Sustaining Engineering Education Research: Sharing Qualitative Research Data for Secondary Analysis

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Today’s Agenda

Understanding SDA
Identifying National Contexts
Pilot Project Summary
SHARE Framework
Small Group Discussion
Next Steps
Understanding SDA

- **Working Definition:**
The analysis of a single dataset that has been previously collected and analyzed now is re-used to achieve a new goal or answer new research questions.
  - Same researcher, new question
  - New researcher, new question (our focus here)

- **Challenges**
  - Human subject protection & participant confidentiality
  - Loss of context
  - Misinterpretation of data
  - Time investment versus rewards
  - Potential for gatekeeping around access

- **Possible opportunities**
  - **Data as product:**
    - Designing data for broad sharing (e.g., Design Thinking Research Symposium)
    - Designing data (and human subject documentation) for broad analysis
  - Collaborative SDA: Original researcher plays a role with a new researcher
Identifying National Contexts

Take an index card and answer these questions:

- In what country/ies are you working as a researcher?
- Have you ever done or wanted to do secondary data analysis?
- Is data sharing a common practice? Is data sharing encouraged?
- Is data sharing mandated?
  - If so, under what conditions?
Collaborative SDA: Pilot Project 1

- **Original Researcher**
  - Experienced EngE Researcher
  - Research-intensive institution
  - Federally funded project
  - Qualitative interviews
  - Graduate student support
  - Results published

- **New Researcher**
  - Experienced EngE Researcher
  - Teaching-focused institution
  - Only undergraduate engineering students as research assistants

- **Benefits**
  - Training of undergraduate students on deep qualitative investigation
  - Further exploration of data
  - Development of new scholarly networks
  - Support of existing findings and exploration of new findings

- **Challenges**
  - Providing context without findings
  - Learning data for which context is not as present
  - Development of new processes
Collaborative SDA: Pilot Project 2

Original Researcher
- Experienced EngE Researcher
- Research-intensive institution
- Federally funded project
- Qualitative interviews with marginalized population
- Graduate student support
- Results published

New Researcher
- Emerging EngE Researcher (grad student) + advisor w/o direct expertise in topic of interest
- Researcher-focused institution
- Limited access to participants of interest + concerns about overburdening minoritized groups

Benefits
- 100+ training hours for PhD student in qualitative analysis methods & work with Indigenous populations
- Development of dissertation research protocol

Challenges
- Original HSP protocol did not allow for SDA - reconsent required
- Learning data for which context is not as present
- Development of new processes

Shawn Jordan, Arizona State, E. Tyler Young and David Delaine, Ohio State

Lessons learned from pilot projects

- Context matters: links to the original researcher are key
- Mutual benefit is critical
  - What does the original researcher gain?
- Reflective practice supports engagement and questioning
  - Our pilots used semi-structured reflection questions as well as a log of ongoing questions from the new researcher for the original researcher
- Opportunities for learning on all fronts (from data, as researchers, through collaboration) are significant
- Logistics take time: Human subject requirements, data cleaning, documentation, and communication
SHARE: A Framework for Collaborative SDA

- Stewarding collaborative relationships
- Honoring context of data
- Aligning questions and data
- Responsibly reusing data
- Expanding capacity and ownership

Preliminary – Not Yet Published
Small Group Discussions

- Form a group of 3-4 participants
- Introduce yourself and your research context broadly
- Then get discussing:
  - What existing data sets do you have that could be amenable to SDA?
    - What opportunities does using the SHARE framework offer for that data?
    - What challenges does using the SHARE framework pose for that data?
  - How do national regulations and requirements impact your data sharing practices?
- Decide on a rapporteur to share the highlights of this discussion in the plenary
Next Steps: Building a Network

- How do we build a network of collaborations to support collaborative SDA and ethical data sharing?