

## On My Mind: Grantsmanship and The Key Role of Reviewers

A friend emailed me a link (<http://chronicle.com/article/How-to-Fail-in-Grant-Writing/125620/>) to an article appearing in the December 5 edition of The Chronicle of Higher Education titled “How to Fail in Grant Writing.” The email I received was linked to several others including one from the originator, a person with the title *Proposal Developer* in a research development office at a university. The message read: “In case you haven’t seen, great article in the Chronicle — thought you’d enjoy! M.”

My first thought in reading the title of the article was “why would anyone provide a roadmap for failure, particularly to people who are already probably having a difficult time preparing an application that can get funded?” From my perspective, seldom if ever, particularly in the realm of preparing successful grant applications, does success equal the absence of failure. Preparing a successful grant application takes much more than not making mistakes...to be successful applicants must do it right.

As I read on I discovered that the authors of the article are currently in academia and had served as reviewers on study sections. So apparently they were writing from the perspective of individuals who themselves had both received funding by submitting successful applications and had reviewed applications. The article written by this group of experienced grant applicants/reviewers was expressing their frustration. And so I wondered...what’s that about?

Reviewers are the heart and soul of the peer review process. Without them the whole enterprise falls apart. They are overworked and underpaid for their services. The average reviewer may receive 60-80 applications for each review meeting. Individuals who review for NIH meet three times a year and serve a term of four years...that’s 12 meetings in the course of their service. For each review meeting they are responsible for learning enough about 15-20 of the applications to be able to write a meaningful assessment.

Do the math. Over a full term a reviewer is responsible for looking at more than 800 applications and for writing reviews for about 200 of them. And these are individuals who are selected because they are successful scientists. That means that they have grants of their own, labs of their own, and applications of their own to prepare in order to continue their own research programs.

Many years ago when I served in the Office of the Director of NIH we conducted a survey and determined that, on average, reviewers spent as many as 45 days a year engaged in peer review activities. Those were the “good old days” when NIH received approximately 20,000 applications a year. Today, the number of applications received at NIH has more than tripled, increasing the work load for reviewers. Yet the commitment of these individuals to insuring continued progress in science remains and they continue to invest large blocks of time to peer review. No wonder they are frustrated when it’s difficult for them to understand what it is that an applicant is proposing to do.

At the same time, however, as I said above simply pointing out failing strategies doesn't insure that someone would know what to do to correct those mistakes in order to succeed. So, in order to help, I offer the following guidelines for developing a successful grant application:

1. For starters, make it easy for the reviewer to understand:
  - a. ***what*** you are proposing to do
  - b. ***why*** you are proposing to do it (i.e., why is it important; when your work is completed what will we know that we don’t already know)

- c. **how** you are going to do the research
  - d. **who** is going to do it and what makes them qualified to do it
  - e. **where** the research will be done and what equipment is there to do it; and
  - f. **how** you are going to spend the money you have requested.
2. Keep things simple, focused and straightforward. Include only those things (e.g., studies from the literature) that are directly relevant to your project. Do not try to include everything you know. One technique for staying focused is to start from the end (i.e., the hypothesis that you are testing) and work backward. Also, avoid the temptation to add additional experiments just because doing so would be convenient or 'kind of cool to get those data'. The only reason for including an experiment is to test a hypothesis that is required by the logic of your proposal.
  3. Link each hypothesis to a specific aim. In the process of doing this, provide the method(s) that will be used to test the hypothesis and the logic for using that/those method(s).
  4. Do not assume that the reviewers will know what you intend/mean or that they will fill in any gaps that remain...particularly gaps in logic (i.e., why you have taken a particular approach to studying the problem). The whole purpose of writing the application is to provide the reviewers with enough detail that they are certain that you have an important problem and know how to handle it. And keep in mind...it is very likely that you know more about the subject matter than they do.
  5. One of the first things a reviewer sees is the abstract. In the NIH system, all reviewers, even those who do not provide a written assessment, are asked to provide a score of the scientific merit of all applications. For many reviewers, the abstract is the only thing they will read. Make sure that it is complete and reads well...after all it is the first impression.

Finally, in the words of a former NIH colleague -

**“No amount of grantsmanship will turn a bad idea into a fundable one...but there are many outstanding ideas that are masked by poor grantsmanship.”**

Good luck and remember that whatever you do, make it easy for the reviewers to read your application and follow the logic of your proposed research. One test of whether you've succeeded in doing it is to share your application with a colleague (not necessarily your best friend, and preferably someone who has a critical view of your research) for feedback.

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