Acknowledgment: I appreciate Danielle Ompad from the Department of Nutrition, Food Studies, and Public Health for sharing her PP presentation, “Tips and strategies for NIH grant writing.”
Overview

• Mechanisms
• Format
• Budget
• Review process
• Advice

Disclaimer: NSF is a large organization, and my experience is limited to the Directorate of Education and Human Resources (EHR) Division.
My Guiding Principles

• Federal funding comes from tax payers’ money
• Do good work for *participants*; at least, do no harm to *subjects*
• Contribute to building knowledge in the field
• Promote scholarship for the project personnel, especially junior scholars and doctoral students
My NSF Grants

1992-1993 (Co-PI) $ 50,000 (exploratory)
1995-1998 (Co-PI) $650,000
1997-2000 (PI) $750,000
2000-2004 (PI) $2.5 million
2004-2009 (PI) $5.0 million
[2009-2013 (PI)] $3.0 million USDOE IES
2011-2015 (PI) $4.5 million

• Building your research program over the years
• “Exploratory” grant that does not go through regular review
• Progression from Co-PI to PI
• Continuation of research through alternative/multiple funding sources (e.g., NSF, IES, etc.)
Mechanisms

- NSF grants do not have funding categories, unlike IES grants (Goals 1 through 5) or NIH grants (K-awards, R03, R21, R01)
- NSF programs change to reflect changes in the field (i.e., field-initiated)
- The duration or longevity of NSF programs vary
- It is critically important to follow program solicitation, which may change year by year
Funding - How to Prepare Your Proposal

Proposals to NSF must be submitted electronically via either the NSF FastLane System or Grants.gov.

Proposals submitted via FastLane should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify the program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

Proposals submitted via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide. To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

A list of other types of proposals is available on the Other Types of Proposals page.

The Policy Office, in the Division of Institution and Award Support, provides general policy guidance for proposers. The Policy Office page includes NSF regulations, other Federal regulations, notices of important policies and other
Format

• Follow the instructions in each program solicitation (document #1)
• Follow the instructions in NSF grant proposal guide (document #2)
• I use my own NSF proposal as an example to highlight key features (document #3)

Bottom line: “Follow the rules" of NSF and NYU/Steinhardt
Budget

• Look for the “award information” section in the solicitation
• Be realistic about the budget to be able to carry out the project
  - overall size and distribution of the budget
  - alignment with the project activities or deliverables
• Budget is addressed during the negotiation with NSF for an award
Review Process

NSF Merit Review Criteria

Section 1: Intellectual Merit
How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?

- Significance of issue
- Audience and approach (strategic, appropriate)
- Project design, methods, and deliverables (quality)
- Innovation (sources, degree)
- Qualifications (team, partners, and their collaborative process)
- Prior NSF work (nature and quality, if applicable)
Review Process (continued)

NSF Merit Review Criteria

Section 2: Broader Impacts

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?

- Advancement (research and/or practice)
- Evaluation (learning impacts, thorough, realistic, and appropriate to goals)
- Dissemination (breadth, plausibility, specificity)
- Participation (of underrepresented groups)
- Capacity/infrastructure (builds)
- Other benefits to society (if applicable)
- Post-doctoral mentoring plan (if applicable)
- Data management plan (data storage, accessibility)
Review Process (continued)

NSF Merit Review Criteria

Section 3: Summary Statement and Rating

**Excellent** – Outstanding proposal in all respects
**Very Good** – High quality proposal in nearly all respects
**Good** – A quality proposal, worthy of support
**Fair** – Proposal lacking in one or more critical aspects
**Poor** – Proposal has serious deficiencies

(*no numeric ratings)
Review Process (continued)

1. Individual reviews and ratings

2. Panel
   - Panel chair = Facilitator
   - Primary panelist = Write review; Start panel discussion; Write panel summary
   - Secondary panelist = Write review
   - Panelist = Reads proposal; Participates in discussion
   - Program Officer = Observer; Resource for technical questions
Review Process (continued)

3. Panel reviews
   - Proposals with low ratings are not discussed (triage)
   - Reviewers change ratings throughout panel discussion
   - Panel determines each proposal as “highly competitive,” “competitive,” and “non-competitive”

4. Panel summary signed off by all panelists

5. Decisions within NSF
Advice

• **Understand the funding mechanisms**
  – Follow funding opportunities closely
  – Read solicitations carefully
  – Call NSF Program Officers

• **Information gathering**
  – Conduct FastLane search to see NSF-funded grants and PI’s in your research area
  – Talk to NYU/Steinhardt research office as soon as you decide to submit a grant proposal
  – Talk to people with NSF funding experience (i.e., ask for examples of winning proposals)
Advice (continued)

• Field-initiated nature of NSF grants
• Change of NSF programs

*example: my NSF grants*
- Discovery Research K-12 (2011-2015)
- Teacher Professional Continuum (2004-2010)
- Research on Teaching and Learning (1992-1993)
Advice (continued)

• Fit with goals of a specific NSF program as well as overall NSF funding priorities (e.g., transformative research, cyber-learning, scale-up)

• Two primary factors for funding
  – Research topic
    * Investment in ideas
    * Contributions to the literature or field
  – Research team, especially PI’s and junior scholars
    * Investment in scholars
    * Your research agenda and trajectory
Advice (continued)

- The amount of work and time to prepare a winning proposal (a lot of work)
- Attempts with multiple proposals versus focus on each proposal (be aware of low rates of awards)
- Be proactive to reviewers’ questions
- Explain foreseeable challenges and difficulties
- Attention to details (accuracy of content, APA, grammar and spelling, etc.)
- Formatting (“easy on the eyes” to reviewers)
- Expert consultation for proposal preparation
Best Wishes for Getting Funded!