NSF Graduate Research Fellowships: 
A Toolkit for Applying and Q&A with Awardees, Their Advisors, and NSF Reviewers

NSF graduate research fellowships are an excellent way to fund graduate student research in I-O psychology. With the deadline to apply quickly approaching, this document provides a toolkit to assist I-O graduate students in preparing their application materials. We will cover the reasons students should apply for these fellowships, the eligibility requirements, components of the applications, some tips for applying, and lastly, some frequently asked questions.

Why Should I-O Graduate Students Apply?

This fellowship program recognizes and offers support to excellent graduate students in NSF-supported science disciplines, among other disciplines. The Graduate Research Fellowship Program (GRFP) selects recipients who are expected to achieve high levels of success in their careers and continue to be great leaders and thinkers, contributing research that has both intellectual merit and broad impact. As the field of I-O psychology is a high-impact field that affects numerous audiences, our field of research easily lends itself to meeting and exceeding the requirements of the fellowship program. I-O graduate students and their research could benefit greatly from applying to this fellowship program. Receiving a fellowship also has higher-level benefits: It increases the visibility of the students' I/O program, their psychology department, and the university as a whole. It also increases the legitimacy of I/O among all the sciences that compete for NSF GRFPs.

Eligibility

Before beginning the application process, it is important to verify your eligibility for applying to and receiving the fellowship. In order to apply for an NSF Fellowship, you must:

- Be a US citizen, US national, or permanent resident
- Intend to pursue a research-based Master's or Ph.D. program in an NSF-supported field
- Be enrolled in an eligible program at an accredited United States graduate institution
- Have completed no more than twelve months of full-time graduate study (or the equivalent) as of August 1, 2015. Applicants who have completed more than twelve months of graduate study or have earned a previous graduate or professional degree may be considered eligible if they have had an interruption in graduate study of at least two consecutive years prior to November 2015. To be eligible, applicants must have completed no additional graduate study by August 1, 2015.

Now that we have covered the eligibility criteria for applying to this fellowship, let’s focus on the components of the application.

Application Components
1. Personal Statement (Limit of Three Pages)

The purpose of your personal statement is to outline your educational and professional development plans and career goals. In order to do so, describe your personal, educational and/or professional experiences that motivate your decision to pursue graduate study. Also provide specific examples of any research and/or professional activities in which you have participated and discuss how these activities have prepared you to seek a graduate degree. In addition, describe how your activities advance knowledge in STEM fields as well as the potential for broader societal impacts.

For the personal statement, address what you have done and what you plan to do. It is important to show that you have the ability to execute the proposed project with past accomplishments in order to demonstrate that you have the capability to carry out the proposed research and actively participate with your research. However, you must also focus on what you plan to do and provide a trajectory for the project at hand, so reviewers can see where you intend to take the project (Putnam, 2012).

A good personal statement describes a cohesive story. Rather than simply chronologically listing each of your experiences, try to describe how each experience builds on the previous ones in order to show advancement in knowledge, skills, and experience. Also be sure to discuss how each of the experiences in your story helps to fulfill your development plan and bring you one step closer to your career goals. Remember - NSF is evaluating your potential as a future STEM scholar; you want to show them how your past, present, and future experiences and plans all shape up to make you a high-potential contributor to your field. Communicate your openness and enthusiasm for learning all your future graduate program has to offer. As an entering graduate student, you are certainly not expected to understand the field of I/O deeply at this point; however, your statement should clearly lead up to your Research Plan Statement as the logical next step in your early career development.

2. Graduate Student Research Plan Statement (Limit of Two Pages)

In this section, you present an original research topic that you would like to pursue in graduate school. It should read as a short concept paper for your proposed research. Reviewers who read your paper will be social scientists; they may not be I/O psychologists, and they may not even be psychologists. Therefore, be sure to define your constructs, explain how they are theoretically connected, and list your hypotheses. Include important citations to support your ideas, but do not excessively cite, as space is at a premium. Also be sure to describe the specifics of your research plan, so that reviewers can appreciate that your plan is concrete and feasible (and that you took the time to plan and make it so): Note your sample, procedure, measures, as well as any unique resources that may be needed for accomplishing the research goal (e.g., access to national facilities or collections, collaborations, overseas work). Perhaps most importantly, be sure your theoretical and empirical contribution is stated in clear and broadly accessible language. Address who would benefit from your research and how it benefits your field of research.

For this section of the application, consider emphasizing broad impact. NSF defines broader impacts as a criterion that encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes (National Science Foundation, 2014a). Broad impact means furthering scientific theory, empirical knowledge regarding the topic, and on a much larger level, the field of science (e.g., training research assistants, implementing an intervention, applying knowledge to “real-world” settings, developing a program focused on
solving a particular issue, or creating and validating tools or methods for other researchers to use). Therefore, how will your proposed project impact the science community? The greater community? How will your research benefit society? The NSF website discusses the importance of communicating scientific findings broadly, and, as such, your project should have broad-impact goals. Communicate these in your application.

Although you want to make your contribution and broader impacts clear, be careful not to make the research statement and your contribution too complex. First, it is difficult to communicate an overly complex study in the two-page limit. Unclear proposals may be confusing and frustrating for reviewers, making them less likely to be funded. Try to make your study simple and concise, while also targeting an issue that has important implications. Second, funding agencies such as NSF want to support graduate students whose projects will be completed and yield the proposed implications. If they feel your research project is not feasible, unlikely to succeed, or unlikely to reap the benefits you describe, your proposal will not have a high chance of being funded. Be sure your project is feasible given your skills, available resources, and time constraints.

3. Reference Letters

There are five slots available for applicants to list reference writers. Applicants are required to submit three reference letters but are strongly encouraged to use all available slots.

Your letter writers should be more senior research collaborators and mentors who can speak to your potential, as well as to the knowledge and skills you need to successfully conduct the research you described in your research plan statement. Letter writers who you’ve worked with for an extended period of time or who have given you increased responsibility are ideal, as they can draw upon multiple experiences to write a more detailed, supportive letter.

The reference letter should provide details explaining the nature of the relationship to the applicant, comments on the applicant's potential and prior research experiences, statements about the applicant's academic potential and prior research experiences, statements about the applicant's proposed research, and any other information to enable review panels to evaluate the application according to the NSF Merit Review Criteria of Intellectual Merit and Broader Impacts (see the NSF Proposal and Award Policies and Procedures Guide; National Science Foundation, 2014b). It can be helpful to provide each reference with a descriptive summary of your experiences. For one, the reference might forget; for another, you might have worked more closely with a graduate student, so the reference needs to be reminded of your experiences; and finally, to the extent that the reference actually makes use of the material you conveniently provide, then you are shaping your own letters to some extent.

4. Academic Transcripts

Your academic transcript is the evaluators' opportunity to view the courses you have taken, allowing them to determine your level of preparation for your proposed plan of research. Thus, it is a significant component of a complete application. An academic transcript is required for each institution where you have previously studied.

Tips for Applying

Before submitting your application, there are a few further tips to consider:

Do your homework. As with any grant application, you should always do your due diligence and research the funding organization. Our toolkit provides some information to get
you started, but there is much more to know about funding through NSF. Become familiar with
the mission and goals of NSF. What do they seek to accomplish? Be sure your application
clearly speaks to how you and your research further the interests of NSF. As an example, your
research should speak to NSF’s objective of creating broader impacts, as discussed above. It is
also a good idea to look at past publications and funded research projects, at least to get a general
idea of the wide range of projects that are typically funded.

Solicit feedback from multiple individuals. Receiving feedback from various sources will
help to improve your application (Gaffey, 2014). As mentioned, the committee that reviews your
proposal will be interdisciplinary, may not have an I-O Psychologist, and will be especially
unlikely to have someone who studies your specific area of expertise. Getting different
perspectives helps you ensure that individuals with different areas of expertise are able to read,
understand, and appreciate your potential as an applicant and scholar. These individuals can
include your advisor, your lab mates, other graduate students who have applied to NSF grants,
and departmental faculty members. You don’t necessarily have to take the advice of each person,
but having more people read over your application will give you more insight about the
perceptions of the readers. In addition to the aforementioned audiences, you should also ask for
feedback from a variety of sources in alternative disciplines and outside the academic
community. These sources can include family, friends, and individuals from fields other than I-O
psychology.

Tell a good story. Why are you the qualified candidate for this fellowship? What
questions are you seeking answers to? Weave a narrative throughout your answers, building a
compelling case for your proposed research. A good story will be much easier for reviewers to
read than a disjointed application. In telling this story, be sure to think carefully about and
incorporate your relevant outstanding accomplishments to-date, because you might discover
connections that you hadn’t thought of before (e.g., you used R programming in a calculus
course, but this programming will help you in conducting psychological research).

Set yourself apart. How is your application better than other applications? Remember that
reviewers will be reading many applications, so you want to ensure your application stands out.
Be sure to highlight the importance and value of your proposed project.

Don’t be shy to reach out! You can contact NSF through their website if you have
questions that are not answered in the online materials. Often, individuals in charge of a given
program are willing and timely when providing applicants with additional information and
feedback.

Start early! The application process will take you longer than you think, especially if you
go through several rounds of feedback with your major professor and others. Starting early gives
you, your letter writers, and your collaborators time to really develop the project into the best it
can be.

FAQs

The following frequently asked questions are common questions you may have while
progressing through the application process.

When is the deadline this year?
The deadline changes from year to year and varies across disciplines. For 2016 awards, the
deadline for psychology is October 29, 2015 at 8PM Eastern time. For the most up to date
information, consult the online announcement:  
http://www.nsfgrfp.org/applicants/important_dates

How many applications does NSF receive for the fellowship?  
About 12,000 applications.

How many fellowships are offered annually?  
About 2,000 fellowships.

How competitive is the fellowship?  
The success rate is about 17%. While this is competitive, the success rate for the fellowship is not much different from getting published in a top tier journal. Moreover, this success rate is actually much higher than the admission rates for many of the top I-O graduate programs.

How much is the stipend awarded with the fellowship?  
For 2015 awardees, the stipend was $32,000 annually for three years, accompanied by a $12,000 educational allowance that can be used toward tuition and fees (this is paid to your institution).

I started graduate school last fall. Am I still eligible?  
Yes, you are still eligible unless you completed any other graduate study between your undergraduate program and the start of your current graduate program.

I took graduate-level courses at my undergraduate university, does that make me ineligible?  
No, graduate-level courses taken as an undergraduate do not count toward the limit of graduate study.

What criteria will be used to evaluate my application?  
Applications are reviewed by a panel of social scientists based on two primary criteria: intellectual merit and broad impact. These criteria are used to assess the merits of the applicant and research statement simultaneously as a whole package. In your personal and research statements, describe any unique or outstanding past experiences, as well as future opportunities and areas of growth that speak to these criteria.

When will applicants be notified of the results of their application?  
Applicants will be notified via email around early April.

Will I receive feedback from my application?  
Yes, applicants receive anonymous copies of constructive comments provided by NSF panelists.

What benefits are there for applying if I don’t end up receiving the fellowship?  
The application is great practice for applying for other awards, job applications, and for writing publications. You may also gain professional connections from the application process.

When should I start preparing for the application process? Where do I start?  
Because the application has been available since August, now is a good time to start the formal application process. However, it would be beneficial to take other preparatory steps before then. You can make yourself competitive by engaging in activities that demonstrate your ability to
have broad impact from your research on your application. For instance, you may want to begin training and mentoring undergraduate students, developing training programs based on research results, or starting an informary blog. Also try to keep new project ideas developing in your research pipeline, ideally with some feedback or guidance from your major professor or a mentor. Having a working idea will save you time, effort, and stress when drafting the research for the application. Finally, find and ask your three reference writers as soon as possible to ensure they have plenty of time to work on your letters.

In order to provide additional perspectives for students considering applying to NSF’s Graduate Research Fellowship Program and to complement the toolkit for applicants, we asked former student recipients of the award, their advisors, and application reviewers some questions related to the application process. Below is a synopsis of their responses.

**Student Recipients:**

**How did you incorporate the feedback from multiple individuals into your application?**

- “I incorporated the suggestions that I felt were most in line with my goals for the work and would have the greatest impact on my final outcome. As some feedback contradicted others, it was very important that I first established the main ideas and goals of my application materials so that I would be sure to use only the suggested changes that were consistent with my framework.”
- “My editors took slightly different focuses when reviewing my application so the feedback was very easy to incorporate. Their complimentary feedback ensured that my drafts constantly improved and were polished from every angle.”

**What is one aspect of the application you wished you approached differently?**

- *Research Proposal.* “What they want to see is that your research plan is well thought out and that you are capable of executing it. There's no need to stress out about the specific details of your proposed research (manipulations, measures, etc.). In the end they're funding the researcher, not the research, and what's most important is convincing them that you have the know-how, resources, and support to take a great research idea and put it into action.”
- *Personal Statement.* “I wish I had been a bit more creative during the writing process.”
- *Time Allocation.* “I would advise others to approach time allocation based on component difficulty and progression of ideas at the time of applying.”

**What was the most difficult part of the application process in your opinion?**

All interviewed recipients agreed that the *research proposal* was the most difficult component. Creating a project that was specific enough to be practically meaningful, yet broad enough to potentially benefit many others was very challenging.

Specific challenges for the research proposal include:

- *Two page limit.* This is a small amount of space to go through background literature and theory while also providing an in-depth outline of one's research methods for the proposed project. To address this, cite what is centrally important, and make sure you are able to justify your hypotheses, but resist the urge to include every piece of literature that is remotely related to your project.
• **Broader Impacts Criteria.** It can also be difficult to address the NSF broader impacts criteria, but it’s very important. You need to emphasize how your project relates to these criteria, even if you think it’s obvious—don’t expect them to just read your project description and make the connection themselves.

**Could you describe how you addressed something that you considered a potential weakness in your application?**

• **Experience Level.** “I was only a graduate student for a few months at the time of my application submission. To address this potential weakness, I highlighted my research experiences from undergraduate school, the capabilities of the faculty members who would be supporting me in this research process, and the research skills I gained in those first few months of graduate studies. I focused on my willingness and ability to seek support from others and learn new skills as needed.”

• **Project Appeal.** “I addressed this potential weakness by finding pertinent examples that would interest and draw a reader in to the application (and the subsequent publication) was a very useful method that was instrumental in getting the award. Most proposals will have a solid methodology, but convincing the reviewers that your project is important because it addresses and answers interesting and engaging questions is a necessary thing to do.”

• **Scientific Basis.** “My research was on a very applied topic. That made it easy to address the broader impacts, but I had to make sure that it would still be considered ‘basic science.’ I went to great pains to discuss how my project would add to general psychological knowledge and not just focus on how it would change the world.”

• **Grammar and Wordiness.** “The first way I addressed this was keeping the formal writing tone and page limit requirements in mind. My editors were also invaluable. I asked them to point out places where I could be more concise. I would also take breaks from revisions and read my proposal aloud so that I could correct mistakes I may have previously overlooked.”

**Which part of the application did you find the most time consuming?**

All interviewed recipients agreed that the research proposal was the most time consuming component.

• “These essays require research, creativity, numerous drafts, feedback, and revisions to get right. The trick is starting early and asking for help from reliable editors.”

• “To draft a proposal for a 3 year project plan that I was invested in and that was persuasive enough to convince others, in a few pages, that this research was both possible and meaningful was no easy feat. I gained a deeper appreciation for the quote, ‘If I had more time, I would have written a shorter letter.’”

To save time, try to use any materials that you may already have.

• Build your personal statement from your graduate school application essays.

• Write up a research plan for a project that you've already started working on.

**Advisors:**

**How would you define your role in the application process?**

“Early on, the advisor is a sounding board for a student to talk through what they are thinking about as the idea for the application. In addition, the advisor can help the student narrow down a
topic that has both theoretical and practical/societal importance. Later in the process, the advisor can read drafts and give general suggestions and feedback regarding relative emphasis relative to the NSF criteria (e.g., scientific merit, broader impact), as well as strengthen the student's arguments in the application.”

What is one thing students could do to fully utilize the insight of their advisors throughout the process?

- **Start early.** Start brainstorming with your advisor as early as possible and begin your essays well ahead of time.
- **Ask questions.** A student may have a good research study idea but not really have a good sense of how to discuss the broader impacts, which is a key criteria for NSF.
- **Try to obtain successful proposals** from other students so you can see some examples.
- **Focus on a topic that is new, bold, and has great societal importance.**

What is helpful information that students can provide to aid in the writing of their recommendation letters?

“Students should provide letter writers with their essays and proposal for the project as early as possible. Additionally, a curriculum vita/resume is also useful to the writers. While students at that stage may not have many presentations and publications, knowing about the student’s research skills gained from various projects can help a letter writer convey the student’s capacity to complete the proposed fellowship project. Students should also send the writers numerous reminders, so they don’t forget to submit the letters.”

**Reviewers:**

**What characteristics distinguish the applications who are selected for funding from those who do not?**

“Strong applicants had high GPAs and previous research experience, such as publications and conference presentations. Successful applications were written clearly and logically, outlining research plans that were feasible and possessed potential for broader impact.”

**Have there been any instances that caused you to immediately eliminate an application from consideration?**

“Typically, applications are not immediately eliminated for one particular reason. Applications that lack logical flow and consistency or fail to incorporate all NSF criteria are likely to be rejected during the review process.”

**Can you describe the review process? How are proposals rated and by whom? How does the review panel reach a decision?**

“Each proposal is reviewed by three panelists, composed of faculty with research experience, mentoring experience, and a multidisciplinary perspective. Each review form includes ratings and comments for intellectual merit and broader impact, a summary
statement, and an overall score. Overall scores can range from 1 to 50. These individual ratings are submitted independently. Panelists then meet in groups online to discuss these applications in further depth (such as discussing when ratings for the same application diverge greatly). Applications that receive the highest scores are selected for funding. An additional set of applications will be selected for honorable mention, but are not funded.”

**What did you look for in the letters of recommendation to demonstrate the applicant’s potential?**

“Strong recommendations letters help connect the applicant’s previous accomplishments to the NSF criteria. Recommendations should provide evidence that the applicant has received strong and relevant training and that the applicant will receive strong mentorship relevant to the proposed research. Provide your letter writers a list of accomplishments they can incorporate into their recommendation. This information reminds your writers of what you have accomplished, as well as helps them think about these accomplishments considering the NSF criteria.”

For further information regarding the GRFP application process, please visit the NSF website in order to learn more about the grant and application process (https://www.nsfgrfp.org/applicants/).

If you are a faculty member or postdoctoral researcher, consider registering as a potential panelist for the the GRFP. Serving as a GRFP panelist is an excellent opportunity to apply your research and expertise to help identify future leaders and gain valuable perspective to share with faculty and students at your institution. For more information, please visit https://panelists.nsfgrfp.org/program_info/nsf.

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**References:**


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