

**FIGURE 1****Interview questions used to generate faculty profiles.****Background and beliefs about teaching (< 15 minutes)**

1. Tell me a little bit about your teaching background. (probe for how long have you been teaching, in what settings/roles, time at BYU, what types of courses, etc.)
2. Tell me about a powerful, positive, or effective STEM learning experience that you've had as a student. (probe for what the teacher was doing, what you were doing, what made it such a good experience)
3. As an educator, what do you think your role should be? (probe for what your responsibility is in the learning process)
4. What do you think the student's role as the learner should be? (probe for what the student's responsibility is in the learning process, specifically what they should do in class and out of class)
5. Can you describe a time when you felt successful as a teacher? (probe for what you did and what your students did)
6. What do you think student-centered teaching is, or how would you describe student-centered teaching to a colleague? How is it different from traditional instruction? (probe for when you have used it in the past, what you have heard about it, what you think it's good for, when it is appropriate to use) Help the participants understand student-centered teaching as focusing on the learning that happens, not the teaching that happens.

**Current teaching practices (< 15 minutes)**

7. Please describe a typical day in your classroom. (probe for what you are doing and what the students are doing, for how much time/what proportion of class for both)
  - a. What types of content do you normally teach via lecture? Via student-centered methods?
8. What do you see as some of your strengths as an educator?
9. What do you see as some of your challenges as an educator?
10. Tell me about a time you decided to try something new in your class.
  - a. Probe for motivations: WHY did you want to change?
  - b. Probe for strategies: WHAT were you trying to change?
  - c. Probe for social context: WHO did you talk to about the change?
  - d. Probe for barriers: WHAT made the change difficult?

**Ecological Model of STEM Faculty Instructional Decision-Making (< 15 minutes)**

11. What barriers keep you from using more student-centered approaches? What do you think would enable you to use more student-centered approaches?

*Personal factors*

12. What changes do you hope to make in your future teaching? (Probe for student-centered teaching: Is that part of the participant's goals?)
  - a. There are pros and cons to any teaching strategy. What do you think are the pros of (your chosen strategy)? The cons?
  - b. What do you think might make this change difficult?
13. How confident are you in your abilities to use student-centered strategies?

*Social factors*

14. Tell me about the teaching culture in your department. What expectations are there around teaching? (probe for expectations of colleagues, students, the department or college leadership, and disciplinary societies)

*Environmental factors*

15. Are there any factors outside your control that you think influence your ability to use student-centered strategies in the classroom?

**STEMFI**

16. What are you most excited about or what do you hope to gain from your STEMFI experience?
17. What are you most worried about when you think about your participation in STEMFI?
18. How else can we help you have a successful STEMFI experience? How can we prepare the workshop to be most effective?