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#### RESEARCH STATEMENTS (AND JOB TALKS)





Supplement the cover letter and CV for most academic searches

### TEACHING & RESEARCH STATEMENTS



Research statements are more common in STEM fields and social sciences



Teaching statements are increasingly common for most academic fields

Writing with a tone appropriate for your anticipated audience is essential.

## **RESEARCH STATEMENTS**

 Departments are seeking to complement and/or enhance their current and future scholarly endeavors, SO...

 Statements should reflect some institution- and department-specificity.

### **HOW ARE THEY FORMATTED?**

- Typically 2-3 pages, max of 5
- Use sub-headings, white space, bullets
- Use only effective graphics, but sparingly

Materials

(HO)<sub>P</sub> The focus of my attention at the moment is in the synthesis of orthocarborane (and meta-carborane) cages substituted at the carbon with a long chain hydrocarbon chain containing a phosphonate end group similar to the one shown on the right. Eventually, I will be interested in the kinds of compounds these substituted carboranes will make with metal  $\bullet = BH$ centers. This project has two stages, the  $\bullet = CH$ first is to make the ligands ("hangers") and the second to understand their interactions with different metal centers.





#### Job Candidate

#### Chemical Research

I am a synthetic chemist, I enjoy mixing chemicals and making new architecturally interesting molecules and solid state materials. I became interested in inorganic chemistry because of one element Boron! (And Jim Spencer's enthusiasm as well, of course.) The cage structures and complexity of the boron hydrides, have fascinated my fellow Boron chemists for more than 40 years and me for more than a decade. Only one element away from carbon, yet its reactivity is so dramatically different.

At the moment, I have four applications to which I am applying my synthetic skills, new drugs for boron neutron capture therapy (BNCT) and new architecturally interesting materials, new carbohydrate ligands and the development of laboratories for teaching. Often the two are one in the same.

#### New Architecturally Interesting

The second stage however may prove to be trickier. As unstable as boranes are, their

metal complexes while more stable, are often more difficult to characterize. I am confident that I will be able to isolate both discreet compounds as well as complex layered materials such as the one shown here.

- Introduction
- Prior and current research projects
- Future plans
- Future research goals
- Student involvement in your research
- **Possible collaborations**
- Funding for future research



### INTRODUCTION

What is your research story?

An abstract

Elevator talk (why should we care about your research)



### INTRODUCTION

 "Secretary Arne Duncan recently stated, "I believe that education is the civil rights issue of our generation. And that is why great teaching is about more than education—it is a daily fight for social justice." My research work embodies his sentiment. The focus of my research looks at how a teacher exemplifies their sense of responsibility in the classroom. Responsibility as defined for my research work has been divided into three categories; responsibility of commitment, responsibility of knowledge, and the responsibility of action."

### PRIOR AND CURRENT PROJECTS

How current research contributes to field

Its relevance, distinctiveness, & importance (avoid obvious hype)

Use appropriate amount of detail (be specific but accessible)

Methodologies used

Include preliminary data sparingly

FUTURE RESEARCH GOALS Include research questions (if you have them) Short term vs. long term goals Consider plans for a 3-5 year period **Potential outcomes** Your excitement about your agenda Its relevance, distinctiveness, & importance How your research is related to others'

### STUDENT INVOLVEMENT

# Ability to advise graduate students on publishable research

### Incorporating undergraduates

- lab work
- courses on research
- independent study



### **STUDENT INVOLVEMENT**

• "In addition to mentoring undergraduates with their more independently inspired research projects, I welcome the opportunity to involve students in my own research. Most of the questions that I am interested in pursuing next lend themselves to a collaborative effort. For example, [....]. As I collaborate with students on my research, I plan on encouraging them to investigate their own side questions. To me, the most exciting part about science is thinking creatively about new avenues of investigation. I am eager for students to experience this for themselves."

### POSSIBLE COLLABORATIONS

- Industry
- Community
- Academy
  - Universities
  - Faculty
  - Interdisciplinary partnerships w/ other departments



### **POSSIBLE COLLABORATIONS**

- ed
- on the vulnerability and resilience framework, my foremost interest would be to develop a strong community partnership and compassion by collaborating with local agencies in [city] on behalf
- of
- underrepresented populations. This will include
- seeking funding opportunities in federal and local l evels to conduct an art-based action research plan t

#### "While focusing on the publication of my study bas

### FUNDING FUTURE RESEARCH

Potential funding partners

Experience with writing grants

Facilities needed to conduct the research



### **FUNDING FUTURE RESEARCH**

• "I would like to mention that not only are my study subjects readily available throughout the state, but it is also incredibly cost effective. For \$3,328, I have been able to establish my own research program and shift a 30-year old paradigm in the communication literature that took millions of dollars in funds from NIMH to establish! While I plan to apply for extensive grant funding to allow me to take high-tech approaches, such [...], my research record to date demonstrates that with modest funding, I am able to address important questions in my field.

## WHAT ELSE COULD I INCLUDE?

- Alternative projects
- Incorporating research in the classroom
- Scholarship on Teaching & Learning (SOTL)



## WHY DEMONSTRATE **INDEPENDENCE?**

"The best plans usually build on the prior experience of the applicant but are not direct extensions of their doctoral work."

Jim Austin, Writing a Research Plan, 2002

- Have creative new directions for the research
- Carve out your own research niche within the larger research effort
- Get advisors to emphasize your independence in recommendation letters



## **Teaching Statements**

#### **TEACHING STATEMENT**

- Other names:
  - Statement of Teaching Philosophy
  - Philosophy of Teaching
  - Teaching Interest Statement
- General Description/Purpose:
  - Part of Teaching Portfolio
  - Always a document in progress



# GENERAL FORMATTING SUGGESTIONS

 No required content or set format • Generally 1-2 pages • Present tense, first-person Avoid technical terms

• Paint a picture of who you are in the classroom









1.

### THREE MAJOR QUESTIONS

- What are your **goals** for teaching?
- 2. How do you **operationalize** these goals?
- 3. How do you know you've successfully met those goals?

### 1. GOALS

"I value helping my students understand difficult information. I am an expert, and my role is to model for them complex ways of thinking so that they can develop the same habits of mind as professionals in the medical field."

## 1. GOALS

"My primary goal in both lecture and lab is to help students become confident, independent learners who think critically and communicate clearly."

#### 2. OPERATIONALIZE GOALS

"I always try to create the kind of classroom where students know I am excited to teach them and an environment in which students *feel encouraged to participate*. I am genuinely interested in the lives of my students and I try to express this to them. For instance, I like to arrive to class fifteen minutes early and play music while talking to my students about their week."

#### 2. OPERATIONALIZE GOALS

"Most importantly, students should have a clear understanding of the scientific principle at hand and the appropriate experimental methods to address it. I have students peer teach as well as present their findings orally and in writing to ensure that they truly understand the rationale of an experiment rather than the steps of a protocol."

### 3. MEETING GOALS

"In my evaluations, students consistently comment that I am "always smiling," "very responsive," and "warm and engaging." They also often report that they can "tell I care" and that I am the first instructor with whom they have been comfortable enough to come for extra help. The emotional bridge that I build between my students and myself is fundamental to my success as a teacher.

### 3. MEETING GOALS

"Being demanding yet fair is by far my most difficult task. There are always gifted, selfmotivated students who will rise to any challenge I offer. What about those less driven, or less able? [...] Many of my students struggle early. My rules are simple: Don't panic, don't quit, come talk to me. [...]Ultimately, most students trust me and buy into the system. My grades are relatively high; not because I give students anything. The grades are earned."

### WAYS TO START WRITING

Make a list of the qualities of an effective teacher.

"Free-write" on a memorable experience in the classroom that you experienced or observed. Consider what went well, what you might do differently, and why.

Begin with concrete details: How would an observer describe your teaching?

Use the Teaching Statement App https://app.teachingadvantage.org/home

http://teachingcenter.wustl.edu/writing-teaching-philosophystatement Advisor

### **TALK IT OUT!**

#### GTA Supervisor/Coordinator

**Recent Alum** 

Drake Institute for Teaching and Learning

### EXAMPLE

- I want students to take responsibility for their own learning
  - 1. I create a learning environment of high standards
  - 2. They must come prepared to class They use information in group work & discussions I provide them with lots of support 3.
- - - Many office hours
    - Low stakes quizzes & homework  $\succ$

**Reflects on teaching** 

**Enjoys** teaching

Excels at teaching

Fit of teaching style

Personality

### COMMITTEES LOOK FOR...

### Writing/communication ability







#### WHEN AND WHAT







#### ON CAMPUS INTERVIEW



#### **RESEARCH TALK**







#### DEMONSTRATE COLLEGIALITY

#### DEMONSTRATE REACHING LOCAL UNDERGRADUATES



#### GIVE BROADEST AUDIENCE ACCESS TO YOUR VISIT

## WHAT TO PRACTICE



#### **Know your audience!**

Imagine it includes students They do *not* know as much as you on this topic



#### **Address topics in Job Ad**



Timing





#### Pace, volume, gestures

## STRUCTURE



#### Advance *one* point in rest of talk.

- Not every theoretical nuance
- Not every other scholar. Highlight your work.

Provide conclusion that connects to original A,B, C.

5



Provide slid visuals.

#### VISUALS/SUPPORTING DOCUMENTS



Consider whether there are detailed figures/quotations that would be more accessible in a printed handout.



Follow rules of PowerPoint design:

#### Provide slides with simple, helpful

Sans-serif font

Not too much text

Align well with text from which you're reading



Stick to plan

#### **ACTUALLY GIVING** TALK



audience (during talk)



Be ready to shine in Q&A

### Leave time for pauses/questions of

Mostly, they want you to have a chance to show off, not trying to "get" you Chance for you to demonstrate collegiality!

#### RESOURCES

- Writing a research plan [Science Careers]
- http://sciencecareers.sciencemag.org/career magazine/previous issues/ articles/2002 07 26/nodoi.4611149009600202486
- Writing a philosophy of teaching statement [UCAT]
- http://ucat.osu.edu/read/teaching-portfolio/philosophy
- Writing a statement of teaching philosophy for the academic job search [University of Michigan CRLT]
- <u>http://www.crlt.umich.edu/sites/default/files/resource\_files/CRLT\_no23.p</u> <u>df</u>