A Brief Introduction to Qualitative Data Analysis

RECOUP
Research Consortium on Educational Outcomes & Poverty
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Focus of the session

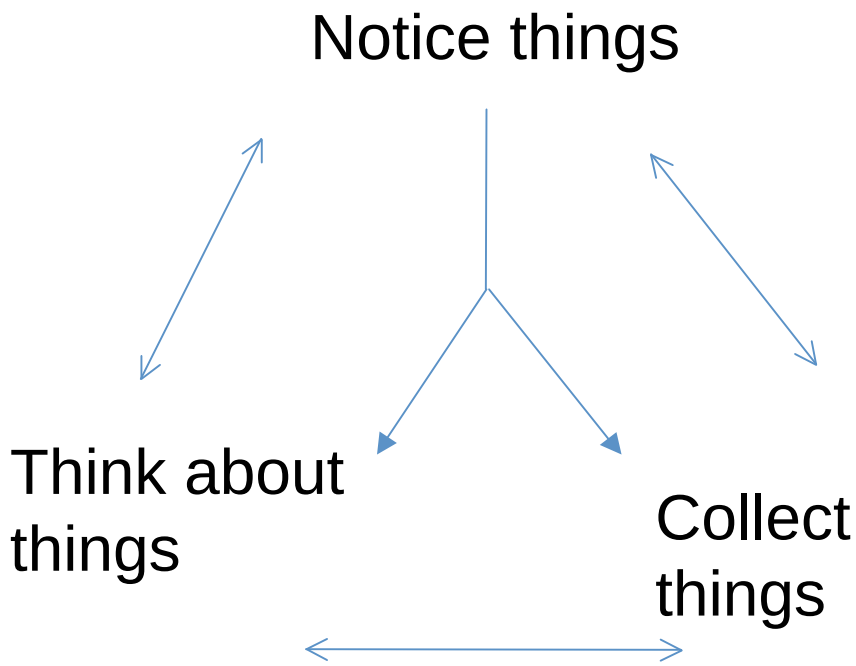
- Provide an overview of Qualitative Data Analysis
- Develop familiarity with some of the basic principles underpinning this process
- Provide opportunities to examine how projects evolve through time
- Enable participants to undertake analysis on their own or other team projects
- Help develop a coding frame and become familiar with it

Data analysis: similarities

- **Infer:** researchers carefully examine empirical information to reach a conclusion. The conclusion is reached by reasoning and simplifies the complexity of the data. There is some abstraction or distancing from the data
- **Public method or process:** researchers systematically record or gather data and in doing so make accessible to others what they did
- **Comparison:** this is central to all data analysis. All researchers compare features of the evidence they have gathered internally with related evidence. They look for patterns—similarities and differences, aspects that are alike and unlike
- **Strive to avoid all errors, false conclusions and misleading inferences:** researchers sort through various explanations, discussions and descriptions, and evaluate merits of rivals, seeking the more authentic, valid, true or worthy among them

Quantitative researchers …	Qualitative researchers …
Choose from a specialised, standard set of data analysis techniques that are highly developed, and build on applied mathematics	Are less standardised, with a wide variety of approaches possible. Often inductive approaches are used
Start analysis only after data has been collected	May start analysis along with data collection, and not as a distinct phase
Manipulate numbers that represent empirical facts, in order to test an abstract hypothesis	Create new concepts and theory by blending together empirical evidence and abstract concepts. Instead of testing, illustrate or colour in evidence showing that a theory, generalisation, or interpretation is plausible.
Assume that social life can be measured by using numbers. Manipulation of numbers that reveal features of social life according to the laws of statistics	Tend to be less abstract and remain closer to raw data

Qualitative Data Analysis process



Seidel, A. (1998)

QDA process

- **Is iterative and progressive:** the cycle keeps repeating. For example, when you are *thinking* about things you also start *noticing new things* in the data. In principle the process is an infinite spiral

- **Is recursive:** one part can call you back to a previous part. For example, while you are busy collecting things you might simultaneously start noticing new things to collect

Noticing

– First level:
  - Data collection

– Second level:
  - You do this by reading the record—if possible, many times. As you begin to notice things in the record you name, or “code”, them

– “more descriptive”

Collecting

- As you notice and name, the next step is to collect and sort

- “more analytical”

Thinking

- The goals are:
  - Make some types of sense out of each collection
  - Look for patterns and relationships both within a collection, and also across collections
  - Engage in constant comparison
  - Make general discoveries about the phenomena

Types of Coding

1. Descriptive coding – the variables – the ‘whats’
   - This is when coding is used to describe what is in the data.

2. Analytic/Theoretical coding – addressing research questions – the ‘whys’ and ‘hows’
   - These are codes based on the analytical thinking by the researcher about why what is occurring in the data might be happening.

How do we generate codes?

Bulmer (1979) lists ten different sources of themes, which range from:

- local commonsense constructs
- review of the literature
- researcher's values

Recurring themes in the data regardless of what the research questions were—even though they might seem irrelevant in the first instance

Approaches to Coding

1. Inductive or A Priori codes- these are identified from a range of sources ‘outside the data’, e.g.:
   - Previous research or theory
   - Research or evaluation questions you are addressing
   - Questions and topics from your interview schedule
   - Your gut feeling about the data or the setting

2. Deductive or Grounded codes- these ‘emerge from the data’ because you put aside your prejudices, presuppositions and previous knowledge of the subject area and concentrate instead on finding new themes in your data

additionally…

- Co-occurring codes- the same lines of segments of text may have more than one code attached to them

Words of caution (1)

"...a serious problem is sometimes created by the very fact of organising the material through coding or breaking it up into segments in that this destroys that totality of philosophy as expressed bye the interviewee—which is closely related to the major goal of the study"

- Therefore it is important to work back and forth between the parts (interview segments) and the whole (all we know about someone)
- **Crucial to maintain the context when coding**

Words of caution (2)

- “...the critical way of seeing, in my experience at least, comes out of numerous cycles through a little bit of data, massive amounts of thinking about the data, and slippery things like intuition and serendipity” (Agar, 1991: 193)

– Not a mechanical process but “a little bit of data and a lot of right brain”
– Draw on your reading of the literature and research experience to follow up leads

Basic rules for dealing with qualitative data

- Keep tabs on what you are doing with a good index system
- Generate themes, categories, codes etc as you go along.
  Start by including rather than excluding; you can combine and modify as you go along
- Dealing with the data should not be a routine or mechanical task; think, reflect! Use analytical notes (memos) to help to get from the data to a conceptual level.
- Be prepared to re-sort
- There is 'no right way'--thus it is even more crucial to be systematic, organised and persevering
- You are seeking to take apart your data in various ways and then trying to put them together again to form some consolidated picture. Your main tool is comparison.

Other things...

- Memos—these come in different types and have different roles

- Negative evidence
  - Events that do not occur
  - Events of which the population is unaware
  - Events the population wants to hide
  - Overlooked commonplace events
  - Effects of a researcher's preconceived notions
  - Unconscious non-reporting

Task 1

- Analyse an example
  - Segment and code the data by hand as individuals
- Then discuss what you have done in small groups
- Then de-brief and try to understand how people have come to different decisions

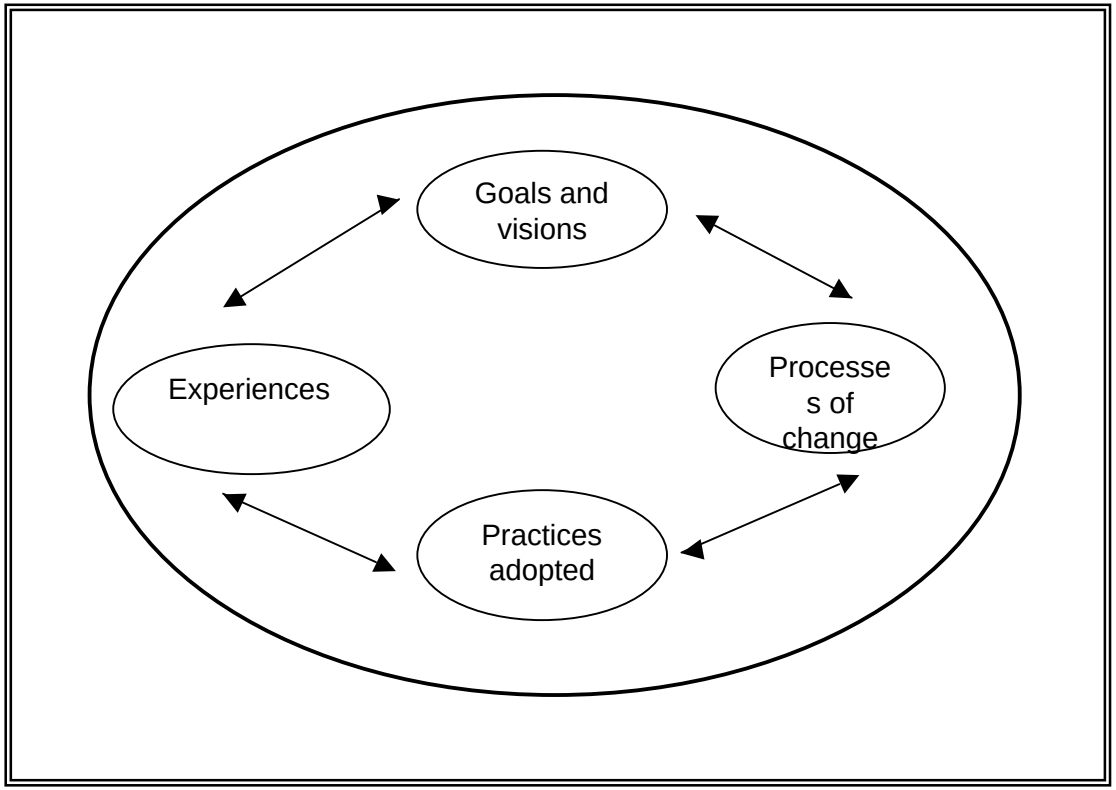
Sharing an example of analysis process from a project titled: *Exploring Inclusive Education in an Indian Context*

What is (are) the meaning(s) of inclusive education in an Indian context?

I) What is (are) the meaning(s) of inclusive education at the governmental level?

II) What is (are) the meaning(s) of inclusive education as construed by individuals working in schools?

Operationalising: ‘meanings’



Research sub-questions

i) What are the various goals and visions of inclusive education that have been envisaged at the government level and in inclusive schools?

ii) What are the processes of change that have been adopted in the field at the level of the government and schools to develop an inclusive system?

iii) What are the practices that have been adopted by inclusive schools, and teachers to respond to increased diversity in the classroom?

iv) What are the experiences of individuals who are involved in the development of an inclusive system of education?

Initial guide for interviews with teachers

Themes		SAMPLE QUESTIONS
1.	Introductory comments and warm up questions	-How long have you been teaching? -Which subjects do you teach? -How long have you been in this school?
2.	Understanding of the concept	-Your school regards itself as an inclusive school. What are the characteristics according to you, which make it an inclusive school?
3.	Processes of change	-What are the factors which led to this focus? -What kind of steps were taken after this decision? -Did you have any training?
4.	Current teaching practices adopted	-What kind of practices do you follow in your classroom to respond to the needs of all? -How did you learn these practices?
5.	Factors that are perceived as facilitating or inhibiting adoption of such a focus – school-related and parents-related	-What are the positive factors that helped? -What hurdles did you face in adopting this focus? -Do parents play a role in your classroom? -If yes, then what kind of role do they play? If no, do you wish them to have a role; why?
6.	Experiences of the teachers	-Do you think it is desirable to have such 'inclusive' classrooms? Why? -Are there any students for whom you think you will not be able to cater in your classroom? Why? -What impact do you think such a classroom has had on the other children?
7.	Changes perceived as essential	What changes or modifications would you like to see in your current set-up to assist in the smooth functioning of your classroom?
8.	Closing and leaving	-Is there anything else you want to share with me? -Thank you very much for your help.

Steps for analysis (extracts from PhD thesis)

- The first step was to read through all the data several times to gain familiarity with it....data reduction and analytical categorization of data into themes

- ‘open coding’ (Neuman, 2000: 421) was carried out, which primarily involved giving **descriptive codes**, and a low level of abstraction to help flag themes from the data. However, as the analysis process continued, the codes became **more analytical in nature**. Throughout the process I remained flexible and open to new information, new understandings and accordingly developed the codes. The initial concepts were developed, new concepts formed and some reformulated as the process of analysis continued. This ‘second pass’ through the data, termed as ‘axial coding’ (Neuman, 2000), involved the **organisation of ideas or themes in a coherent manner**. The final step was that of ‘selective coding’, which involved scanning the data and previous codes to organise the overall analysis **around several core generalizations or ideas**.

- The code-book (which can be built into the NVivo) included a detailed description of each code, inclusion and exclusion criteria and, in a few cases, exemplars of real text for each theme (MacQueen *et al.,* 1998).

Example of segments for the code: "Reasons underlying the shift" (towards inclusion)

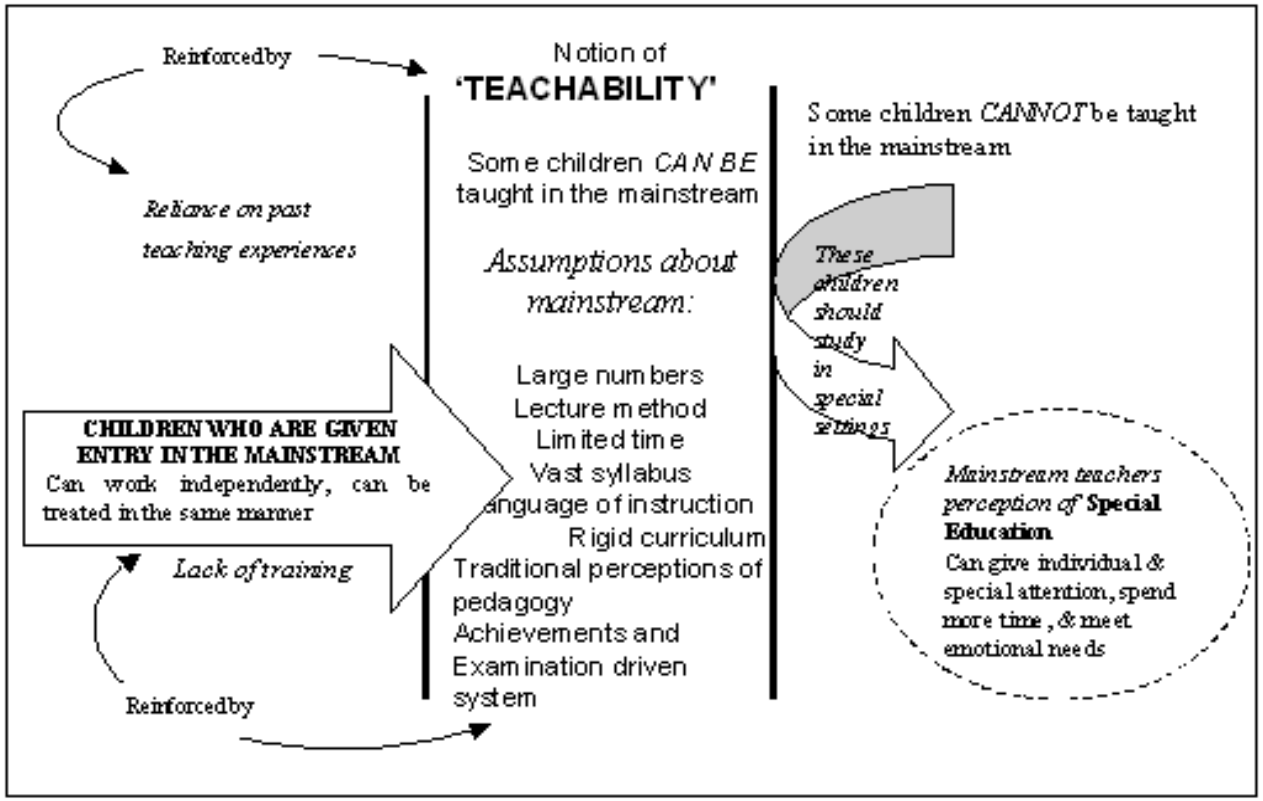
- This change is due to governmental pressure. When the government stopped funds to the special school, they insisted that a more inclusive focus must be followed to be able to get the funds. So to get more funds the school had to do this. (Usha Nanda)

- There was no point in keeping the child in a separate classroom, as we did not have extra funds. Also we could not think of a special educator because of the same reasons. The peers were motivated to help, the teachers were made to get involved. (Manisha Sen)

- The school first made this move when a parent whose one child was already a student here had a child who was spastic…Now they were living nearby and the mother approached me that she would like her child to come here, as he would also be a little occupied in the school and it would be good for him. I thought why not, the NGO also helped us. (Manisha Sen)

- Parents want their child to go to the main school. They are not happy that their child is in the special school, they are not accepting of this and are always waiting for them to move to the other school. (Jyoti Mate)

Bringing a range of codes together for developing theory



Notion of "teachability"- who it is framed and it impacts upon teachers beliefs and practices