Writing Successful Grant and Fellowship Applications in the Sciences

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Outline of Workshop

Part 1: Parts of the application

Part 2: Writing the essays

Part 3: Editing and revising

Part 4: Organizational tips

Part 5: Resources for grant writing

Part 1: Parts of the Application

What will you need to apply? Usually some combination of the following:

- Reference Letters (2-4)
- CV/Biosketch
- Transcripts, GRE scores
- Research Experience/Personal Statement
- Research Proposal

Part 1: Parts of the Application

Reference Letters – Whom to pick:

- Your recommendations should support your narrative
  - Choose recommenders who have worked closely enough with you that they can comment on the specific personality traits or accomplishments that you have brought up in your essays
- Pick recommenders likely to be known in the field, but best to have recommenders who really know you
- Be sure they will submit by the deadline!

Part 1: Parts of the Application

CV/Biosketch – What to include:

- Education/Training, including degree programs and relevant research, teaching, and/or work experiences (may or may not be limited to academia)
- Significant academic and professional honors
- All previous fellowships, scholarships, and grants
- Publications and presentations
  - Include “In prep,” “Under review,” and “Invited resubmission” if allowed
- Personal statement, if required

Part 1: Parts of the Application

Transcripts, GRE scores:

- Unofficial, electronic copies are often acceptable
- If you need to submit official copies, request them early & follow-up to make sure they are received
  - Request transcripts from UCLA in person at the Registrar's Office (Murphy Hall) or online via MyUCLA

Part 1: Parts of the Application

Essays: Research Experience/Personal Statement, Research Proposal

- Follow formatting guidelines (font type, size, spacing margins, references, footnotes, etc.) exactly
- Tailor your writing to:
  - Page limits
  - Type of fellowship/grant
    - Primarily funding you or the research?
    - Emphasis on completing degree / training for future career?

Part 2: Writing the Essays

Prep Work

Get used to talking about your project and yourself

Remember: Proposal = Persuasive Document

Argument is:

- Your project is feasible and significant
- You are qualified to undertake it
- It is a good fit for the mission of the funder

Part 2: Writing the Essays

Prep Work

Know the evaluation criteria

- Common criteria: Contribution to the field and to society, feasibility, innovation, academic merit
- May also include: Training potential, financial need, personal characteristics/history, diversity statement

Know your audience

- Reviewers in you field?
- Reviewers in related fields?
- Peer review (1-on-1) or panel review (group discussion)?
- Is there a program director with discretionary power?

Part 2: Writing the Essays

Create a narrative across the app. components:

- How do your life experiences (biosketch/personal statement) make you suited to do this research (research plan)?
- How does the research/training plan expand on past experiences to further progress toward career goals?
- Use personal statement to highlight elements of your CV, biosketch, transcript
- Ask referees to highlight specific aspects of your training
- Aim is to prove that (1) you are trained, motivated, and well prepared to undertake proposed research, and (2) that this research project is original, feasible, and meaningful within your field (or broader).

Part 2: Writing the Essays

Research Experience/Personal Statement

- Are you applying to a Personal Characteristic Fellowship? (Ford Foundation, Soros Fellowship, etc.)
  - Yes? Be sure to address that in your PS
- Is the Personal Statement separate from the Research Statement (RS)?
  - Yes? Remember to connect your PS to your RS
  - No? Weave in PS material into your RS

Part 2: Writing the Essays

Research Experience/Personal Statement

- Why you?
- What makes you different?
- Why are you passionate about research and science?
- Why are you the right one to do this work?
- What have you learned from your work experience that will enable you to be successful in your research?
- How can you benefit the field and society through research?
- Do your future goals make sense?

Part 2: Writing the Essays

Research Experience/Personal Statement: Tips

- Argument: Why you are an ideal candidate?
- Don't make it too personal
- Only describe hardships if you can also highlight specific positives that have resulted
- Don't feel trapped by chronology
- Isolate 4-5 points that you want the reader to remember about you

Part 2: Writing the Essays

Read 1-2 Successful Personal Statements (PSs):

- Online samples from successful NSF GRFP applicants:http://www.alexhunterlang.com/nsf-fellowship

  *In the live workshop we review the NSF GRFP 2014 Geosciences - Marine Biology PS, as well as a Personal Characteristics PS

Discuss:

- How is the PS formatted?
- Is there a theme to the PS?
- How does the writer:
  - Demonstrate commitment to academia? To society?
  - Connect past experiences to future goals?
- What is the level of detail?
- What impression(s) are you left with about the writer?

Part 2: Writing the Essays

Research Proposal

- 2-10 pages
- Is this the target of their funding, or is it you?
- Two main questions must be addressed:
  - Is the research original/relevant?
  - Is the research feasible?

Structure of the Research Proposal (2 pages / 10 pages)

The "Double Funnel"

- Introduction
(1 paragraph / 1 page)

- Big Picture Questions
- Your Specific Research Q's

Relevance

Originality

- Body of Proposal
(1.5 pages / 9 pages)

- Lit Review (1/2 pg / 4 pgs)
- Methods, Hypotheses/Results (1 pg / 5 pgs)

Relevance

Feasibility

- Conclusion
(1 paragraph)

- Relevance to Field
- Relevance to Society

Part 2: Writing the Essays

Research Proposal: Introduction (1 paragraph / 1 page)

- Purpose is to convince reviewers to want to read your proposal
- 1-2 paragraphs, should contain clear, concise, interesting idea
- Include a clear research question – what is the problem, why is it interesting?
- Be sure language is accessible to non-specialists
- Revise this section continuously

Part 2: Writing the Essays

Research Proposal: Introduction (1 paragraph / 1 page)

"Moves" overview adapted with minor modifications from p. 55 of Feak, C. B., Swales, J. M., Swales, J. M., & Feak, C. B. (2011). *Creating contexts: Writing introductions across genres*. Ann Arbor, Mich: University of Michigan Press.

Part 2: Writing the Essays

Research Proposal: Introduction (1 paragraph / 1 page)

- Move 1: *Establishing a Research Territory*
  - Show that the general research area is important, central, interesting, problematic, or relevant in some way
  - Introduce and review items of previous research in the area
- Move 2: *Creating a Niche*
  - Indicate a gap in the previous research, or extend previous knowledge in some way
- Move 3*: Occupying the Niche*
  - Outline purposes or state the nature of the proposed research
  - List research questions or hypotheses
  - State the value of the proposed research

Part 2: Writing the Essays

Research Proposal: Specific Aims (*optional;* ½ pg / 1 pg)

- Can be incorporated into the introduction, or be a separate document
- Usually 2-3 aims (too many seems overly ambitious)
- Content:
  - State concisely the specific objectives of the proposed research
  - Summarize expected outcome (include impact results will have on research field and possibly society)

Part 2: Writing the Essays

Research Proposal: Relevance (Lit Review; ½ pg / 3 pgs)

- What is the relevance of the question to the field (narrowly or widely defined)?
- How have other people addressed this question?
- Are there conflicting answers? Are there faulty answers? Are there unsolved gaps?
- Should end with your specific approach to answering the question, including specific hypotheses
- For short proposals, the research must be interesting enough that its relevance is clear by the first paragraph.

Part 2: Writing the Essays

Research Proposal: Feasibility

(Methods, Hypotheses/Results; 1 pg / 5 pgs)

- What will you actually do? Be specific!
- What is the data set?
- How will you acquire it?
- How will you analyze it?
- How will this answer the question? Provide pilot data or explanation of anticipated results.
- Are you capable of doing this research?
- Why is your institution the right place for this research?

Part 2: Writing the Essays

Research Proposal: Conclusion (1 paragraph)

- Return to relevance and feasibility, summarize these here
- Use non-technical language
- What is the take-home point?
- Focus on evaluation criteria!

Part 2: Writing the Essays

Challenges and common pitfalls:

Short essays:

- Challenges: writing must be clear and concise; research must be interesting and the relevance must be clear without pages of background
- Common pitfall: overly detailed or technical at expense of logic motivating research

Long essays:

- Challenges: keeping the reader engaged
- Common pitfall: not getting to the point soon enough, losing the logic/getting off track

Tips:

- Clearly label different sections
- Address explicitly each evaluation criterion

Part 2: Writing the Essays

Read 1-2 Successful Research Proposals:

- Online samples from successful NSF GRFP applicants:http://www.alexhunterlang.com/nsf-fellowship
- Online samples from successful NRSA F31 applicants (National Institute of General Medical Sciences): http://www.nigms.nih.gov/training/indivpredoc/pages/predoctoral-f31-sample-applications.aspx
- Online samples from other NRSA F31 applicants (Psychology, may or may not have been successful): http://psych.colorado.edu/~willcutt/resmeth_F31_samples.htm

*In the live workshop we review the NSF GRFP 2014 Geosciences - Marine Biology Proposed Research Statement as well as another, longer, research proposal for a different fellowship, such as the NRSA

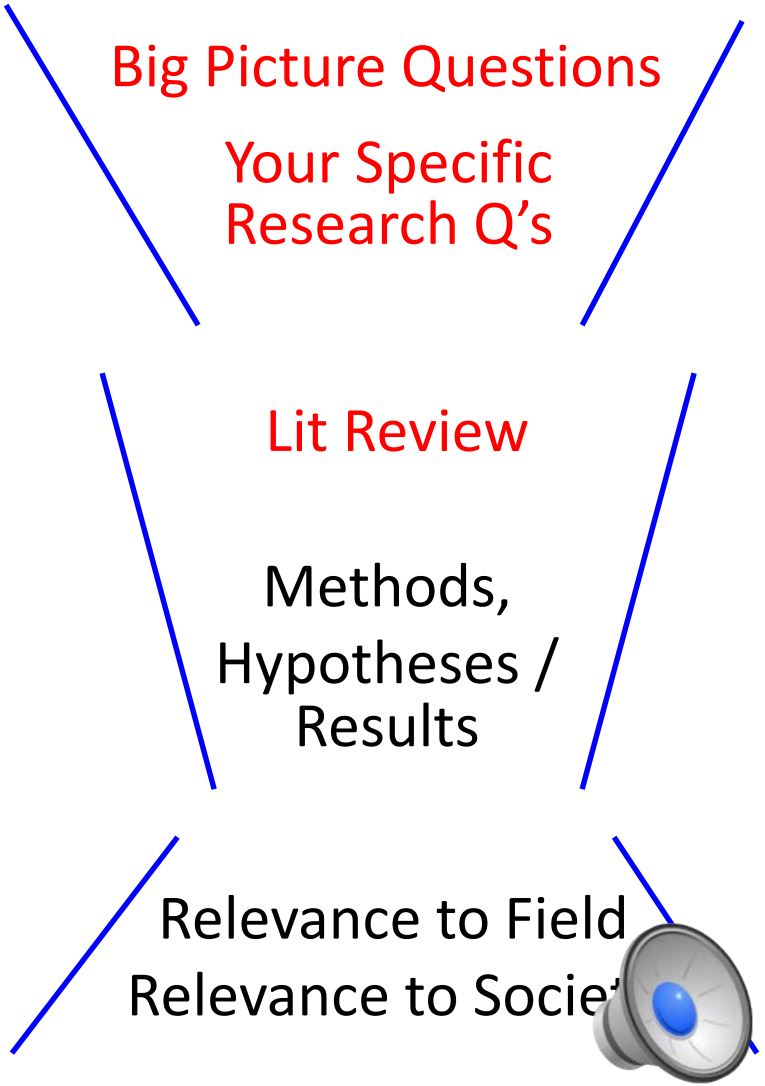
Part 2: Writing the Essays

Discuss:

- How is the research framed in paragraphs 1-2 of the proposal?
- How does the writer motivate the relevance and feasibility of the research?
- What is elaborated in the long (compared to short) proposal?
- What do you find to be effective or ineffective?

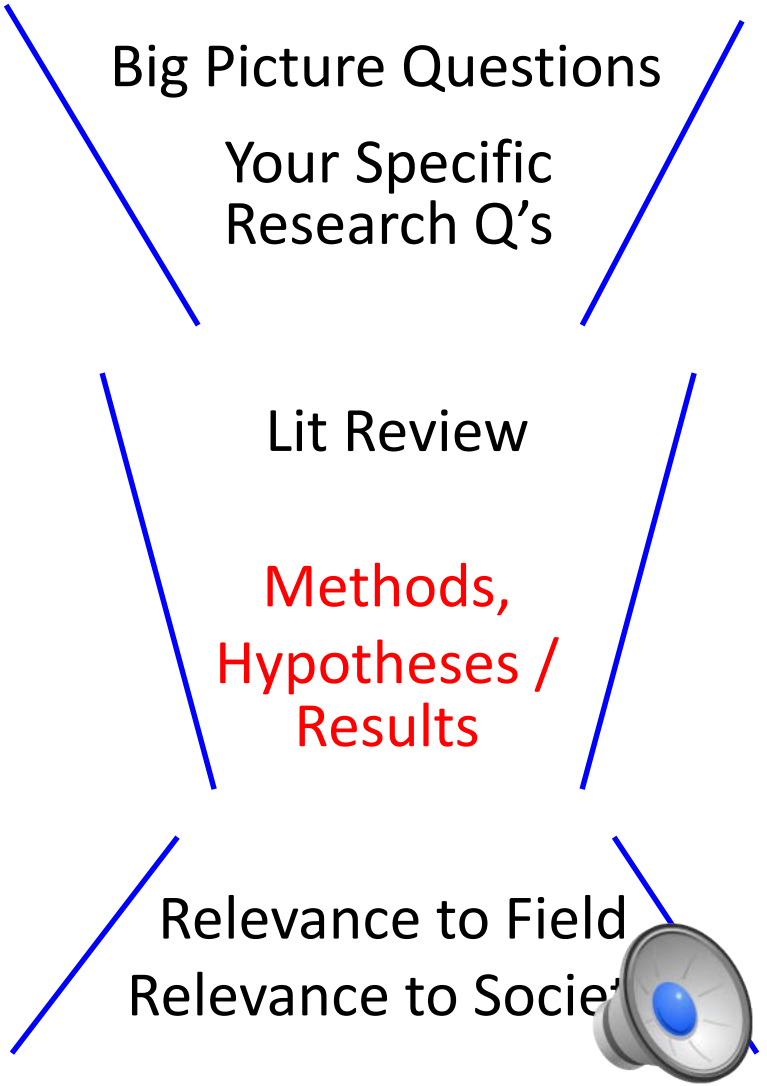
Part 2: Writing the Essays

- How is the research framed in the introductory paragraph and background section of the proposal?
- What is the level of detail?
- How does this early part motivate the relevance of the research?
- Does the writer include specific aims? Are they helpful?



Part 2: Writing the Essays

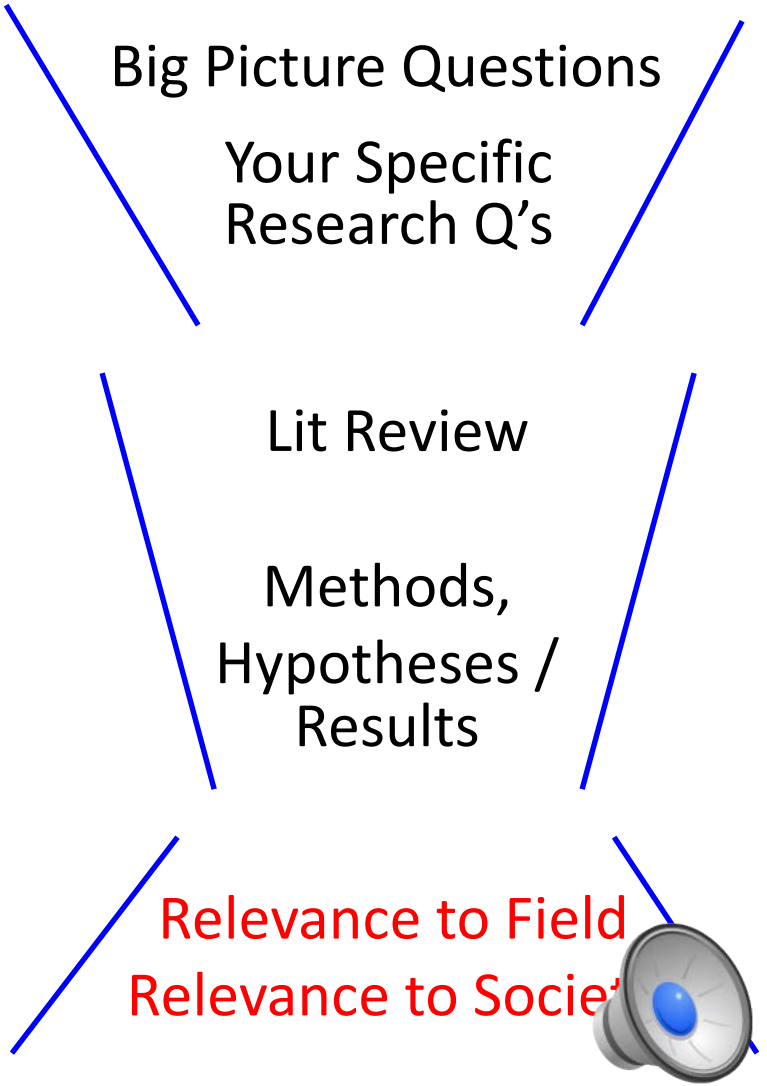
- How does the writer motivate the feasibility of the research?
- What is the level of detail?
- Is there preliminary data?
- Does the proposal include figures? Are they helpful?
- Does the writer address potential limitations of the research?



Part 2: Writing the Essays

- How does the writer conclude the proposal? What does the conclusion emphasize?

- NSF GRFP Application:
  - How do the two essays coordinate with each other?
  - What aspects do you think are effective for creating a common narrative?



Part 3: Editing and Revising

Get others to read your essays – feedback is critical

- Fellow students
- More advanced students who hold the grant/fellowship
- Faculty advisor or mentor
- Graduate Writing Center consultants
- Graduate Division Faculty Extramural Fellowship consultant

Plan to revise extensively!

Part 3: Editing and Revising

Content:

- Does it target the review criteria?
- Is it correctly balanced to address those?

Organization:

- Is it “skimmable”?
- Do the important parts stand out?

Argument: Explanatory, not descriptive, language

Style: Precise word choice, concise, jargon-free

Technical: Does it meet the font, margin, word limit, etc. requirements for submission?

Part 3: Editing and Revising

Rejected! What next?

- Get the rating sheets/reviews
- Why didn't the reviewers like it?
- How can you modify your proposal to help the readers understand your point?
- Can you apply again? Do it!
- Give yourself more time the 2nd time around; try to get additional, different feedback
- Take this proposal and rework it for another granting agency

Part 4: Organizational Tips

- Keep copies of every draft, numbered sequentially
- Keep notes from discussions with peers and faculty, all reviewers' comments
- Keep track of time spent, to gauge time needed next time around
- Create worksheet with deadlines, major evaluation criteria, communications with referees, etc.
- Start the online application early and get familiar with the submission site

Part 5: Resources for Grant Writing

- Resources linked through the GWC website
- UC Berkeley: Institute of International Studies
- NSF:

  http://www.nsf.gov/funding/education.jsp?fund_type=2
  - Lists funding opportunities for predocs and postdocs
- NIH:

  http://grants1.nih.gov/training/F_files_nrsa.htm
  - Lists grants for predocs, postdocs, and dual degree candidates

Part 5: Resources for Grant Writing

- GWC writing consultant appointments:
  - Several consultants have received grants and fellowships and are available for appointments (http://gsrc.ucla.edu/gwc/reservations/)
- Graduate Division:
  - Cherie Francis, Graduate Division Fellowships and Financial Services (cfrancis@grad.ucla.edu)
- Grant Writing courses through UCLA Extension