



Faculty Panelists: Dr. Sharon Moran (ES), Dr. John Stella (FNRM), Dr. Melissa Fierke (EFB)

Graduate Student Panelists: Jesse Robinson (ERE), Stephen Balogh (GPES), John Wiley (EFB)

1. Round of Advice from Panelists

a. Moran (ES)

- i. Stay in touch with your committee: negative stories result from a lack of communication/coordination. Pin them down if you have to.
- ii. Schedule the capstone a bit before the defense to allow for feedback that you can use in your defense. Some time for reflection/feedback helps you to get a better sense of “your story.”

b. Fierke (EFB)

- i. Practice your capstone; vet it in your lab or friends prior to the public presentation.
- ii. Your thesis is due two weeks before your defense, but be sure to check in with each committee member, “look them in the face” and ask what they think, if they foresee any problems.
- iii. Make sure there are no spelling/grammatical errors, that your thesis has a logical layout, work cited are in order, consistent format throughout the document.
- iv. Look at the documents of your major professor's previous students, but also check with Suzette Vandeburg from OIGS for formatting guidelines.
- v. Use previous student’s capstones as a guide also, no need to “reinvent the wheel.”

c. Balogh (GPES)

- i. Previously defended MS at ESF, passed candidacies just last semester (FI 2012).
- ii. Providing food makes for a happy committee and potentially a smoother defense.

d. Robinson (ERE)

- i. Committee should have a vested interest in your success; no one wants you to fail.
- ii. Anticipate questions and address them in the document, be honest about the weaknesses.

e. Wiley (EFB)

- i. MS at different institution, passed candidacies Sp 2012
- ii. Know the deadlines to OIGS and to your committee, get a sense of it the semester before if you can.

2. Philosophical Points

- a. As a committee member, you really want to see the student do their best. You want to get the most out of the experience. The student framed the question in their thesis/dissertation, so big questions shouldn't be a surprise. It's critical to "workshop" the document to other students/faculty/your committee members. Don't rush the process, it's about preparedness (Stella).
- b. It's important to be able to respond to different styles of questions. Your committee is pushing you to the edge. Saying "I don't know" is okay, but say "here's what I do know." The process should be known as a "Thesis Opportunity", not a "Defense" (Stella).
- c. At some point you might get asked questions outside the scope of your thesis, don't be alarmed. Acknowledge your limitations but try to relate what you have learned: do your best to first answer the question then connect other thoughts you might have (Balogh).
- d. Don't be afraid to repeat the question back so you know what's being asked. Clarifying is okay (Fierke).
- e. Don't hit just the talking points; speak to the larger context of your system. You should be able to give a 1 min. elevator speech, a 5 min. explanation to mom, 10 min. presentation at a conference, 40 min. capstone – you should have these down cold (Stella).

3. Capstone

- a. Go to capstones, experience them. Take hints. You can also observe in a defense to "demystify" the process. Also make sure you have lots of pictures of your work (Fierke).
- b. Get a sense of your audience and couch your presentation. Practice with "new eyes" if you can, i.e., people unfamiliar with your work (Robinson).
- c. General format is 40 min. presentation, leave time for questions at the end. Don't overwhelm with jargon. Use the hourglass format of an article (Stella).
- d. If you feel anxious, there's a class on advanced presentation skills by Benette Whitmore. Also, ES submitted a grant for a presentation skills center, similar to the writing center, that may be in development in the future (Moran).
- e. Try to get experience giving a long presentation (Stella). GSA provides opportunities for student talks (contact Brent Johnson), as well as the upcoming Elevator Pitch Competition (<http://www.esfgsa.com/elevator-pitch.html>), and the Spotlight on Student Research poster competition (<http://www.esf.edu/spotlight/>).
- f. Question: is there a guide for the format?
 - i. My lab group passes down templates, you can model from that. Also, inject humor if you can, humanize your work (Fierke).
 - ii. There are good resources online too, "best practices for using powerpoint," etc. We can gather these resources (Stella).

4. Is There a Set Format for a Thesis Defense?
 - a. Depends on the department. The Chair of the committee represents you and they are there to ensure it's a fair defense, and that the student's not attacked. They also keep the time (usually 2 hours long). Generally, the major professor starts the round of questions, with time divided among committee members. Sometimes the committee takes a break after the first round, then start a second round with less time each (Fierke).
 - b. The first round can inspire the second round, which can be a more open discussion (Wiley).
 - c. It ends up as a gathering of really smart people talking to each other about your work, which can feel pretty cool (Robinson).
 - d. Make eye contact with the person asking the questions, focus on them (Balogh).
 - e. Usually it's two hours long (three hour block if including the capstone). The defense can also follow the hourglass format: starting with broader questions by your major professor, then more integrative questions by all, then the major professor again. Opening question may be "how did you get here, where do you want to go?" It's really a great opportunity, since you have the committee's undivided attention. Feed into it and make it a conversation (Stella).
 - f. The panic wears off after the first 1.5 hrs, then maybe you feel comfortable (Balogh).
 - g. Questions can relate to both the capstone and the thesis, since they are both representations of your overall work (Fierke).

5. Scope of Questions asked at Defense/Candidacies
 - a. It's really about your work and research. General questions indicate the committee member is perhaps unprepared. You know the most about your own work (Stella).
 - b. Check with students who have defended with certain professors before. Doug Allen will ask all about the species nomenclature. Know your basics too, like in EFB what's the difference between richness and diversity of species (Fierke).
 - c. You should definitely understand your statistical choices (Robinson).
 - d. In the case of candidacy exams, the questions tend to be very unique, and are a function of your committee's personalities. Sometimes the exams are structured around a list of key readings. Sometimes, anything's fair game within a body of knowledge (Moran).
 - e. COMMUNICATE, meet with each member of your committee prior to the exam/defense and understand where they're coming from, also in order to put your work on their radar. Bring your examiner on early, as their role is an additional set of eyes, external to planning/guiding committee, to add another perspective (Stella).
 - f. You can select an examiner as you declare your committee. Works out better (Wiley).
 - g. Candidacy exams can be open or closed book, but sometimes open causes pressure and scrambling. Written exams can have different formats, 3-12 questions depending on the professor, must manage your time. Meet with professors to see what their style is (Balogh).
 - h. Written candidacies have 2-3 possible styles: 4 days of written questions, write a big paper as an integrative exercise in 1 month, or an additional option in Chemistry (Stella).
 - i. I prepared by making a list of readings, read them in order, stayed focused, wrote a summary after each text was finished (annotated bibliography), then spent the last week reviewing it all (Wiley).

- j. That kind of preparation serves as a raw lit review for your final dissertation, too (Stella).
6. Strategies for Challenging Questions
 - a. It's okay to say "I don't know" sometimes, to ask the professor to "repeat the question", or to say when you think the question is out-of-bounds. Before your defense, think through what you would do differently or in the future – this is a typical question (Fierke).
 - b. Be honest about what you do know, where that boundary is. Don't wing it (Wiley).
 - c. Put your "I don't know" into the larger context, bring it back to your knowledge base (Stella).
 - d. You can say "I don't know" and you can ask for clarification – sometimes this leads to more of a "hint" as to their answer. Sometimes toward the end professors will ask questions that they don't even know the answer to. These questions generate great conversation – and are generally a good sign that your work is solid (Balogh).
 - e. Think of the advice you would give to the next person who might pick up your topic or work, or how you might extend your work. Give some thought to where you might publish your work, or who your audience might be (Fierke).
 - f. Consider writing your thesis toward a specific journal (Robinson).
 7. Do the Examiner and Chair Also Ask Questions?
 - a. The examiner is a full participant and will ask questions. With the chair, it depends on who they are. They certainly can ask questions (Moran).
 - b. My chair asked me to think about my work in a completely different perspective, and it generated good conversation (Balogh).
 - c. You can contact your chair and ask if they plan to participate, if you want to be sure (Stella).
 - d. One defense that I chaired, the student was like a robot, and I tried to give him an easy question but it really threw him off. I eventually abandoned the question, and it did not impact the student's passing (Fierke).
 - e. Bring a tabbed copy of your thesis so you can flip through the document easily (Balogh).
 - f. **But make sure it's the SAME copy (including page numbers) as your committee (Fierke).
 8. General Mistakes
 - a. Try not to rush toward a defense, and anticipate the hurdles as best you can. Try to plan out TA responsibilities not to fall around defense/capstone either (Moran).
 - b. Wear something that makes you feel good, confident (Fierke), and do dress up a bit (Stella).
 - c. Present as confident, even if you aren't (Wiley).
 - d. You know more about your work than ANYONE else, even your major professor (Balogh).
 9. Food?
 - a. Check with your major professor, but snack and coffee are usually important (Stella).
 - b. Have your friends or lab/office mates provide the food for you (Fierke).
 - c. ALWAYS use two hands on the pointer, and use it judiciously (Fierke).
 - d. Use custom animation or guiding boxes and skip the pointer (Wiley).
 - e. Don't lose the message of your work, keep it simple and practice! We want to see that you are a thinker, primarily (Stella).