(My) Guide to Crafting a Successful Chalk Talk

Academic Application & Early Career Success Series

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My background / qualifications

- Applied to ~75 jobs in chemistry, chemical engineering, biomedical engineering, etc. departments … in 2015-2016
- Gave ~15-20 chalk talks
- Served on 5 search committees while at Columbia

Process Diagram: Faculty Jobs

Preparing for an on-site interview

- When invited to interview (by phone or e-mail), you can and should ask questions to help you prepare!
  - What is the standard interview set-up? What are they looking for in the position?
  - What is the audience for the research talk? The proposal / chalk talk?
  - How should you arrange travel?
  - Will you get to meet with students during your visit?
  - … etc.

Overview of an on-site interview

- Day 1
  - Back-to-back one-on-one meetings
  - Research Seminar
  - More back-to-back one-on-one meetings
  - Dinner
- Day 2
  - Chalk Talk
  - More one-on-one meetings

- There are lots of options for interview set-ups (1-2 days)
- All involve:
  - dinner with a few faculty
  - 1 h research seminar
  - 1-2 h chalk talk
  - 0.5-1 h individual meetings with faculty
  - meals with faculty or students
- The order of these can be highly variable!

What is the chalk talk?

- The research seminar showcases your major accomplishments (your past; think of this as a typical departmental seminar)

- IN CONTRAST: the Chalk Talk is your 'vision' for your lab and your academic career (your future)
  - Chalk Talks are often HIGHLY interactive
  - Format varies widely from place to place!

General guidelines for the chalk talk

- Practice, practice, practice
- Ask the search committee chair what they are looking for in a pre-interview phone call
- Share your most creative, new ideas (e.g. are you in 'Pasteur's quadrant'?)
- Make it clear that you have both the big picture vision and the ability to execute that vision (e.g. can you design an experiment!)
- Be respectful and prepared for a helpful scientific discussion
- Communicate that you have thought about running a research group
- You generally need enthusiasm from all faculty – both experts and non-experts in your field. Make sure everyone can understand the importance of the problem you are trying to solve!

Format of the chalk talk

- Two common formats
  - Powerpoint slides
  - An actual chalk / white board talk without any slides

  You need to know the expectations for the chalk talk for the specific department in terms of format and scope!
  - How long is the talk? How much time should you spend on research, teaching, service portions of the talk?
  - Is it a chalk board or a white board? Can you bring your own writing materials? What are the dimensions of the boards?

A chalk talk should be interactive

- The faculty are interested in finding out if you will be able to do high impact science, but also how you will be as a colleague for the next 5-50 years…
- How do you handle combative (or blunt) questioning?
  - You should keep your cool! This says a lot about your resilience
  - Don't take the bait and respond in a rude, terse, or angry way
  - Remember that it says more about the person asking the questions than it does about you … but keep this in mind if you do end up getting an offer…
- This is an opportunity to get feedback from experts on your ideas – you may learn a lot! It can be better to recognize a limitation of your work instead of trying to appear faultless and bluster through

Practicing your chalk talk

- You should practice before your interview
- Practice on your own, with lab mates, with friends that are on the job market
- Practice in the format(s) you will be expected to present in!
- Ask senior people you trust to practice with (e.g. current / former advisors)
- Ask your PI for help in recruiting faculty to sit in on your practice
  - At best you will only be able to do this once! So pick a single format

Parts of a good chalk talk

- BRIEF re-introduction to who you are
- Two to three major research thrusts for your lab
- How you will integrate into the department/university

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  - VERY limited (1-2 slides) recap of your research seminar (in case anyone missed it!). These are your qualifications to do the proposed work!
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- How you will integrate into the department/university
  - Who are potential collaborators? Any relevant institutes or centers?
  - What will you teach in your department (if applicable)?

Additional information to have on hand

- Lab growth plan over the next X years (~5)
- Infrastructure you need for your work (e.g. fume hoods? tissue culture hoods? vivarium? etc.)
- Equipment you need to buy (and ideally an order of magnitude cost)
- Overview of your funding strategy
- Summary of potential collaborators (internal and external)
- (if relevant) what classes you would teach and your approach to teaching

Activity # 1: high level overview

- On a sheet of paper, provide succinct (10-20 word) answers corresponding to the major parts of a chalk talk (see bullets on the next slide)

Parts of your successful chalk talk

- BRIEF re-introduction to who you are
- Two to three major research thrusts for your lab
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Activity # 2: sketch research thrust 1

- Story-board how you would convey the information for your first research thrust
- Consider how each element from the high level overview gets represented
- How many colors do you need to readily convey this information?
- How many chalk boards are you going to need in order to convey all of this information?

Activity # 3: practice out loud!

- Now re-create your storyboard while also explaining it
  - Try to whisper-talk … we will all sound a little crazy doing it together!
- Try not to look at your original storyboard while you do this if you can