WRITING A RESEARCH STATEMENT FOR FACULTY APPLICATIONS

BRIDGING PAST WORK & FUTURE VISION

The **research statement** (also known as a research **vision** or **proposal**) is a piece of persuasive writing, similar to a grant or fellowship proposal, that enables a search committee to understand and assess the quality and viability of your research agenda. A successful research statement outlines how your unique experiences, expertise, and accomplishments prepare you to be a successful faculty member and leader in your field. After reading your statement, the search committee should understand:

- How your specific research interests fit into their department and your field as a whole
- The knowledge, skillsets, and community resources you bring into your future work
- The short-term specific and achievable research goals that will lead to grants and publications (within the tenure-track timeline, if applicable)
- Your unique and impactful motivations and long-term vision for your research

The typical statement structure and ratio of components may vary from field to field; obtain recent examples from others with similar interests and get feedback from those in your field to ensure that your statement is appropriately tailored for your area of work. However, the core function of the statement is always the same: to **show how your past work sets you up for success as a future colleague and expert in an exciting and productive research niche.**

WHAT'S THE CORE STORY OF YOUR RESEARCH?

Applications for faculty positions are extremely competitive. Many search committees are reviewing hundreds of applications in a short period of time. Make it as easy as possible for your readers to identify what makes your research questions compelling (and fundable!) and why you are the perfect person to answer them. A memorable way to convey the *what* and *why* of your work is to carefully craft a research story.

One useful storytelling tool is the **ABT (And – But – Therefore) statement**. An ABT statement includes the context of your research problem (AND), a concise description of the problem/question (BUT), and your solution (THEREFORE). You might use an ABT statement to introduce the high-level motivation and direction of your research in your introduction, or to convey the goals of specific projects or aims. You can also think of the ABT statement as being an "elevator pitch" for you and your future research.

> **Example:** Many bacteria have antibiotic resistance systems called "Bce modules" which **[and]** protect the cell from clinically relevant antimicrobial compounds. However **[but]**, little is known about how these Bce modules work, what they look like, or how they contribute to the antibiotic resistance crisis. **Therefore,** we use cryo-electron microscopy to build 3D models of Bce module proteins in action to identify how we might block these this resistance machinery and increase the efficacy of our antimicrobial medications.

Distilling your work to its core problem, solution, and impact may help you keep your writing focused and coherent. The content in your statement should connect back in some way to this core narrative. If you are finding your ideas do not clearly mesh with your story, you may need to modify how you present the mismatched content or revise your core story to better encompass your interests.

Another strategy for developing a research story is to **develop a personal tagline**. In this exercise, think about the key terms, characteristics, values, and approaches that define you as a researcher. Can you condense these concepts down into a single sentence? Identifying the core themes that define you and your work may help you structure your writing to emphasize what makes you unique.

> **Example:** You have a strong biochemistry research background but often find yourself asking questions about community-level behaviors of your species of choice. Your work focuses on understanding how exactly individuals relate to their neighbors and adapt their behaviors to their surroundings.
>
> Potential tagline: "I am interested in the molecular mechanisms behind ecological interactions."

You can use this tagline to check if your research goals are framed in a way that creates a cohesive research vision. Do your goals clearly relate to this condensed description of who you want to be? Is the language in your statement too generic, or is it clear what makes you and your work unique and valuable?

DEMONSTRATING FIT & POTENTIAL FOR SUCCESS

Your research statement should convey to the search committee that you are a good fit for their department and have the potential for a sustainable research career.

Showcase the Significance of Your Work

Ensure that your statement clearly conveys the significance and novelty of your research and its potential to develop into a career-long exploration of questions that matter in your field. For example, does your research:

- Identify or address limitations of existing methods?
- Develop strategies to tackle important open questions?
- Apply new knowledge or technologies to solve real-world problems?
- Build on novel connections between fields that don't traditionally overlap?

Don't assume that readers will read between the lines to realize the impact of your research. Make the significance clear enough that anyone in your target department will understand why you do the work you do, not just the person whose work is mostly closely aligned to yours.

What Do YOU Bring to the Table?

Help the search committee see that you have the skills, connections, and academic savvy to act on your great research ideas. Some strategies for demonstrating your personal potential for success and aptitude for the job include:

- Noting any existing grants, or grants-in-progress on which you are a PI or co-PI
- Identifying potential funding opportunities that would be a good fit for your work
- Indicating any unique connections or collaborations you have established
- Highlighting key publications or awards related to the work you propose

Demonstrate Short and Long-Term Planning

Use your statement to demonstrate your ability to strategically plan on multiple timelines – both a bold and comprehensive vision for your career, and grounded, realistic goals for projects you will be able to start in your first few years in the position.

- Do you have a plan for hitting key milestones such as acquiring your first grant and publishing papers? Does your proposal suggest you will be similarly productive as other new faculty in your field at similar institutions?
- Do you have a well-defined research vision to keep you relevant, productive, and interesting in the long term? Can you think broadly about your field and develop novel ideas and projects, or are you unable to think beyond the next step of your current work?

Some writers address these questions by including a separate "long term goals" section at the end of their statement. Others incorporate their perspective on the future of the field into their introduction or project background.

You + Your Future Department = Success

Familiarize yourself with the language of the relevant department, division, research centers, etc. Can you frame your research in a way that echoes some of the priorities, values, and goals the institution? Can you identify areas where your research interests and skills will intersect with existing research in the departmental? Can you show how your project ideas will involve the department's students? If the position is associated with a specific research center or group on campus, how does your work align with their priorities?

Get to know the campus and its resources. If you are proposing a project that requires regular access to multimillion dollar equipment not available anywhere near the institution, you might not look like a good fit – unless you convey that you have an established relationship with a lab that has those resources and is willing to collaborate.

Does Your Research Fit the Institution Type?

Beyond the department itself, the *type of institution* to which you are applying defines the expectations of faculty, and as a result, will shape your research statement and other application materials. For example, at a large R1 university, your role may primarily be to do research while collaborating with a large team of TAs on a limited teaching load, while at a smaller regional school, liberal arts college, or community college you may be expected to spend a higher percentage of your time on teaching with limited access to support from TAs.

Different types of institutions may also attract students with different priorities, goals, and experiences. For example, undergraduates intending to go to medical school may have different priorities for research experiences than students considering research in industry. At an institution with broadly defined departments (for example a single "biology" department rather than separate "ecology" or "molecular biology" departments), a smaller percentage of incoming graduate students may have overlapping interests with your area of expertise, and you may have fewer colleagues with whom you can easily collaborate. At a primarily undergraduate institution, you may be expected to primarily work with undergraduates rather than relying on graduate students and postdocs.

The projects you propose in your research statement should fit within this institutional context. As you draft and revise your research statement, ask yourself:

- Are my projects of appropriate scope for the research expectations of the position?
- How can my research further the educational mission of the institution? Are there obvious projects for PhD students? Undergraduates? Whom will I be mentoring? Am I framing my research in a way that is accessible to the types of researchers and students in this department?
- Does my research statement work with my other application materials (such as teaching or diversity statements) to present me as a collaborative colleague who will pull my own weight in all aspects of the faculty role, including research, teaching, and service?

ORGANIZE WITH THE READERS IN MIND

Structuring the Statement

There are many effective strategies for organizing your research statement. Two general patterns you may discover while reading examples are:

1. Separate Past/Future Work: Some writers describe their past work in one section, and their future work in another (sometimes splitting the future work into short- and long-term goal sections). This approach helps clearly distinguish between work on different timescales, highlights how your work in the field will develop over time, and may help

you showcase your ability to plan not just a project you might do next year but also a long-term strategy for your lab.

2. <u>Combined Past/Future, Separate Topics</u>: Some writers organize their statement by research topic, combining their past work and future goals in each area within topic sections. This approach may be useful if your research falls into multiple distinct areas that would be challenging to describe as a single unit.

Either organizational strategy can produce an excellent research statement. Consider which format will make your research story easy to understand.

Eye-Catching Key Details

Make strategic formatting decisions to help the search committee glean key information from your statement at a glance. Consider **bolding summary statements** or <u>underlining important terms or concepts</u>. Make your section headings visible and informative. If appropriate, use numbered lists to break down information into sections that stand out.

If you include figures in your statement, ensure they are thoughtfully designed and easy to understand without familiarity with your work. Carefully choose elements that best demonstrate your abilities or provide pivotal evidence to support your proposed projects. Graphics may also be useful for showing relationships between research areas or depicting workflows. Follow visual design principles to make your figures appealing and clear.

How Much Jargon?

Your overall problem, goals, and significance should be easy to grasp by an academic audience from diverse backgrounds, while more technical details of your approach may be included as necessary to accurately describe your work and signal your expertise. Tailor the content of your statement to your audience; if you are applying to a broad and interdisciplinary department, you may have readers less familiar with the finer points of your research than if you were applying to a department with a lot of expertise in your area of interest. To help you keep your audience in mind, you might look up the department members and pick out one person who is close to your subfield and another who works on topics unrelated to your research. Keep both those specific readers in mind and try to write something they can navigate easily.