SEI Research Interview Guide

Source: CU Science Education Initiative and Carl Wieman Science Education Initiative, with notes from UBC's Ashley Welsh
PDF and editable Word version: https://pressbooks.bccampus.ca/seihandbook/chapter/supplemental-documents/

This document outlines good interview practices (for student and faculty interviews) from the SEIs.

Good practices

General tips for all interviews

- Before conducting an interview, define what the objective of the interview is (e.g., exploring the student learning experience, course evaluation, etc.).
- Ask others to review your questions before you do the interview (faculty, students, or other DBESs can be useful in this regard). This will help you make sure your questions are clear.
- Phrase questions in interviews and surveys so that it is clear to your audience what you are asking.
  - Try out your questions on other people before using them. For concept interviews/surveys, try having faculty members or grad students answer the questions and point out any confusion they had.
- In most cases, starting out with broad, open-ended questions can be helpful before moving on to more specific questions. However, it may result in getting different types of answers than what you expect.
- Try to finish all interviews by asking if the person you are interviewing has any other comments/questions.
- Any surveys you give out should be as short as you can make them (while still getting the information you want) to get as many responses as possible. Most people don't like to take the time to fill it out if it's going to take too long. (10 minutes is a good length.)
- Summarize! After every interview try to sit down and write everything you remember about the interview and any important points you want to remember. Try to do this immediately or at most within 24 hours of the interview.
  - For more open-ended interviews, try sending your compilation of the interview (or transcription; see below) to the person and ask them if this summary is a correct representation of what they shared in the interview.
  - Although it is time consuming, transcribing the interviews can be extremely worthwhile especially if the research contains publishable materials. Develop a coding scheme to analyze the interview transcripts.

Faculty interviews

- Instead of sending out mass emails to get faculty members to volunteer for interviews/surveys, try sending emails to individuals or groups of individuals, and address them by name. They may feel more compelled to take the time to volunteer.
- In the first few interviews, go with very open-ended questions, then use the information from these interviews to come up with more specific questions for later interviews.
- It may be helpful to bring up what the faculty members' colleagues said about a certain issue to generate more discussion
  - It might help to get a better community discussion going among the faculty in the department.
  - This can be done anonymously by compiling what all the colleagues said into one lump of information to give to future faculty that you interview
- Make sure the faculty members know that the information you obtain from the interview may be shared with others (it is up to you how it may be shared) unless they specify something they don't want shared.
- When asking faculty about learning goals, try asking them how *they* think the students learn.

- When interviewing faculty about trying to develop new materials and practices for a course, try to get a better sense of their feelings about learning/teaching by asking them more specific questions.
- When trying to develop new materials and practices for a certain course, make sure to look at the courses following that course (courses students would move on to take). Find out what the teachers of these higher level courses expect their students to learn, and what they have found their students to be lacking.
- In general, good questions to ask are on:
  - How they think the students learn.
  - How they think they should teach to get students to learn.
  - What students are lacking when coming in to their class(es).
  - What knowledge basis, thinking skills, and affective attitudes they would like the students to have coming into their class, as well as after taking their class.

Student interviews

- Explain to students why you are conducting this research and how it may benefit them and their peers.
- Similarly to the faculty interviews, start with more open-ended questions, and then find common themes and create more specific questions to ask in later interviews.
- Start the interview off with some icebreaker questions to get the student relaxed. Examples:
  - How long have they been here?
  - Their year in school?
  - Did they attend another college before coming here?
  - What is their major? Why did they choose this major?
  - What is their favorite class? Why?
  - Have they had any classes in (your dept) before?
  - What do they want to do after they graduate?
- Try group interviews/focus groups for finding out about students' educational experiences.
  - Try emailing the students ahead of time and asking a series of questions, from which you can group them by similar attitudes.
  - Information obtained from the students may be richer/more honest; if the students in the group have something in common they may share more.
- Important aspects to capture about students' educational experiences:
  - How they use their resources (text, course notes, TAs, instructor, etc.).
  - How the information is structured; can they find what they need when studying.
- When creating concept tests for the students, try sending your questions to faculty members or grad students before giving them to the students you are interviewing to make sure the questions are clear.
- Give students the survey or concept test and ask them to work through it, talking as they go. Ask them to tell you where they get confused, and if they get quiet, probe them and ask them what they are thinking.
  - Have them explain everything they are doing by drawing pictures, etc.
- When you want to see how students solve problems, try giving them actual problems to solve; rather than asking them how they would solve the problems, watch them do it!
- Use probing questions to help students elaborate on their ideas/concerns (help students to reframe the problem and to be metacognitive).
  - Can you elaborate on what you mean?
  - Could you define what you mean by that?
  - What are you thinking about?
  - What do you think is missing from the question?
  - What do you need to know in order to complete this problem?
  - If you were at home working on this problem, what steps would you take to resolve it?
- Observing or helping at problem solving sessions is very helpful to see where students are having problems understanding the material.

- To find some common misconceptions, it may be helpful to look on the internet at course materials for elementary students and teachers. They are often full of common misconceptions about science
- Another way to get an idea of student misconceptions is to ask the faculty what they think students have misconceptions about.

Practices to avoid

General tips for all interviews

- Try not to make your questions too broad. This may result in getting several different types of answers and it may be difficult to compile the answers and find themes.
- Make sure your questions are not going to be too difficult for the audience, and also make sure the questions are not going to be confusing or misinterpreted.
- You don't have to follow your protocol exactly every time you do an interview. If something interesting comes up, pursue it. Follow your gut instincts. Your protocol will evolve as you continue to do interviews and find out what information is helpful.

Student interviews

- Try not to finish students' sentences when they are talking through their answers, and don't interrupt them. If they look like they are struggling with their ideas, let them think before helping them. Let pauses happen. It may seem like a really long pause and an awkward silence, but again, let the students think and give them the time to answer before you interrupt their thoughts with the next question.
- Be aware of how you may bias students' answers or behaviours.
  - Be careful not to use too much confirming language/actions (nodding, "yes", "good").
  - Be aware of your inflection and tone.