Qualitative Research: Overview and Data Collection/Analysis

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Introduction

- Best suited for initial explorations of a group or phenomenon.

- A powerful tool for generating quantitative research questions.

- Has its origins in the disciplines of sociology, anthropology, and history.

Small group discussion

- Identify an educational research question(s) that might be studied via qualitative methods.

Qualitative vs. Quantitative Research (Gay et al., 2006, p. 400)

<table>
<thead>
<tr>
<th>Quantitative (quantitative)</th>
<th>Step in Research Process</th>
<th>Qualitative (qualitative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description and explanation oriented</td>
<td>Identifying a Research Problem</td>
<td>Exploratory and understanding oriented</td>
</tr>
<tr>
<td>Major role: Justification for the research problem/need for study</td>
<td>Reviewing the Literature</td>
<td>Minor role (often because it does not yet exist): Justification for the research problem</td>
</tr>
<tr>
<td>Specific and narrow: Measurable and observable data</td>
<td>Selecting Participants / Sample</td>
<td>General and broad: Participants' experiences</td>
</tr>
<tr>
<td>Predetermined instruments: Numeric data: Large number of individuals</td>
<td>Collecting Data</td>
<td>Emerging protocols: Text or image data: Small number of individuals or sites</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Analyzing and Interpreting Data</td>
<td>Text analysis</td>
</tr>
<tr>
<td>Standard and fixed: Objective and unbiased</td>
<td>Exploring and Evaluating Research</td>
<td>Flexible and emerging: Reflexive and biased</td>
</tr>
</tbody>
</table>
Features of Qualitative Research

1. Relies on data gathered during intensive field (real world) study.
2. The researcher is the primary evaluation tool or measure. Relatively little standardized instrumentation is used (at least at the outset).
3. Results are descriptive (done with words not numbers).
4. Aims at making holistic (systematic, encompassing, integrated) interpretations.
5. Inductive reasoning.
6. Participant perspectives emphasized. Explicate the ways people in particular settings come to understand, account for, take action, and otherwise manage their day-to-day situations.

Characteristics of Qualitative Research

1. A portrait (with words not numbers) of some group of people.
2. Determines how members of a culture function and interact within a natural setting.
3. Does not manipulate variables.
4. Tries to identify variables that occur naturally and to explain how they are interrelated.
5. Variable to be studied are not necessarily identified in advance.
6. Foreshadowed problems, the general ideas or notions the researcher brings to the study.

Qualitative vs. Quantitative Research

- Small Group Discussion
  - Review the qualitative mini proposal outline found in the syllabus.
  - Compare it to the quantitative mini proposal outline.
  - Identify specific ways in which the proposals will be different.
Validity (trustworthiness) in Qualitative Research

1. Descriptive Validity
2. Interpretive Validity
3. Theoretical Validity
4. Evaluative Validity

Strategies for Ensuring Validity (Guba, 1981)

1. Prolonged participation
2. Persistent observation
3. Peer debriefing
4. Collect a variety of raw data items
5. Check findings with participants
6. Collect detailed descriptive data
7. Develop detailed descriptions of the context
8. Establish and audit trail
9. Practice triangulation
10. Practice reflexivity

Strategies for Ensuring Validity (Wolcott, 1994)

1. Talk little, listen a lot
2. Record observations accurately
3. Begin writing early
4. Let readers "see" for themselves
5. Report fully
6. Be candid
7. Seek feedback
8. Write accurately
Selecting Participants

1. Who
   a) Informed of topic
   b) Real life

2. How
   a) Stratified purposeful
   b) Opportunistic
   c) Convenience
   d) Typical case

3. How many
   a) Time, energy, resources dictate
   b) Rarely more than 20 (as few as 1)
   * Thus sampling is very important

Data Collection

- Observation
- Interview
- Record/Document Review

*NOTE: Your mini-proposals should use all of these data sources.

Data Collection: Observation

- Fieldwork (the time spent observing the group being studied).
  - Field notes (example to follow)
    - Chronological account of events.
  - Memos
    - Reflective note designed to help the researcher focus on the whole.
  - Participant observation
    - Becoming part of the group being observed.
  - Privileged observers
    - Observer, but not a participant.
Data Collection: Observation

- Small group discussion
  1. What are the pros and cons of being a participant observer?
  2. What are the pros and cons of being a privileged observer?
  3. How do you overcome the identified “cons” and realize the identified “pros?”
Data Collection: Interview

- Unstructured
- Semi-structured (example to follow)
- Structured

Recording and transcribing the interview.

Collaborative Research on Preparing New Teachers

Data Collection: Interview

1. Introduction: The interviewee should introduce him or herself to the interview. Provide background information necessary to facilitate an effective rapport.

2. Motives and intentions: Explain to interviewee that the interview is part of a larger research effort designed to better understand how the UC Davis teacher training program works.

3. Protection of respondents: Explain to the interviewee that their identities will be protected via the use of pseudonyms.

4. Review Statement of Consent form: Obtain the interviewee’s signature on this form.

5. Logistics: Determine the availability of the interviewee and establish how long the interview will last.

Note: Questions 2 & 3 from Mirriam (1987).

Semistructured Interview Outline

Prior to Beginning the Interview

1. Introduction: The interviewer should introduce him or herself to the interviewee. Provide background information necessary to facilitate an effective rapport.

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Interview Questions

- Personal Questions
  1. Interviewee’s name and credential program?
  2. What lead to your interest in becoming a teacher?
  3. What lead you to choose the UC Davis teacher training program?

- Programmatic Questions
  4. What activities have you engaged in as part of your preparation to become a teacher at UC Davis?
  5. How were these tasks organized over time?
  6. How have your preparation tasks changed as the year progressed?

- Rewards and Challenge Questions
  7. Which of these activities have been most/least helpful in providing you the skills needed to become an effective teacher?
  8. What turning points—either positive or negative—did you experience in your work with the program this past year?
  9. What activities or experiences in your first-term program were the most rewarding/challenging/frustrating?
  10. What activity(ies) have you engaged in as part of your preparation to become an effective teacher?
  11. How did these rewards/challenges/frustrations change over time?

- Relationship Questions
  12. How would you characterize your relationship with other people involved in the teacher preparation program (i.e. other student teachers, university supervisors, cooperating teachers, K-12 students)?
  13. What has gone well or poorly for you with each of these relationships?
  14. What aspects of these relationships would you like to alter if you had this year to do over again?

- Evaluative Questions
  15. In what way did the design of the program help your preparation to become a teacher?
  16. Knowing what you do now, how might you redesign your training program experience to better prepare you to become an effective teacher?
  17. In general, what changes would you like to see in how teacher preparation programs in general are organized?
  18. Is there anything else about the university teacher training program that you think I should know about?

After Completing the Interview

1. Protection of respondents: Remind interviewees that their identities will be protected via the use of pseudonyms.

2. Feedback: Let interviewees know that they will be given feedback regarding what was learned from this research project.
A male student (code number 6) in a single subject credential program at the University was interviewed. The

A semistructured interview outline was used to help guide this interview.

This Interview was conducted as part of EDU 203's study of the University teacher training program. The general purpose of this study was to learn more about the process of preparing students to become certified teachers.

**SPEcific Interview Questions:**

1. What led to your interest in becoming a teacher?

2. What are your reasons for choosing to study education rather than another field?

3. How do you think your previous experiences have influenced your decision to become a teacher?

**General Research Questions:**

1. What are the factors that influence students' decision to pursue a career in teaching?

2. How do these factors differ for male and female students?

**Recording Arrangements: Recorded with the consent of Student 6**

**Place:** University, Room B

**Interview Date:** May 15, 1994

**Interviewer:** Stephen E. Brock

**Interview Setting:** Research Room

**Person(s) Being Interviewed:** Student 6

**Context:**

A female student (code number 5) in a single subject credential program at the University was interviewed. The

A semistructured interview outline was used to help guide this interview.

This Interview was conducted as part of study of the University teacher training program. The general purpose of this study was to learn more about the process of preparing students to become certified teachers.

**SPEcific Interview Questions:**

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**General Research Questions:**

1. What are the factors that influence students' decision to pursue a career in teaching?

2. How do these factors differ for male and female students?

**Recording Arrangements: Recorded with the consent of Student 5**

**Place:** University, Room B

**Interview Date:** May 15, 1994

**Interviewer:** Stephen E. Brock

**Interview Setting:** Research Room

**Person(s) Being Interviewed:** Student 5

**Context:**

A female student (code number 5) in a single subject credential program at the University was interviewed. The

A semistructured interview outline was used to help guide this interview.

This Interview was conducted as part of study of the University teacher training program. The general purpose of this study was to learn more about the process of preparing students to become certified teachers.

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INTERVIEWLOG

Minutes Speaker Quotes and Interviewer Comments

00.00 SB OK, why don't we just get started by you telling me something about what you would indicate that you always knew you would like teaching.

5 ...Yea...

SB ...teaching...

5 Um hum.

[5's interest in becoming a teacher cannot be traced back to any one event. She started out at University as a chemical engineering student. It sounds like she just sort of fell into becoming a teacher. Regarding her choice of University, it would appear that she chose it because of its familiarity "I was here already". She also knew and liked Supervisor B. She indicates that she really didn't want to move. "In fact this was the only place I applied"

02.00 SB ... telling me about some of the activities you have engaged in during the course of the program.

[5 describes her course of study as involving a placement in a school where she student teaches in two separate classes and aids in a third. She also indicates that journal writing, and small and large group seminars have been part of her preparation.]

03.00 5 ... LEP, LEP and a [pause] this quarter is, wait/interviewing and, its kinda like four sections, ones been interviews, ones been [pause] resumes, ones been, urn, sexual harassment, um, and today, a, is gangs.

Data Collection

- Record/Document Review
  - Archival Documents
  - Journals
  - Maps
  - Video and audio tapes
  - Artifacts

An Example

- Topic: The education of children with ADHD
- Initial formulation
  - Researcher bias
An Example

- Data collection
  - Interviews with all stakeholders (parents, teachers, students, support staff).
    - Semi-structured Interview Questions:
      - How are ADHD children best served?
      - What modifications should be made?
      - When are special education programs needed?
      - What is the role of general education?
  - Fieldwork
    - Privileged observer
  - Documents
    - Cumulative files
    - Standardized testing
    - Teacher comments
    - Teacher training materials

Threats to Validity

- Observer Bias
- Observer Effect

Leaving the Field

- Data driven
- Resource driven
- Ideally determined by data redundancy.
Data Management

No universally agreed upon procedures.
Use common sense.
Be as organized as possible
- Label, code, categorize

Data Analysis

During data collection
After data collection

Records
Observations
Interviews
Triangulation

Steps in Data Analysis

1. Reading/Memoing
2. Describing
3. Classifying
Data Analysis Strategies

1. Identifying themes
2. Coding qualitative data
3. Asking key questions
4. Doing an organizational review
5. Concept mapping
6. Analyzing antecedents and consequences
7. Displaying findings
8. Stating what's missing

Example of a Concept Map

Example of a Concept Map
### Data Interpretation

- What is important in the data?
- Why is it important?
- What can be learned from it?
- So what?

### Ensuring Credibility

- Are the data based on one's own observations?
- Is there corroboration from others of your observations?
- In what circumstances was an observation made or reported?
- How reliable are those providing data?
- What motivations might have influenced a participant's report?
- What biases might have influenced how an observation was made or reported?

### Mixed Methods

- **QUAL-quan Method**
  - Qualitative study followed by quantitative investigations
- **QUAN-qual Method**
  - Quantitative study followed by qualitative investigations
- **QUAN-QUAL Method**
  - Both methods undertaken at the same time
Next Week

- Qualitative Research: Narrative & Ethnographic Research
- Read Educational Research Chapters 15 & 16
- Portfolio Element #10 Due: Mini proposal 5
- Briefly describe a qualitative project relevant to one of your identified research topics. The preceding lecture and Chapters 15 & 16 provide the information needed to complete this activity.
- Guidelines provided in the syllabus.