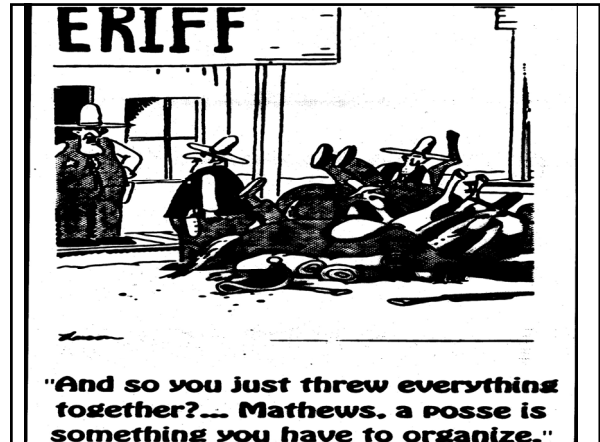


Writing More Effective
NSF Proposals
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Top Ten Ways To Write a
Good Proposal...
That Won't Get Funded

Flaw #10

Inflate the budget to allow for negotiations.

Instead...

- Make the budget reflect the work plan directly.
- Provide a budget explanation that ties your budget request to project personnel and activities.
- Make it clear who is responsible for what.
- Provide biographical sketches for all key personnel.

Flaw #9

Provide a template letter of commitment for your (genuine) supporters to use. (They will!)

Instead...

- Ask for original letters of support that detail what your collaborators will do and why involvement in your project will help them.
- Letters from administrators are stronger if they demonstrate real commitment, e.g. release time, faculty development funds, new course approvals, etc.

Flaw #8

Assume your past accomplishments are well known.

Instead...

- Provide results from prior funding – this includes quantitative data and information on impact.
- Describe how new efforts build on this previous work, and how it has contributed to the broader knowledge base about educational improvement.
- Recognize that the review panelists are diverse and not all familiar with your institutional context.

Flaw #7

Assume a project website is sufficient for dissemination.

Instead...

- A website may be necessary, but who will maintain it and how in the long run?
- Engage beta test sites. "Early adopters" can serve as natural dissemination channels.
- Plan workshops and mini-courses; identify similar projects and propose sessions at regional and national meetings.
- Learn about and use the Math Gateway of the NSDL.

Flaw #6

Assert: "Evaluation will be ongoing and consist of a variety of methods."

Instead...

- Plan for formative and summative evaluation.
- Include an evaluation plan with specific timelines and projected benchmarks.
- Engage an objective evaluator.

Flaw #5

Assume the program guidelines have not changed; or better yet, ignore them!

Instead...

- Read the solicitation completely and carefully.
- Address each area outlined in the solicitation that is relevant to your project.
- Check the program solicitation carefully for any additional criteria, e.g. the Integration of Research and Education, or integrating diversity into NSF Programs, Projects, and Activities

Flaw #4

Don't check your spelling, nor you're grammar.

Instead...

- Check and double check; first impressions are important to reviewers.
- State your good ideas clearly. Ignore the bad ones.
- Have a trusted colleague who is not involved in the project read your drafts and final proposal.
- There is nothing worse than a mathematics proposal with mathematics mistakes in the budget or body!

Flaw #3

Substitute flowery rhetoric for good examples.

Instead...

- Minimize complaints about students, other departments, the administration, etc., and describe what you will do and why.
- Ground your project in the context of related efforts.
- Provide detailed examples of learning materials, if relevant.
- Specify who you will work with and why.
- State how you plan to assess progress and student learning.
- Detail the tasks and timeline for completing activities.
- Specifically address intellectual merit and broader impacts and use those phrases explicitly in the project summary.

(Fatal) Flaw #2

Assume page limits and font size restrictions are not enforced.

Instead...

- Consult the program solicitation and the GPG (Grant Proposal Guide) carefully.
- Proposals that exceed page and/or font size limits are returned without review.

(Fatal) Flaw #1

Assume deadlines are not enforced.

Instead...

- Work early with your Sponsored Research Officer (SRO).
- Test drive FastLane and make sure your SRO knows how to use it also!
- Set your own final deadline a day or so ahead of the formal deadline to allow time to solve problems – and there will be problems.
- Stay tuned: **Grants.gov** is coming...

**Make Your Project Better:
Plan from the Beginning
10 Helpful Hints**



***Helpful Hint Number 1:
Read the Program Announcement***

- NSF has no hidden agendas. I reiterate - It's all there in the program announcement.
- Talk with a program officer to make sure that your ideas fit in the program. If the program officer tells you that your ideas are too narrow or don't fit a program, look for other sources. Program officers don't mind talking with prospective PI's.
- Make sure that your project is worthwhile, realistic, well-planned, and innovative.
- Do what you say you will do.



***Helpful Hint Number 2:
Be Passionate About the Project***

- Work on projects you care deeply about. Let that passion come through in the proposal and then as you and your team carry out the project.
- Keep the enthusiasm and passion you show in the proposal as you carry out the project. Be exuberant.
- Enjoy what you are doing.

***Helpful Hint Number 3:
Build on What Others Have Done***



- Like any research project, you must build on what others have done before you and then add to the knowledge base of the subject. **Don't reinvent the wheel.**
- Read the literature, go to workshops, talk with others, know how to use the NSF database.
- Stay current.



***Helpful Hint Number 4:
Think Globally, Act Locally and Globally***

- Your project must have more than just a local impact. It must impact more than just your students and your institution. Think about how others could use and build on your work?
- On the other hand, you do want to be a "prophet in your own land". If the project is not good enough for you and your institution to use, why should others?



Helpful Hint Number 5: Use Good Management Skills

- Have a realistic time line and implementation schedule from the beginning and stick to it.
- Have benchmarks and specific deliverables (with dates)
- Use carrots when you can (but be prepared to use the stick when you must). Don't reward until people deliver.
- Assign responsibilities, but also give folks needed authority to do them, and then hold them accountable .



Helpful Hint Number 6: Think Teamwork

- Successful projects are team efforts, although individuals also matter. Your project team should be greater than the sum of the parts.
- You work in an department. Department efforts are much more likely to be successful than individual efforts.
- You must have support of administrators. Keep them involved, keep them informed, make them look good, give them credit where credit is deserved, find out what they need to support you.
- Recruit/hire a good group of internal and external advisors and an outside evaluator (or evaluation team).

Helpful Hint Number 7: Have Measurable Goals and Objectives

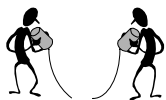


- Enhancing student learning, improving undergraduate education, and other similar things are lofty, but not measurable. Make sure that you have **measurable** goals and objectives. What will be delivered? What is needed to convince others that this works and is worth supporting or emulating?



Helpful Hint Number 8: Evaluation is Impact and Effectiveness

- You do need numbers. How many students are impacted? How many faculty? How many students succeed in the next course?
- That, by itself, is not enough. You need evidence that your project is having an impact and that it is effective. How do you know the project is working and that it is worthwhile?
- Ask yourself and your team, "Who needs to be convinced and what evidence will they accept?"
- You **CANNOT** evaluate yourself. You have to have outside validation.
- Build in evaluation from the beginning.



Helpful Hint Number 9: Spread the Word

- Work with other faculty and support them as they try to implement your materials. Doing new things is not easy.
- Try to get a team of folks who have used your materials to help spread the word.
- Do not work only with mathematicians, but also reach out to other disciplines.
- Have a pro-active dissemination plan. A



Helpful Hint Number 10: Pay Back Time

- Keep NSF or other funders informed. They have to report also. It is all a cycle.
 - Send in reports on time. Use the required format.
 - Send in "nuggets", information about awards, student impact, pictures, etc.
- Give credit to NSF or other funding organizations, your administrators, your team members, your department, etc. Giving credit to others makes you look better and get you better support later.
- Offer to be a reviewer and to help others.

But Most Importantly!

Have fun!

