

TWELVE TIPS

Twelve tips for writing educational research grant proposals

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Abstract

Background: The need to promote educational research and faculty development grants and assist medical educators with grant writing is well documented in the medical education literature.

Aims: To assist medical educators with writing educational research grant proposals, we propose a set of 12 tips for writing competitive grant proposals.

Methods: We distilled challenges and effective strategies and approaches from our experience in writing and assisting with education research grant proposals. We presented these challenges and approaches at faculty development workshops on writing educational research grant proposals conducted over the past 3 years and evaluated the outcomes of these presentations and the participant's experiences with educational research grant writing.

Results: Approximately 100 participating faculty provided feedback, affirming that these sessions were very useful for developing grant proposals and for reaching out to funding agencies and that these faculty development efforts in grant writing are much needed.

Conclusions: Based on our experiences with education grants and workshop efforts, we propose a set of strategies for faculty to seek grant sources and write promising education research grant proposals.

The need to promote educational research and faculty development grants is well documented in the medical education literature (Albanese et al. 1998; Walling et al. 1998; Carline 2004; Irby et al. 2004; Quirk et al. 2005; Collins 2006). Still, this literature highlights the need to assist medical educators with educational research efforts, such as writing research proposals. Although basic science or clinical medical educators are familiar with clinical and/or basic science research, they are less comfortable with conducting medical education research. Reasons include lack of training in educational research methods, unclear "credit" in promotion processes, limited education research funding, and insufficient mentors.

Over the past 3 years, we have offered faculty development workshops on writing education research grant proposals (hereafter, grantsmanship) at local, regional, and national professional meetings. Our main goal has been to assist faculty with identifying challenges of and strategies for writing effective grant proposals. Approximately 100 participating faculty provided feedback about the effectiveness of and lessons learned from these sessions, affirming that these sessions are very useful for developing their grant proposals and reaching out to funding agencies and that these faculty development efforts in grant writing are much needed. The predominant "take-away" lessons were how to write competitive research in medical education proposals, and how to plan grant search strategies. The chief concern faculty raised

was the paucity of funding for such educational efforts and the difficulty finding the few funding sources that do exist.

Based on our experiences with education grants and workshop efforts, we propose a set of strategies for seeking funding sources and writing promising education research grant proposals.

Tip 1

Identifying funding agencies and resources

Start by contacting the Development Office at your institution. Development offices have a database of funding agencies and are familiar with funders' missions and funding opportunities. Development staff can assist you with identifying possible funders for your project and verifying that your project aligns with the funder's mission and goals.

Your school's offices of medical education, or educational or faculty affairs may be able to assist you with finding funding resources and refining your proposal. Some schools offer internal grant programs for faculty educational innovations (Albanese et al. 1998; Walling et al. 1998; Maderer et al. 2009). Internal programs are a valuable venue to pilot-test your project. Initial data and results from the pilot can inform the next-stage proposal to expand your project and seek external funding resources.

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Professional organizations, such as the American Association of Medical Colleges (AAMC) and the international Association for Medical Education in Europe (AMEE), are good venues to learn about funding resources and to network with colleagues. By participating in professional meetings, you can learn from colleagues' educational research grantsmanship experiences, and they can provide you with constructive feedback on your project. Furthermore, sharing educational research initiatives with colleagues provides an opportunity for collaborative projects. Some of these professional associations offer Educational Research/Innovations Grant programs, for example, the regional groups of the AAMC Group on Educational Affairs (GEA 2011).

Finally, professional specialty and sub-specialty organizations in areas such as family medicine, obstetrics-gynecology, surgery, rheumatology, etc., sponsor various education scholars programs that include early career support and project funding.

Tip 2

Getting to know the funding agency

Once you have selected a funding agency, make sure you understand their mission and goals. Check their website, annual report and prior grant holders to evaluate whether your project is a good fit. Do you match the profile of prior grant holders? Does your project address their goals? Private funders need to be approached in partnership with your development office, since these are generally by invitation only.

Tip 3

Talking to the program officer

If the agency has a program officer, do your homework first (Tip 2). You can then call the program officer to verify the "fit" and ask about any special requirements or exceptions. This is particularly important for budget issues (Tip 10). Talking to the program officer can provide insights on how to refine your project to better match the funding agency's interests, goals, and mission.

Tip 4

Reading the directions and following them

This is such a simple tip, but one that is often missed. Read carefully through all the directions, and make a checklist. Ideally, have someone else confirm your checklist, and quickly notify everyone involved including accounts departments, letters of support writers, critical readers, etc. For annually recurring grants, talk with a prior successful applicant for things to pay attention to or avoid. Note the required order, length, and format of documents such as addenda and curriculum vitae. Some prescribe whom the letters of support should be from and how many are allowed. More is not always better. Letters of support generally are best from the highest ranking administrator who needs to approve the project

budget or other requirements and should explicitly state that support.

Tip 5

Writing clearly

The reviewer is unlikely to be from your field and typically will be a busy person. Therefore, it is critical to write clearly and avoid jargon. If the formatting rules permit, create headings that contain the "take-home message" for each section. Topic sentences should contain the key points for quick reading. Use bullets, key diagrams, or charts to highlight other key points. Test diagrams or charts with someone unfamiliar with your project to insure that they are self-explanatory and enhance your message. Allow time to ask mentors or colleagues to provide feedback on a latest draft to insure clarity.

Tip 6

Making a case for the need of the project

Provide a convincing argument that clearly shows that your project will address a problem or answer a research question that is timely and relevant to the field. The reviewer should quickly be able to answer several key questions related to the importance, need, and purpose of the project, and your own credentials to undertake the proposed project: (1) Why is your project important to the funder? Why should the funder care? (2) Was a case made for the project's need? What's new, different, better? (3) Was the hypothesis or purpose clearly identified, does the hypothesis or purpose address the need? (4) Do the specific aims address the purpose? (5) What track record do you have to accomplish your aims/goals? Do you have prior related work, experience, and grants? Who have been your collaborators?

Tip 7

Stating the relevance to the literature and the degree of innovation of the project

Cite appropriate literature. Elicit help from your reference librarian to conduct an additional search of the relevant literature. Reviewing related literature will help to better identify the problem or research question related to your project that has not yet been addressed by others and to tailor your project accordingly. Is the proposed project contributing to the field with innovation in content, instruction, or assessment? Consulting relevant literature will also help define the conceptual frameworks that will inform your project (Bordage 2009).

Tip 8

Designing appropriate methodology

Clearly explain your methodology and evaluation methods. Describe the participants and context of your project, and

select the appropriate sample size. If the project involves human subjects, state that you will seek Institutional Review Board (IRB) approval and consider the IRB application process when you design your project timeline (Tip 9). Identify potential measurable outcomes of the project and the type of data you need to collect. Do you need to collect qualitative data, quantitative data, or both? Describe the strategies and instruments you will use to collect the data, followed by the methods of data analysis you will perform. The methods must test the hypothesis or answer the research questions and address the purpose of your project. Once you lay out your methodology, assess whether or not you have the appropriate team available to carry out this methodology, and plan accordingly.

Tip 9

Planning a feasible project development and implementation timeline

Based on the design and methods you will pursue, map a realistic and feasible timeline within the grant time period. Account for extra time in case the implementation process does not run as smoothly as planned, particularly if you cannot commence necessary start-up activities prior to the official start date. Projects that involve multiple sites and programs typically demand more time. If your project involves human subjects, the IRB process must be factored in, especially if participants are hosted at different sites, which may require going through the IRB at each site. Check your proposed timeline with experienced colleagues. Remember, "less is often more." A succinct timeline that is self-explanatory and highlights project milestones or deliverables is often most effective.

Tip 10

Allocating funds appropriately

The level of budget detail required and what is fundable vary widely by agency. This information might not be clearly stated in the grant instructions; so, check with the program officer to insure that your budget items are eligible for funding (Tip 3). For instance, common areas where agencies differ include travel, faculty support, overhead rate, equipment, student stipends, and expectation for in-kind contributions.

Tip 11

Sustaining the project after the grant period

Funding agencies seek projects with products that will endure beyond the grant period and may stipulate community involvement and/or impact. State how the outcomes of the project will be sustainable beyond the funding period in your department, school, institution, or field. Anticipate how you will maintain and even expand the outcomes of your project after the grant period. The outcomes of your project should not require extra funds to insure their sustainability, unless this is a pilot being used to pursue the next level of funding.

The explicit support of your higher ranking administrator (Tip 4) may serve as a testament of the sustainability of your project.

Tip 12

Disseminating the project and extent of impact on the field

Describe your plans for disseminating the outcomes of your project, including to non-academic audiences, and your project's impact locally, nationally, and/or internationally. Explain the difference your project will make to the field and what future initiatives your project might give rise to. Your dissemination plans will also reflect the sustainability of your project beyond the grant period (Tip 11). Consider using open-access venues to disseminate your work more widely and to enable others to more easily build on your work.

Conclusion

As the faculty and educational scholars who joined our educational research grantsmanship efforts suggested, these educational efforts, as well as generating more funding for research in medical education, are much needed. With this article, we hope to reach out to more faculty and educational scholars and continue to promote faculty involvement in educational research grantsmanship efforts while raising the field's awareness of the need for such efforts.

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