Facilitating Proposal Development: Helping Faculty Avoid Common Pitfalls

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Abstract

With increasing pressure to obtain extramural funding, success in proposal writing becomes ever more important to colleges and universities. Though the characteristics of good proposal writing are well understood, success ratios remain low and most proposals are rejected on first reading. This paper discusses the dimensions of the problem, identifies some common proposal errors and pitfalls, and suggests techniques to avert them. It concludes that grants specialists can employ intervention strategies centered around internal competitions, early career award workshops, funding search workshops and acceptance of preproposals to help faculty improve their grant writing skills.

Introduction

Success in proposal writing must be viewed as a low probability game. At the National Science Foundation (March 2002) and the National Institutes of Health (2002), two key federal agencies that together account for a major portion of research funding at America's universities, only a quarter to a third of the 70,000 applications received annually get funded, a range that has remained steady over the past several years. Dooley (1995) has estimated the success rate nationally across all fields at 30 per cent. New and Quick (1998) report that even good grant writers can expect to win only 30 to 40 percent of the proposals they submit. As research universities become more aggressive in their efforts to elevate their rankings, their faculties experience more and more pressure to pursue extramural funding and competition is likely to increase. But does it follow that success ratios must remain low?

Before turning to this question, it is well to remember that researchers are not alone in feeling the pressure. On the sponsors' side are budgetary constraints and cadres of overworked reviewers, faced with higher and higher stacks of quality applications. A typical reviewer has very little time to do the job: Mohan-Ram (2000) cites the examples of two NIH reviewers, both full time professors with research responsibilities of their own, who receive batches of anywhere from 6 to 12 major proposals to evaluate three times each year. Reviewers will admit candidly (that is, conversationally and rarely in writing) that, when sorting through a growing

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mass of documents, they often resort to the most expedient means to narrow the field—they look for reasons to reject any given application, regardless of the merit of the researcher's basic idea. New and Quick (1998) estimate an average of 60 per cent of proposals are eliminated on first review because the applicant did not follow directions or had not made a good project match. Among the common mistakes listed in one NIH grant writing guide are (a) no signature page, (b) an insufficient number of copies, and (c) failure to respond to a specific RFP or Program Announcement (NIH, 2000). Rejection, it seems, may be more a matter of overlooking some simple rules than a result of aggressive competition or a reflection of the researcher's basic competence.

In some cases, overlooking the basics has been more the rule than the exception. For example, Mervis (1999) documents NSF's recent experience with changing proposal review criteria. In 1997, the agency announced a major change in the general criteria that would apply to all its programs. In brief, the concept of the "broader impacts" of the proposed activity—on everything from societal benefits to student learning to enhancing diversity—was elevated to the same status as the quality of the proposed science. Yet two years later, an internal survey of 17,000 reviews done under the new system found more than half the proposals submitted failed to address the new nonscience criterion. The seriousness of this deficit is evident in a letter sent by Rita Colwell (1999), the agency director, to presidents of all colleges and universities asking them to remind faculty that NSF expected all proposals to address both review criteria, which were enclosed in their entirety with the letter. Five years after announcing the original policy, NSF (August 2002) finally issued the ultimate warning to grant writers: Proposals failing to treat the broader impacts criterion in separate and distinct sections of the proposal will be returned without review!

In sum, analysis of proposal success ratios can be somewhat disheartening. First, in most schools only a minority of faculty are players. Monahan's survey of eight New Jersey state colleges (1993) found just 20 percent of faculty were actively engaged in sponsored research activities. Informal conversations with research administrators suggest that Pareto's classic 80/20 rule still applies, that is, 80 per cent of research funding is generated by about 20 per cent of the faculty. (The numbers at Virginia Tech closely mimic this.) Second, even among those who are active, success in grant writing is diminished considerably by elementary mistakes.

Avoiding Proposal Pitfalls

So how does one help faculty be more successful in their search for funding? Certainly no dearth of materials exists on how to write good grant proposals. Numerous web sites at federal agencies, private foundations, and research universities are filled with helpful, detailed advice, most of it centering on the same small set of basic principles. But in view of the data cited above, grants specialists should keep in mind two hard realities: (a) Habits and behaviors that lead to success in other academic endeavors can be disastrous in grant writing; and (b) though they may express irritation, even the most seasoned scholars respond to criticism of their writing style. Given that, here are ten strategies to avoid a quick rejection:

1. *Before starting, verify the project's match with the agency's funding priorities.* Faculty are understandably hesitant to contact busy program directors at major agencies. In their job seeking and scholarly activities, academics are accustomed to relying on the written word to convey quality. In these circumstances informal, personal contacts are suspect, even *verboten*. But grantseeking is a different milieu altogether. A brief letter, e-mail or phone call to a contact person or program director is actually a time saver and will often elicit quick feedback as to the proposed project's fit with the agency's research priorities. It also opens up a line of communication and the beginnings of personal acquaintance, which can be invaluable as the proposal is developed.

2. *Begin by proving the importance of the proposed project.* Constructing a strong proposal is not like writing for a professional journal, where one must carefully build the case before asserting even the

most cautious conclusions. As noted by Molfese, Karp and Siegel (2002), grantseeking is basically an exercise in persuasive writing, where the object is to get and hold the attention of the reader with a compelling argument. In many ways, it is more like writing for the Op Ed page of a good newspaper. The importance of the topic must be stated at the outset, augmented by a brief citation from an authoritative source or two. The need for the study or the proposed line of research must be clear from the beginning, expressed simply and with passion. A reviewer forced to wade through paragraph after paragraph of dense academic prose, written in the passive voice and filled with subjunctive clauses, will mentally toss the document into a circular file long before the writer gets around to showing why scarce funds should be expended on the project.

3. *Assume reviewers are uninformed but very quick to learn.* From force of habit, academics tend to write for their peers, for other specialists in the same field. But reviewers may not be readily familiar with current issues or theories in a given field. The project narrative must be written in a way that permits a perceptive reader to grasp quickly what he or she needs to know about the project and how it fits into a larger field of inquiry. (NIH recommends the writer begin by teaching the reviewer about the project, using a kind of *Scientific American* style.) Familiar catch phrases, technical jargon and insider acronyms may be acceptable at professional meetings, but they can quickly lose a reviewer who might otherwise be supportive.

4. *Develop a detailed research plan and illustrate it visually.* Once the reviewer has accepted the need for a particular line of research, he or she wants to know how the applicant proposes to go about it. Here again, old habits die hard, as academic writers tend to be long on theory and short on procedural detail. But the reviewer seeks reassurance that the research plan has been thought through, and, if funded, specific activities will be launched immediately and proceed in an orderly fashion toward stated goals and outcomes. The applicant must help the reviewer see the project; pictures actually do have great power to make general concepts seem concrete and the abstract become real. The more project activities and timelines are visualized with charts and illustrations, the better. Even with academic discourse, showing is better than telling.

5. *Do not deviate from any application instructions, even by a nanobit.* Faculty berate their students for failing to follow directions, yet often commit the same error themselves. Enthralled with their subject, grant writers can assume that application requirements are mere guidelines and are surely open to some degree of reasonable flexibility. Fonts are reduced and margins squeezed, narratives drone on beyond the limit, budget items are left unjustified, and so on, as if to deliberately provoke the wrath of a frazzled, bleary-eyed reviewer.

6. *Pay attention to all proposal review criteria.* As the NSF example shows, it is not enough to demonstrate the importance of a project's research goals; the narrative must also support other objectives that are important to the funding agency. Enhancing diversity, societal benefits, integrating research with education, and an effective project management plan are some of the criteria reviewers can and will use to winnow out proposals that are insufficiently developed.

7. *Be sure the abstract describes the entire scope of the project.* Abstracts are often tacked on to a proposal as an afterthought, quickly appended in the final stages of packaging with the deadline hovering near. Some writers make the killer mistake of extracting verbatim only

the first two paragraphs of the project narrative, forgetting that for some reviewers (financial officers, for example) the abstract may be the only descriptive material they read. To accomplish its purpose the abstract must encapsulate, in very concise fashion, the overall purpose and structure of the entire project. At minimum, it must convey what the researcher intends to do, why it is important, how it will contribute to what has already been done, and how the work will be accomplished. If the abstract does not stand firmly on its own, many reviewers will go no further.

8. *Proposals should be reviewed by seasoned writers before submission.* For the same reason that refereed journals are the standard of quality for scholarly writing, most grant proposals will benefit from objective, knowledgeable scrutiny before they are submitted. Researchers know that constructive feedback from colleagues can mean extra points in the final rounds of a competitive review, but ego and pride of authorship can be significant barriers (as well as waiting too close to the deadline to work on suggested revisions). Yet it is a hard truth that the PI and co-investigators are simply too close to the project to be truly objective, and editorial help is usually called for.

9. *Before submitting, engage proofreaders who are not involved with the project.* Innocuous typos and inconsistencies between the project narrative and the budget, no matter how minor, can doom a proposal at the outset. Sharp readers who are not part of the project team can ferret out mistakes much more consistently than the investigators can.

10. *Allow time to write, rewrite, and rewrite.* James Michener once remarked that he certainly wasn't the world's best writer, but his phenomenal record of bestsellers showed he was among the world's best re-writers. Pushing completion of the full application too close to deadline is among the deadliest sins of proposal writing, as too little time is left for critical Steps 8 and 9. Proposal writers should adhere to a strict *completed draft* deadline at least two weeks prior to submission. In the final rounds of an intensely competitive review, the extra points gained by a well polished document can and often do make a critical difference.

Intervention Strategies

It should be noted that the usefulness of guidelines such as these is akin to the joke about how many psychiatrists it takes to change a light bulb—just one, but the bulb has to really want to change. Dooley's survey within the College of Education at Texas A&M, for example, found that faculty often do not avail themselves of support services that are readily available through the university grants office. The problem has to do with the attention, focus and receptivity of the grant writer. When an agency makes an award, the official notice comes to the sponsored program office; the institution announces it publicly and expresses congratulations to all. When an agency denies the application, often only the applicant gets the bad news, and that individual is usually not anxious to share it. Nor is the disappointed writer in a receptive mood for helpful advice, at least not right away. Those of us who are supposed to help faculty develop successful proposals are challenged to reach those who need help the most, and to reach them at teachable moments, when coaching and mentoring can have real impact. In addition to conducting proposal writing workshops, here are some intervention strategies that grants specialists can use to help faculty hone their skills:

Internal competitions. Directors of popular grant programs sometimes reduce their workload by restricting the number of proposals they will receive from any given institution. NSF in particular, as well as some private foundations, will often impose limited submission requirements, which in turn sets up an internal competition to determine which proposals have the best chance of success. Every time a selection committee announces its choices, opportunities arise for grants specialists to help targeted faculty improve their grantseeking skills. Expe-

rience shows that simply by offering to provide feedback on the committee's deliberations, one can trigger inquiries from the successful proposal writers as well as those who were rejected. These sessions should always be face to face, preferably in the faculty member's office, with the dialogue centering on written notes that summarize the committee's key findings. As an added bonus, the specialist should bring along a list of other funding sources that might be appropriate for the proposed line of research.

Early career award workshops. Studies by Boyer and Cockriel (1998, 2001) show that younger faculty in particular desire more help in preparing proposals. Workshops that feature the many early career awards offered by federal agencies and private foundations will often attract faculty who are receptive to the advising and coaching roles of the grants specialist. In addition to reviewing the requirements of specific grant programs, such workshops should also include proposal development guidelines such as those discussed above.

Funding search workshops. Younger faculty and seasoned grant writers alike are attracted to workshops that feature search techniques for online databases such as Community of Science (COS) and the Illinois Research Information Service (IRIS). These workshops are most successful when held in computer labs with sufficient time for hands-on practice and opportunities for one-on-one coaching. Here again, the specialist can gain credibility and establish rapport with a critically important segment of the faculty whose very attendance signals their readiness. The grants specialist should follow up by meeting with participants who are not satisfied with their initial searches, as these sessions are rich with opportunities for effective coaching.

Acceptance of preliminary proposals. Some programs require applicants to submit preliminary proposals, which the agency then reviews in order to invite a limited number of full applications. By offering to review the initial draft of a preliminary proposal, the grants specialist can start a working relationship with faculty at a time of low tension when constructive criticism is expected and even welcomed. More importantly, the specialist is well positioned to help with proposal development should that be invited, or, in the event of rejection, to revise it for resubmission at a later date.

Finally, it should be obvious that avoiding proposal pitfalls, when viewed as a shared responsibility, opens up possibilities for research administration to be more proactive in this area. With careful timing, assertive grants specialists can find myriad opportunities to establish productive working relationships with individual faculty members. Though grant writing success is a low probability game, small victories for one-on-one teams should add up to a better overall score in the end.

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