

Tips for Preparing a Strong Grant Proposal

Before you do anything...

Think about why you want to do research. To hone your research skills? To challenge yourself? To contribute new knowledge in your field? To jumpstart your thesis? To see if you want to make research your career? Your own reasons for wanting to conduct research will help you frame a good proposal. Make sure you know why you want to take on a research project.

What's your research question? What do you want to study, and why is it important to you and to the rest of the world? What is it that you want to know? A faculty advisor can help you frame your research question.

What's your methodology? How will you go about finding the answers to your research questions? Are you familiar with the methodology in your field or is this something you'll develop in the process of doing this research project? To write a good proposal, you must have a clear understanding of HOW you are going to do the research. It might include background reading on the topic, developing an experiment, conducting interviews, consulting material in archives, analyzing data sets, watching and analyzing films, or composing a piece of music. Your method depends on your topic, but you need to be able to articulate a logical order in which you will undertake the work. Again, a faculty advisor is best equipped to help you develop this plan.

Are you familiar with related scholarship? The more you know about existing scholarship on your research topic, the better. Even basic background on a topic, if it's new to you, is important in helping you formulate the right questions. A faculty advisor (again!) can help you identify sources to consult as you put your project together.

What are the ethical considerations of your research? Every researcher must understand the ethical obligations of a scholar. Every researcher needs to be mindful of intellectual honesty, proper citation of sources, and the consequences of fabricating data. Familiarize yourself with the Student Research Handbook (<http://www.bates.edu/academics/student-research/student-research-handbook/>), which covers many topics related to research ethics.

If you are **working with human subjects**, your research plan may be subject to review by the Institutional Review Board, the college committee that approves research protocols when humans are involved. Some grant applications will ask you if your project requires IRB approval and if you have such approval, so it's important to be familiar with the IRB guidelines. See the IRB website for more info: <http://abacus.bates.edu/~bpfohl/irb/>.

If you are **working with vertebrates**, your work will likely require the approval of the Institutional Animal Care and Use Committee (IACUC), which review research protocols involving animals. If you are working in a Bates lab, your faculty advisor will manage the IACUC approval. For questions contact Professor Ryan Bavis in Biology.

What kind of support do you need? Once you have your idea ironed out, you are in a good position to determine what kind of support you need, if any. If you are running experiments that use consumable supplies, the budget may be straightforward. If you need to travel to a field site or an archive, you can estimate the number of trips and the cost. If you are doing a psychology study with many subjects, you may need to compensate those subjects for their time and to keep them engaged in the entire experiment. If you are spending the summer studying the novels of Jane Austen and living at Bates, you

may not have any operating expenses, but your TIME has value. If you would otherwise have to work at a job in the summer, you'll need to replace those earnings in order to conduct full-time research.

Are there sources of funding to support your work?

Many offices at Bates support students conducting research. Usually Bates funding is secured through competitive grant processes. Consult the Summer Funded Opportunities portal (<http://www.bates.edu/academics/student-research/summer-funded-opportunities/>), which has linked to these key offices that may have programs to support your research:

Dean of the Faculty's Office: Summer research fellowships, Otis and Phillips Fellowships, student-faculty research grants, environmental internships, thesis and academic-year research grants, conference travel funds. <http://www.bates.edu/academics/student-research/summer/>

Harvard Center for Community Partnerships: Harvard Summer Student Fellowships and Summer Community Work-Study Fellowships, which support community engagement that can involve research; academic-year community engagement grants. <http://www.bates.edu/harvard/grants-2/studentsummer/>

Purposeful Work Program/BCDC: Purposeful Work Internships and Bates in Asia Internships, which can be research-based. <http://www.bates.edu/career/purposeful-work-internships/>

Also check out the **Office of Off-Campus Study** if you are studying abroad and plan to undertake a thesis related to your study abroad experience. <http://www.bates.edu/offcampus/during/research-grants/>

Some faculty members, especially in the STEM fields (science and math), have external grants that include funding for student researchers. So do not be shy about asking professors if they hire summer researchers and what type of work student researchers do.

Off-campus opportunities abound as well, though these generally involve placement in existing research programs. Google "summer undergraduate research" and you will find many links to programs. Also check out:

Off-Campus Research Opportunities

<http://www.bates.edu/academics/student-research/summer/off-campus-research-opportunities/>.

Leadership Alliance

(<http://www.theleadershipalliance.org/Programs/SummerResearch/ProgramStructure/tabid/242/Default.aspx>)

NSF-REU Programs (<https://www.nsf.gov/crssprgm/reu/>) for STEM students

Understand the funding source

As you identify possible sources of funding, be sure you read the funder's guidelines thoroughly. Look especially at the eligibility guidelines. If a funder only supports rising seniors and you are a sophomore, don't apply! If the funder supports research in the humanities and you are a biology major, don't apply! If the funder requires that you work on campus but your plan is to work in New York City, don't apply! Your time is both limited and valuable so you want to use your time in a way that creates the greatest

chance of getting funded. If either you or your project does not meet the eligibility requirements of the funder, you need to look elsewhere.

If a funding program, such as an NSF-REU program or the C3 Fellowships, has a start and end date, you should not apply unless you can be present for the entire duration of the program. They will not accept you if you plan to arrive two weeks late.

Make sure your project is aligned with funding program's goals. If the goal of the funder is to encourage diversity by creating as many research experiences as possible for students from underrepresented groups or who are first-generation to college, and you are neither first-gen nor from an underrepresented group, you will probably not be selected and the position will go to an equally qualified student who will help advance the funder's goals. If the Otis Fellowship Program supports experiential learning rather than straight-up research, do not propose a pre-thesis topic, because it will not meet the Otis program goals.

Bottom line: Both you and your project should be eligible for the funding program and align with its goals.

Understand the guidelines. Often proposals do not get funded because the student has simply not read through the guidelines, leading to all sorts of major and minor problems, so be sure to read all the guidelines before doing anything.

Be aware of the deadline and mark it in any calendars you have! Given the deadline, be sure to ask for any letters of recommendation or transcripts requests well in advance.

Some students find that it's helpful to develop a checklist of proposal components so that they do not inadvertently omit any required component of the proposal.

Understand the method and format of submission. Do you apply through Handshake? On paper? Online? Be sure you understand how you will be applying. It is **CRITICALLY IMPORTANT** that you understand the format of the proposal. If the guidelines call for a 2-page narrative, double-spaced, do not submit 3 pages, or any pages single-spaced! If there are word count limits, you must abide by them or many funders will discard your proposal. This may sound obvious, but Bates students routinely ignore these instructions and this puts their funding at risk. In the real world, incorrect formatting almost always means no funding, so compliance with these requirements is good to start practicing now.

Bates proposals often ask for a one-paragraph abstract. This is intended to be a summary of your research questions and plan. Do not create a full-page "one-paragraph" abstract! An abstract should not exceed 150 words.

Depending on the guidelines, you may be able to include attachments such as short bibliographies, sample interview questions, maps, and budgets, but these documents only support your narrative. Do not rely on endless attachments to tell the story of your project. The review committees will consider your narrative as your project's description. **DO NOT** include email threads that prove to the committee that you have done planning. You need to convey that in your narrative.

Key ingredients to a good proposal: time, knowledge, and writing

Time. Deadlines for summer grant funding at Bates come in February, March, and April, all months when the student work load is heavy. This makes it challenging to carve out the time to write a good proposal, but you need to make that time if you are serious about summer funding. You need time to

think, to conduct background research, to consult with your faculty advisor, draft a proposal, edit and revise it, perhaps to seek help from Writing at Bates, and to secure your letters of support. Before you begin, determine if you can set aside the time necessary to do a good job.

Knowledge. You are an emerging scholar and you are developing your own expertise in the topic you wish to study. Your narrative needs to demonstrate that you have a solid handle on the topic and the previous research, that you have a well-defined scope of research, that you know what questions to ask and how to go about finding answers. You need to show that you understand the methods in your field and how to deploy them in your project. The committee needs to see that the project is feasible within the limits of several weeks in the summer and your financial resources. Finally, you need to show that you have ironed out the details of your research plan.

Writing. Your writing not only reports to the committee what you will be doing, but also reflects your capacity to think, organize your ideas, and argue effectively. Your writing reveals how well you are prepared to undertake scholarship, so you must devote time and attention to crafting a well-written proposal.

Bates grant proposals tend to be very short: for research grants, you have a one-paragraph abstract and 2 additional pages, double-spaced, in which to describe your plan. For Phillips and Otis Fellowships, you provide an abstract and a 5-page narrative, double-spaced.

In that limited space you must articulate:

- what you want to study
- why you want to study it: what you want to find out
- why the topic is important to you or the wider world
- how you plan to proceed
- how your research might continue after this project
- that you are qualified to do this research

Remember, you are selling yourself as well as your project.

Outline. Write. Edit. Rewrite. If you are taking the time to write a grant proposal, then you really want it to be funded, so you want it to be the best narrative possible. Don't do a slap-dash job. Take the time to develop an outline. An outline can help you fit a lot of information into a limited amount of space and can help you to build your argument for funding logically. Write a draft, then take the time to edit it, and don't be too easy on yourself! Put yourself in the position of the reader: Does the abstract relate to the narrative? Does this description of what I am doing make really convey what I am doing? Will it make sense to someone who is not, for example, a dancer or a biochemist? Does each sentence reveal my potential? Give you draft a very close read, and take the time to rewrite.

Style and Organization. When you have very limited space, be sure you pitch your proposal based on what the guidelines are looking for and don't go off on tangents that are not relevant to the guidelines. You need to think about your narrative as a writing sample as much as it is a description of what you plan to do. It's easy to focus all of your attention on describing the plan and the details, but you also need to think about HOW you are writing. Your writing is a reflection of how you think, so clarity and writing and a logical progression of ideas will convey to the reviewers that you know what you are doing. So really think about HOW you are writing, not just WHAT you are writing.

As you organize your ideas, you may want to use headlines within your text (as I've done in this document). Headlines help the readers see what is coming next, and they can see that you have a logical

structure to your text. This is especially useful if guidelines ask for answers to multiple questions (e.g., your project, your past research experience, your career aspirations, etc.).

Technical language. You have much more expertise in your field than you may think. If you do not know who the reviewers are, you should simplify your technical language. Proposal readers may not be in your field, though you should write for an educated audience. If, on the other hand, you are writing a neuroscience proposal to a committee of neuroscientists, then you can be confident that the committee will understand your discipline-specific terms.

In general, more simple and direct sentences make more sense to readers, so we caution against over-complicating your writing. Keep it simple but always intelligent.

Passive vs. active voice. Whether you write in the passive voice (e.g., "the subjects are asked to complete a survey, which will be analyzed using XYZ") or the active voice (e.g., "I will ask my subjects to complete a survey. I then will analyze the survey data using XYZ.") is both a style decision and a disciplinary practice. In some disciplines, the passive voice is the standard writing style. Whether you write in the passive voice or the active voice, be sure to be consistent throughout.

Avoid repetition. Usually grant guidelines dictate limited space for proposal narratives, so it is important to make the most of all the space you have by avoiding repetition. In a Bates proposal that requires an abstract, you will not need to repeat any of the text from the abstract in your brief narrative. The reviewers will be reading the narrative immediately after reading the abstract. Conserve your word count, and make every sentence count.

Demonstrate interest and passion. In addition to describing your project plan and revealing your capacities as a thinker and writer, your short proposal narrative also should reveal your interest in and commitment to the work. When a committee is reviewing a stack of proposals and all are well-written and describe solid projects, they tend to support those that reveal the greatest passion for the topic. You might express this by explaining why the research question is so important, how long and why you are interested in it, or who or what inspired you to pursue this scholarship. You need to communicate to the reviewers that this is important work and you are excited about doing it.

Trouble-shooting

Here are some ways that grant proposals go astray and do not make the cut for funding. Some are challenging to fix, others are no-brainers and are easy to avoid.

Challenging conceptual problems.

Not well-aligned with the funding source. You have put a lot of work into a proposal for a community-engaged research grant, but as your project has evolved, it's not involving any community partners! Or you apply for funding to work in a lab in Boston, but the research grant program to which you are applying only funds on-campus research. Time to regroup and rethink. Are you applying to the right funding source? Perhaps there are alternatives.

Project doesn't seem feasible to reviewers. You've described a project that does not seem feasible to the reviewers. Studying the entire history of New York City architecture is obviously not doable in a 8-week fellowship, but other ideas that you think you can manage may not be considered doable by a committee. For example, you are doing an in-depth psychology study for which you need 200 committed subjects in their fifties from a certain ethnic background. The committee may determine that

in the time you have, you will not be able to find enough subjects. Or you plan a two-week trip to visit a vast manuscript collection at the University of Texas. You haven't described a plan for which manuscripts you'll be reviewing. The committee may determine that you need to do more background research before you make such a trip. So make sure the projects seems manageable within the limited time you have in a summer.

Reviewers not convinced that you are qualified. After reading your proposal, the committee is not convinced that you have the background knowledge of the existing scholarship and/or the methodological skills to undertake the projects, so it's crucial that you explain your qualifications. If you are crunching big data and you do not explain your training to undertake this work, you'll be in trouble. If you are doing a project that requires a command of Spanish that you do not have or have not demonstrated, you may get passed over in the review process.

Vagueness: No THERE there. Not surprisingly, this is the most difficult problem to explain to students, but it's one of the most common reasons that proposals are not funded. You may plan to "study literature of the former East Germany" and you list the authors you are consulting, but you have not described the ways you are interrogating these works. What is it that you are trying to find out? This goes back to the research question: it is essential that you understand what your actual question is and can explain it to someone else.

Technical problems: These are easy to avoid!

Your proposal is incomplete. Solution: read the guidelines and make a checklist!

Your letter of recommendation missing. Solution: Ask recommenders way in advance of the deadline and remind them that you have a deadline for submission.

Your narrative is too long. Solution: Read the guidelines! Do not single-space if double spacing is required! Do not use 8-point font!

Unclear writing, grammatical errors, spelling mistakes. Solution: Edit, proofread, ask someone else to proof your work.

Missing IRB or IACUC approval, if applicable. Solution: If you are working with human or animal subjects, it is your responsibility to clear your research protocol with the appropriate committee.

Budget is unrelated to narrative. Solution: Do not include anything in your budget that is not described in your narrative. Don't ask for plane fare if you haven't mentioned traveling!

You missed the deadline. Solution: Simple: Read the guidelines!

Getting help. The following people can help you in this process. Don't be shy about asking for help and advice.

Faculty: research advisor, academic advisor, other professors who know your work.

Writing specialists and peer-writing tutors

Undergraduate Research Advisors (Dean of the Faculty's Office, Harward Center, Off-Campus Study Office)

Community Engagement Advisors (Harward Center)

Career Development Advisors (Purposeful Work/BCDC)