

Special Session

Honing the craft of conducting interviews in engineering education research

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Outline

- Welcome
- Background
- Activity 1: Honing the Craft of Qualitative Interviews
- Activity 2: Questions in Semi-structured Interviews
- Best Practices
- Group Discussion

Introductions



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Session Objectives

1. Introduce a discussion on pursuing quality and care in data collection for interview-based research.
2. Practice reflection as a way to develop quality in conducting interviews.

Background



- Engineering education research heavily informed by qualitative studies that rely on interview-based approaches
- Quality of studies and depth of knowledge claims rely heavily on the quality of interviews
- Prior research emphasized establishing protocols
- Craft of **conducting interviews** less shared in literature

- Henderson et al., 2023; Huff et al., 2021; Boklage et al., 2019; Gelles et al., 2019; London et al., 2022; Rodriguez et al., 2019
- Huff et al., 2021; Mann, 2016; Brooks & Huff, 2023; Weiss, 1995;
- Jacob & Furgerson, 2012; Castillo-Montoya, 2016

Modes

- **Synchronous (face-to-face vs. virtual)**

- Face-to-face has been the standard
- Held face-to-face, by telephone, or virtually through audio/video or messenger software

- **Asynchronous**

- Participants complete in their own time
- Email, audio, or video recordings
- Evidence suggests that asynchronous might be more robust

- **Individual vs. Focus Group**

- Individual (personal narratives)
- Consider environmental factors (power, influence, group dynamics)

- Schober, 2018; Carr & Worth, 2001; Janghorban et al., 2014; Opdenakker, 2006
- Ratislavová & Ratislav, 2024; Lukacik et al., 2022
- Secules et al., 2021; Walther et al., 2011.

Structures

- **Structured**

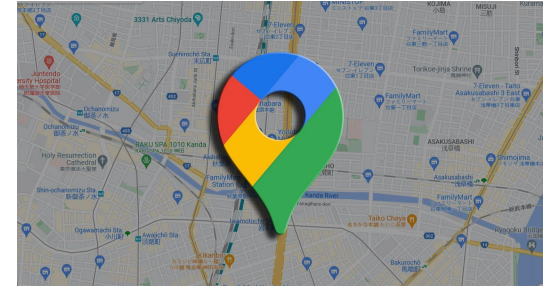
- Standardized questions
- Typically, same order

- **Unstructured**

- Unrestrained by protocol
- Guided by a checklist or topic list

- **Semi-structured**

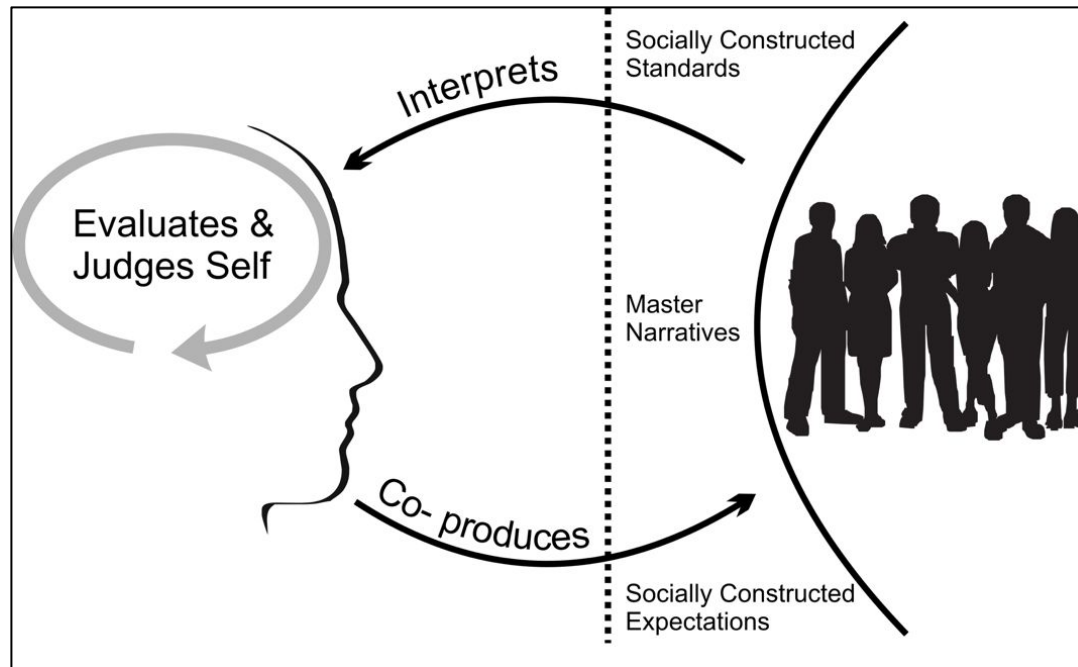
- Predetermined protocol
- Protocol as a guide
- Seen most frequently in engineering education research



- Leydens et al., 2004; Mann, 2016;
- Huff et al., 2021; Mann, 2016; Brooks & Huff, 2023

Activity 1-Conducting Interviews

Professional Shame

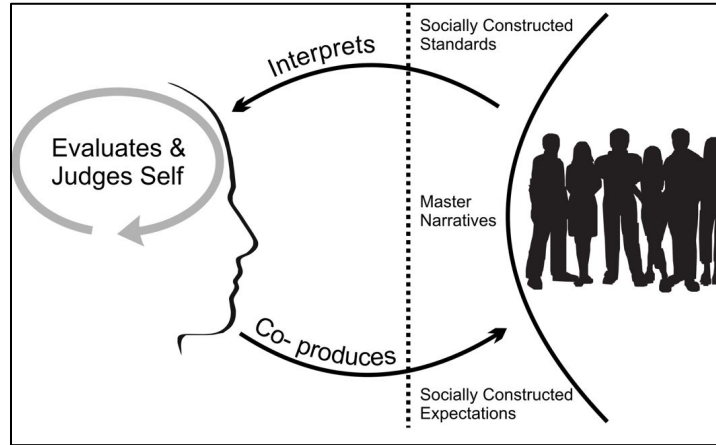


Prior Work on Professional Shame

Lived Experience of Professional Shame for Engineering Students

Junior-level students from marginalized gender and race categories ($n = 7$) using interpretative phenomenological analysis (IPA) to analyze interviews.

White male students in their junior year ($n = 9$) using IPA to analyzing interview transcripts.



Social Construction of Expectations in Engineering Education

Ethnographic analysis of focus group transcripts ($n = 10$) with junior-level engineering students from two universities ($n = 38$).



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Activity 1-Conducting Interviews

Activity 2-Honing the Craft

Evaluating the Quality of the
Interview

Interview Quality Reflection Tool
(IQRT)

IQRT

- For each question **asked**, consider:
 - What was the **goal** of the question?
 - Was the question you asked **aligned** with the goal? (Yes/No)
 - Was it **understood** by the participant? (Y/N)
 - Did it **detract** from their flow of thinking? (Y/N)
 - Did you introduce a **new concept** to the interview? (Y/N)
- In general, how did the question affect the interview? Use the comment space to note your thinking.

IQRT



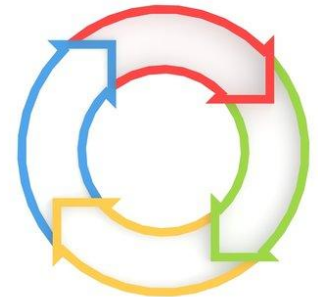
Huff, J. L., & Brooks. A. (2023). *Interview Quality Reflection Tool*. Open Science Framework.
<https://osf.io/cavf9>

Best Practices to Hone the Craft

- **Show** that you are listening (eye contact and active listening responses)
- **Show** that you hear and understand and/or *want* to understand – through paraphrases, summaries, and “check-in” questions
- **Follow up** based on what seems most important to the participant - based on their animation, emotional language, or frequent return to a topic
- **Be aware of markers.** Robert Weiss defines a marker as “a passing reference made by a respondent to an important event or feeling state.” (1994:78)
- Follow up on these when you can
- **Ask for specific examples** rather than generalities – i.e., not “How do you...?” but “How did you... ?” or “Tell me about a time...”
- **Tolerate silence.** (Pauses, let me think about that)

Best Practices to Hone the Craft

- **Examining** other researchers' interview practices
- **Designing** a self-led interview project
- **Practicing** conducting interviews
- **Developing** a reflective interview practice
- Hands-on practice & reflection
- Several studies highlight the benefits of reflexivity in developing interview skills
 - Mentored supervision
 - Reviewing video-recorded interviews
 - Role-playing with trained interview participants or student colleagues
- Reflective **journaling** and critique



We want your feedback!



<https://bit.ly/fie23-ssf>

Questions?

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The Art of Conducting Interviews in Education Research



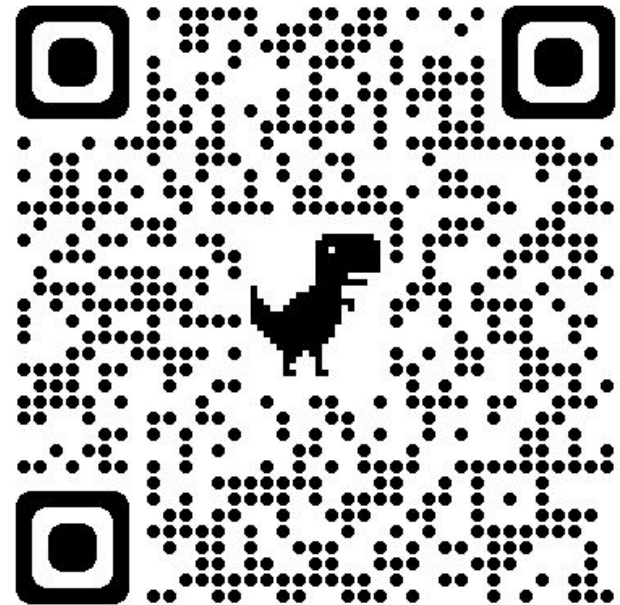
This work was made possible by grants from the National Science Foundation (NSF 2106206, 2045392, and 1828347). Any opinions, findings, and conclusions or recommendations expressed in the material are those of the authors and do not necessarily reflect the views of the National Science Foundation.



This workshop helps participants adapt interview protocols, emphasizes creating accessible research environments with mindfulness, and fosters reflective skills for evaluating their performance in conducting semi-structured interviews

WORKSHOP RESOURCES

Want to access slides and additional resources?



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Additional slides

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Getting Started with Semi-structured Interviews

1. Prepare for the interview
2. Write a guide
3. Introduce yourself and build rapport
4. Start with the simple questions and move to the complex ones
5. Be mindful of your questions
6. Know when to end the interview
7. Write down your impressions
8. Record the interview
9. Use reflective practices to improve your skills

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Purpose

- Cognitive - elicit data on participants' responses and interpretations of specific stimuli or situations
 - Think-Aloud Interview
- Ethnographic Interviews
 - Understanding experiences in natural settings
 - Often in conjunction with observations
- Life-stories
 - Experiences & narratives
 - Guided by a checklist or topic list
- Phenomenological
 - Robust accounts of personal lived experiences
 - First-hand accounts of lived experiences
 - Content + how they experienced the content (emotions, thoughts & reappraisals)
 - Co-constructing detailed examinations