculum vitae with proposal in mind
 - Display unique background of PI(s) related to project
 - Follow guidelines in format and length
 - Describe roles of personnel in project narrative

Step 2 -Writing the Proposal

- Dissemination
 - Describe how information on success and content of project will be disseminated to other scientists and educators
 - Web page is not sufficient.
 - For instructional materials, include information on potential publication

Step 2 -Writing the Proposal

- Letters of Commitment
 - Must show commitment, not just support for idea
 - Detail specific contributions by supporting institutions
 - Letters from appropriate people or groups off campus should be included
 - Write draft letter that can be **edited** and transferred to appropriate letterhead

Step 2 -Writing the Proposal

- Project summary(100 words or less)
 - Important first impression of project
 - Must be written clearly and concisely
 - Summary must contain, in space allotted,
 - What is being done
 - Location
 - Subject Area
 - Objectives and expected outcomes
 - Audience to be addressed

Step 3 - Before Submitting

- Get advice
 - Ask someone who has served on a review panel to assess the proposal
 - Have someone unfamiliar with the project to review the proposal
- Proof carefully
 - Read and re-read

Review Process

- Criteria for NSF Evaluation
 - Intellectual Merit
 - Broader Impacts
 - Additional criteria in specific program

Review Process

- Fastlane submission
- Sent to reviewers for individual ratings
- Reviewers meet in panel
- Program Director recommends
- Six month process

Panel Composition for Education Proposals

- Mathematics/Science Teachers
- University Level Mathematics/Science Educators
- Research Mathematicians/Scientists
- Others as appropriate
- Geographically diverse

What If You Are Funded?

- Read the award letter carefully
 - Pay attention to requirements for continuation funding or renewal
- Conduct the project as closely to the stated proposal as possible
- Consult program officer about changes
- Produce - your reputation for future funding depends on it

What If You Are Not Funded?

- Do not be discouraged if not funded on the first submission
- Study reviewers' comments carefully
- Consult with program officer
- Resubmit after discussions with program officer about reviewers' comments

References

- NSF program solicitations
- Grant Proposal Guide (NSF 08-1)
- <http://www.nsf.gov>