Grant proposal - Choose 1 or 2 topics on a proposed idea (will team up)

Reflection of panelist seminar. Assignment is due January 28th.

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# Class Overview

Learning about grants and how to write them successfully. Including resources and what the panelists have learned from their experience.

# What did I learn?

In lecture two, I learned a lot about review panels, submission techniques, and values to discern quality grant proposals. These techniques are reflected in my class notes, but I will narrow them down into a few bullet points.

* Research and subscribe to agencies relevant to your project
* Find a mentor and know what resources are available
* It’s more important to submit a quality proposal than to submit a large quantity of proposals that are never funded
* Determine your team before you submit the proposal
  + Collaborate and brainstorm with your team ahead of time to ensure you are on the same page
* Include pictures in your proposal
* Make sure the proposal is easy to read and not cluttered with technical jargon
* Explain the proposal’s purpose up front, in clear, concise terms
* Research the agency or company you will be submitting your proposal to
  + Get to know the program manager
  + Network with their teams at industry events
  + Understand what kinds of projects they fund
  + Know what kind of results they will expect (e.g. a project vs. data)
  + What are the grading criteria? Did the proposal meet the required criteria?
* Accept and integrate feedback

# Connecting my Experience to Reflect

I’ve written a number of contracts, proposals, and responses to RFP/RFIs. I have not written a grant on my own.

I’m fairly familiar with the process of researching evaluators and reviewers, but do not know a lot about academic institutions that offer grant money. A few of the bullet points I noted, are things I’m familiar with but just wanted to include to stand out and others are things I believe I can improve upon in future work. For me, writing without technical jargon has been an issue in past.

# What I would like to learn more about

* More grant writing books and resources
* Workshops
* Where to find grants
* Tips relevant to proposal verbiage
* On-campus resources for grant writing and submission
* On-campus resources for finding mentors

# Class Notes: Panel Questions and Answers

## When deciding on a specific topic or issues to place in a grant proposal, is it better to really narrow down into a specific topic, or to create several different grants for each specific area?

Answer (Far left) Greg W- Grant proposals should cater to the agency and what they are requesting. The grant proposal is not intended to span a wide variety of topics based on what you want to research, but is intended to respond to a request for proposal based on a certain subject. Sometimes you have to modify what you are doing for one grant agency or another.

Christina B - Agrees with Greg. Sometimes there are agencies with unsolicited proposals like the National Science Foundation where you can see what has been funded through that program in the past to see what the program is looking for and can submit your own research idea that falls into the program description. As to whether you split it up or not, then it depends- can you justify splitting up 3 ideas into a longer term and needing more research/money?  
  
Mooks, from Stanford says that online education is dead or celebrating 4 years of success. Example a bit coin engineering course. What about teleconference, online gaming technologies, what is available for those kinds of grants.

Answer: Publications often exaggerate the truth. The broad publications often exaggerate the truth. The broad question - does it work? Then the questions narrow down - How can we design them better? Why do mooks start off engaged and then taper off?

## What is the difference between writing grants for academic purposes vs. nonprofit or science vs. another industry.

Stephen - has had a lot of grants from various industries.

Know your audience. Certain NSF program managers don’t want to know about cool codes, they want to know what you will study. They may even give you negative points for saying your final results will be code or a tangible product and not a report. In industry, they don’t care about papers that cannot be applied (features, things that can be sold, quickly applicable findings) they may prefer the tangible code. It's very important to understand what the end goal of that particular agency is.

Is there a call for proposal? That is step one. Step two is seeing what kind of past things have been funded, and you need to fit in to that. Don't be different. Then network and get to know the program managers. Work with them and within your own goals and research and abilities.

## Question 4 - How profitable are grants?

You write a proposal, if it's funded you get a grant but it is not profitable. It will not increase your salary. The exception would be a faculty member who then writes a proposal. The grant supports you and your work with research and students. (Answer by Christina and Stephen) - You can’t hide anything every line item is covered:

* Is there travel?
* Supplies?
* Salary?
* Cost for student researchers?

It’s not like a company that can tack on additional costs, in academia it’s fully transparent.

## A lot of research deals with interdisciplinary teams like psych majors and engineers. How do you form a coalition and direct a team towards one goal?

A workshop is being sponsored on team science at ISU within the week. If you apply the principles of effect teams - the art and science of it. Each disciple works slightly different. It requires good communication, understanding the science of team science, and focusing on improvement.

When working with large groups get to know them. Make sure your vision is similar so you can have a shared goal, trust, and working to the same goal.

Choosing team members is important, but some education grants will list out required team members like an educator, a scientist etc. So when writing a grant proposal make sure it’s not just friends, brainstorm together to make sure that the ideas are cohesive and make sure to thing about your idea and how those people will work together. Choosing good partners is important.

## How long from beginning to end does it take to submit the grant proposal?

Ideally months but in reality you often end up scrambling. Sometimes you only have a few days, a week, or a month. Try to set aside at least a month. Think about quality. If you are a new professor and look at how many proposals are funded. If you are looking at proposals being submitted - 5 crappy unfunded ones vs. 2 funded ones are better. You really want to take the time and build something good. It's better to not submit and make sure it’s good. Reviewers get to know who you are. You don’t want to put a bad foot forward. Make sure it’s a good proposal. The national science foundation is generally unsolicited (Christina before was Stephen) once you have good thesis questions or hypothesis start there. Then everything else may flow more quickly. Then when you have a team who has to figure those out together, it can take even more time.

## Is it possible to start with a question and then look for a grant willing to fund?

Answer second from left. Not really, you don't often search for the company. No, normally you get things in your email. But when the opportunity comes, you drive your research, build team, build experience, and then when something fits, you are prepared and competitive. Work with your team over time

## Think back when you were a new professor. What lessons did you learn that you could use to advice this audience? What should students look for and avoid. Now that you know about multiple agencies, how did you hear about them for the first time?

Stephen - Have lots of pretty pictures in your proposal. In the first paragraph, clearly address what you are planning to do, without any jargon. A picture is worth 1000 words. Grab them right away.

Understand who is going to decide if it’s funded or not. If it’s going to a panel, then you don’t know who is going to read it. So don’t bore the panel. Make it pleasant and tell a story. Make it engaging in a way they can understand very clearly and is relevant. If however you are going to industry you may only have to write a 2 page proposal because you would have been building a relationship over a couple years. You would have talked and already done presentations.

OSR OWR is very different from NSF in that you need to tailor to the reviewers - increase probability of success. Who thinks the main way to get a proposal is to write a proposal and get funded.

## How are you going to differentiate yourself? Maybe they are tired after lunch, how do you capture their interest?

If they like your idea they will ask for a 1 pager, but then a proposal. Industry you meet a long time. NSF and NHF you meet them a long time and then they might tell you about the program. They have a lot of power; there are a lot of people in proposal writing. You cannot just sit in your office and pump out proposals. Even if it’s the best thing since sliced bread, you need to meet with people to rise above and get funded.

Networking (two from left) is really important. Sometimes even if you are not funded the first year you might be invited to be a participant and then the second year you might be funded. You earn credibility over time. You have to build up a reputation. So the review panel knows you are well connected and have evidence of experience.

Being on review panels teaches you what goes on and helps you gain insight on proposals. There are only a few reviewers. Reviewer 1 speaks to others on the entire thing and scores. Reviewer 2 may disagree and then score. And so on.

Most reviewers vote in the range of the first three reviewers

## You have to reach 3 people. Is the process the same for most agencies?

NSF has 3-4 reviewers and program managers. They often have 2 criteria:

* Intellectual merit
* Broader impact.

These are reviewed by 3-4 people then the manager asks where that should go on the axis. The ones that end up highest in the axis are then narrowed down and reviewed more closely.

After further discussion they are rank ordered and determined to be funded or do not fund.  
The agencies are slightly different. In some agencies program directors may be very influential in NIH the program director may be allowed to lobby after the fact but during the review, they may not be allowed to talk.  
  
What are the different strengths of the panels?

They are chosen for different reasons, to be objective and try to guide the process. Either way you need to stay simple, convince the reviewers, and avoid jargon.

## A lot of proposals that come through an inbox are for science what about social sciences and humanities. Is it harder to get grants for those?

Most proposals you receive should be geared to you. A grants person sends out a list that applies to specific departments. You can also subscribe to different sections. If you think a certain company is applicable you can do research. Search for a list or college that is relevant.

## What kind of feedback do you get? Pass/Fail? You should talk to this person?

You get a review back, and too many people are used to a score or paper feedback. Often now you only get on more opportunity to reapply. So do not address the reviewer’s comments like you would for a paper. Instead further enhance, don’t mention concerns. You may get comments about why it is or is not funded. Highlight the strengths not the weaknesses. Respond to reviewers on paper. Grant review is different from paper. NSF doesn't technically have a memory so you don’t have to justify based on comments. That can lead to crap being repeatedly submitted. Here where questioned raised, this is how we addressed those questions and why we resubmitted. Take those comments seriously. Realize that the new panel may have a different view point.

If you have a colleague who might be someone similar to a panelist don’t defend against their review or why their review is wrong. TAKE THE FEEDBACK. You may think something is coming across one way and it’s not. You will not be there to defend your proposal so let it speak for itself.

Get ready for failure, it’s not bad. You will be rejected. It doesn't mean you are a bad proposal writer. You never know what might happen. What comments have they made? The vast majority of comments are good, but what is the meat of what they are saying. Is something unclear or missing background evidence? Remove your ego and prepare for rejection.

Reviewers need a good portfolio of research and have high impact. So you need to be prepared to fill that role.

## When it fails do you go to another agency? How do you adjust for the other agency? How do you continue even after it failed?

At NSF if you are told by the reviewers it’s ridiculous that is probably the only reason to quit. If it’s implausible - and other research has definitively proven it’s not worth it then... quit. Otherwise if you have review feedback that makes you cry then take a week and see if anything is salvageable. If it doesn’t fit in a program, maybe it belongs elsewhere within the agency.

Presentation is important. You can submit to other agencies, especially if it’s interdisciplinary. This is another way to get to know your team over time. So you can quickly retool for other agencies. Keep in mind various agencies have various goals and ideals for writing.

## Faculty will review a proposal project in this class that mimics small grant proposals to NSF HCI; do you have any tips for students?

Focus on the problem and how it may be resolved based on literature and build off other research. If you are passionate about it, that would help. It makes the time fly. When looking to become a professor, find a mentor. Find programs that will support you. Grants hub helps with writing and editing. When you interview at schools, get to know how they will support you. Work on declarative language. Write in an authoritative way. Passed data shows funding is needed to move it to the next stage not we hope you will like our idea. Be legalistic. Prove your theories. Convince them. Good idea, convince them why, and that it needs to be done now. Then refine, refine, refine.

* Scrutinize and revise every word a dozen times.
* You have a limited amount of space and words.
* Don’t be redundant, be clear, do background research.
* Ask yourself, “Is the problem clear?”
* Proof read.

Can you make 7 sentences into 5?

## Recommendations

Future look up:

* NSF career award.
* Career proposal writing workshop.