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Becoming a Successful Principal Investigator

By David A. Stone

It is not enough to have a good idea. Your good idea must also be well positioned, or review panels for grant agencies are unlikely to approve it. A year ago, I wrote a column about how to best position your research idea to attract a grant. Now I'd like to turn the focus on you, the investigator.

Grant writing is the end of a process, not the beginning. Long before you make the decision to write a grant proposal for your research, you should be taking concrete steps to raise your profile in the eyes of reviewers.

What does that mean? Most basically, it means preparing yourself as a scholar, a researcher, and a grant writer in ways that will strengthen the ideas behind your proposal, demonstrate that you have the wherewithal to carry out your project, and enhance your ability to communicate what reviewers are looking for.

Positioning yourself as a scholar. From the perspective of grant reviewers, disciplines are literatures, and the people best positioned to advance those literatures are those who publish regularly in the prominent journals and at the cutting edge of the evidence or the debate. It is rare for someone to parachute into a discipline in which they haven't already published and nonetheless obtain grant money.

Wherever you are in regard to the literature—just your dissertation, one or two pieces as a third author while you were in graduate school, one or two publications as lead author, a long history of publishing in other areas but little in your new chosen topic—it is important to be seen as moving up this ladder as your new idea is gestating.

First author is better than second, co-author is better than no-author. The point is to be viewed as an active part of the conversation in your discipline. That process gets you and your work read and known by both readers and reviewers. The process of

peer review itself introduces you to senior people in the field and helps strengthen your ideas and sharpen your presentation.

Remember: Papers are a great source of raw material, and sometimes polished gems, for your grant proposal. At the end of the day, your proposal is being evaluated for its ability to advance the literature.

Positioning yourself in the field—which is broader than just making your name in the literature—means actively contributing to your disciplinary community. The obvious way to do that is by presenting papers at local, regional, and national conferences. Presentations get you seen and known, offer opportunities for feedback on your work, serve as the basis for published papers, and expose you to competing ideas and approaches.

Beyond presentations, you can get involved in professional societies in any number of ways, including holding office, reviewing proposed presentations and papers, and chairing sessions. An excellent way to enhance your position in the field—and your own skills as a grant writer—is to serve on a grant-review panel. All of those activities improve your position in the field.

A long-term strategy for establishing yourself as a scholar is to ensure from the beginning that you integrate your research, publishing, and teaching. If you schedule your days and weeks as a zero-sum game, playing off time for writing, time for class preparation, and time in the lab or the field, you will likely come to resent the competing demands of all three.

Wherever possible, align your work so that research and publishing activities feed into one another (as noted, papers can provide usable text for grant proposals), and into your lectures. Likewise, find ways of having your course preparation support your research and publishing efforts. Teaching in one area and doing research in another, at least in the long term, is unlikely to lead to success in either.

Positioning yourself as a researcher. I see a distinction between the terms "scholar" and "researcher." A good scholar is someone who has cutting-edge ideas and gets those ideas published in the right places. A good researcher is someone who demonstrates the skills to actually get the research done.

The first step in positioning yourself as a researcher is to establish a long-term scholarly agenda. It gives context to your current work and a trajectory to your plans. It provides a road map from this

study, to the next, and to the ones that will need to follow.

Grant agencies and foundations are seeking transformative ideas and the building of an evidence base for practice and intervention. They want grantees who have identified important, long-term research goals and who are working toward them, individually and as a community. Staying on a research path that is aligned with a given grant agency's mission is the best way to ensure it will continue to support your work.

The second step is to develop solid working relationships with the populations or partners that your research requires. Both field and laboratory-based research are difficult, and grant agencies are risk-averse. Whether the resource you need to do your research is a lab, a piece of scientific equipment, a population, a community agency, or a school, find a way to get experience with it long before you seek grant money. Researchers who wait to establish those connections until they are in the process of writing a grant proposal invariably lose out to those who can show continuing access and a strong history of collaboration.

There are many aspects to establishing a track record. Reviewers want to know that you have done research in the area—even having been a lab assistant or a graduate research assistant helps, as does having served as a consultant or co-investigator on someone else's project. Beyond that, the role of principal investigator involves elements of fiscal and personnel management, supervision, and time management, as well as scientific expertise. Serving as a co-investigator or as a key player in a senior scholar's lab may allow you to demonstrate your experience in those areas firsthand.

In addition, reviewers expect to see some amount of data (qualitative or quantitative), even if it is only from a pilot project, that suggests that the research you are proposing to carry out has some merit based in evidence. The more data that you have, and the closer the nature of that data is to the project you are proposing, the better. That does not mean that you have to have a grant to get a grant. Most reviewers seek to be supportive of young researchers who are new to a field. But you have to give them something to work with.

Finally, in positioning yourself as a researcher, it is important to know your competition. If you have positioned yourself well as a scholar, you know your literature and your field, so you should already know the players. But you still need to know who is likely to be competing for *this* money from *this* agency at *this* time.

Networking helps. The process of searching for potential collaborators can lead you to discover who among the key players is available and who is not. Most of the federal financing agencies also publish lists of past recipients, and it is often helpful to see who is just coming off a grant and how they might be trying to follow up. Knowing your competition can help you craft your project and your proposals in ways that stand out. It can also give you a better sense of where the cutting edge is and how to make sure you're on it.

Positioning yourself as a grant writer. The first step in successful proposal development is to craft an effective literature review. You can do that now because you both know the literature and are an important part of it.

An effective literature review locates the problem at hand within the extant literature and frames a case for advancing the literature in some way. Often that's done by identifying a gap that needs to be filled. Or you can suggest ways in which the conventional wisdom about a topic is based on a flawed premise, shaky theory, or dubious evidence, and then propose another approach. In either case, the goal of a literature review is to lead the reader to the inescapable conclusion that your grant proposal asks the next necessary question in the field.

Next you need to assemble the right players. Review panels want to see the projects they support succeed. To ensure that happens, they rely, in large part, on the quality and makeup of the research team. All the appropriate roles must be represented—subject experts, statisticians, technical experts—and each player should have a strong track record. Beyond that, you need a management plan to guide and coordinate everyone's work. In some cases, you might consider developing an advisory committee comprised of senior scholars who could guide the project during both the formative stage and the dissemination phase.

The next essential step as a grant writer is understanding what the agency or foundation wants. Grant agencies, like scholars, have research agendas—large problems they are trying to deal with by supporting incremental steps toward solutions. Documentation of an agency's agenda is almost always available and should be read in tandem with the call for proposals. Solicitations often, in fact, include citations to documents the agency wants you to read in order to better understand what it is looking for.

Your university's sponsored-programs office may be another source of guidance on how to understand the grantor's agenda. Staff

members in those offices have read hundreds of grant proposals and spent countless hours talking to agencies and foundations, and so tend to be fairly good interpreters of their jargon and intentions.

Finally, to be a competitive grant writer you need to have a solid understanding of the rules of the game—i.e., the specific agency guidelines that accompany a call for proposals. Those guidelines run the gamut from things like font size and margins to rules about subcontracting and publication rights. Fail to conform to the rules, and your proposal doesn't stand a chance.

Again, your university's sponsored-programs office is the place to look for guidance on this. You might also contact a program officer at the grant agency for further clarification.

The grant-writing process has always been a competitive venture, and being well positioned has always helped. But as the competition grows ever more acute, and as agencies find themselves under increasing pressure to demonstrate results from every dollar spent, strong positioning is more important than ever. The steps outlined here are just that—steps. They can be taken slowly or quickly, they can be big or small, as time and energy permit. But if you intend to walk the walk of a successful principal investigator, you need to start putting one foot in front of the other.

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