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# NERUPI Toolkit: Data Collection Strategies

# Qualitative Analysis

## 5th June 2024

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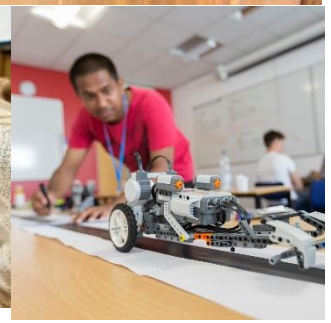

# Types of data

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**How can qualitative data help us to acquire a better picture and strengthen our evaluations?**

# Session plan

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1. Discussion of qualitative data
2. Issues and pitfalls
3. Approaches to thematic analysis
4. Dealing with issues and pitfalls
5. Quality criteria for qualitative research
6. Resources and signposting

**Session on qualitative research with examples: April 2023. Presentation available at: https://www.nerupi.co.uk/members/events/nerupi-reflexive-cycle-toolkit-qualitative-data-in-access-and-participation-1**

# What do APP practitioners do?

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1. Identifying problems/informing policies
2. Agreeing solutions
3. Targeting
4. Delivering activities/supporting effective practice
5. Monitoring
6. Evaluating
7. Collaborating/partnerships
8. Accountability
9. Convincing stakeholders

# Quiz!

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*You are running a pilot transition to HE programme for WP students starting at your university. This involves students arriving early, taking part in a series of 10 group sessions on campus over the first term, and having an informal one-to-one 'coffee and a chat' session with an existing student.*

*At the end of term 1 you've been asked to write an update report to a university committee about the project.*

**Q1. Which of the following types of information would you consider drawing on for this report….**

*……Assume ethical approval etc and free reign access to these etc ….*

# Question 1

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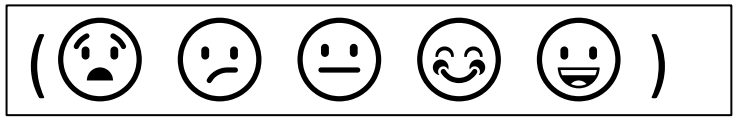
1. Your perceptions (from observing sessions) about how it's going
2. Video diaries made by students starting in HE
3. Transcripts of one-to-one sessions
4. A case study of a new student
5. Plasticine models created by the students to represent their identity (part of an activity)
6. Smiley face poll at each session for happiness at being a student



# Question 2

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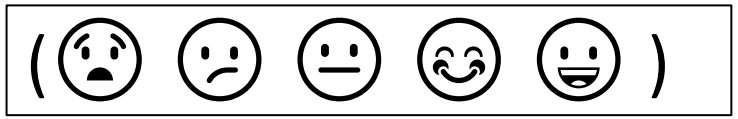
Which of the following would you call 'data'?

1. Observations
2. Video diaries
3. Transcripts of 121s
4. Student case study
5. Plasticine models
6. Happiness survey

Scan the QR or use link to join

https://forms.office.com/e/mYxgYNSMJc



# Discussion

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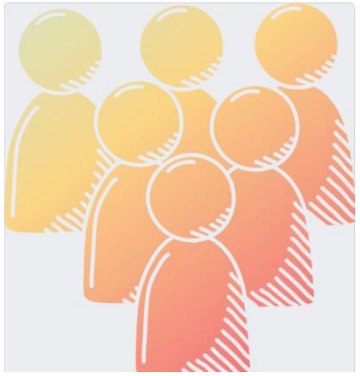

- What are the reasons?
- Did the answers differ?
- What lies behind these differences?
- What issues does this raise?

# Importance of Theory

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- Theory plays a central role in research/evaluation design and the interpretation of data
- What data is believed to represent influences how we analyse it
  - A factual account of phenomena/experience?
  - An expression of participant's desires?
  - An attempt to justify, claim/disclaim responsibility for actions?
  - An insight into a research participant's world view?
  - Created through interaction between researcher and participant?

# Realist approach to impact

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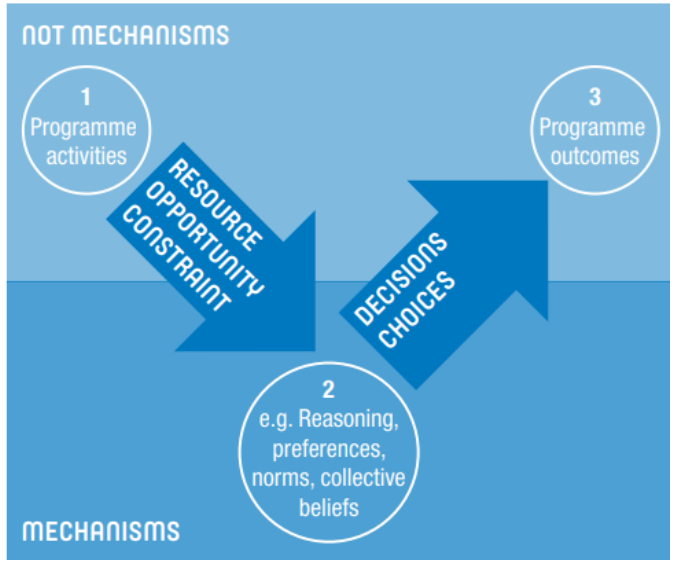
- Assumptions
  - Nothing works for everyone
  - Context makes a real difference to programme outcomes
  - Observation is subjective - shaped and filtered through the human brain
  - Outcome are the result of interactions within and across systems
  - Whether mechanisms 'fire' depends on the context
- Uses
  - Evaluating new initiatives or programmes
  - Where 'how and for whom' is not yet understood
  - Programmes with mixed patterns of outcomes
  - To know how to scale up
  - Understand how to adapt the intervention to new contexts




Pawson, R. and Tilley, N. (1997) Realistic Evaluation, Sage
Wong, G., Westhorp, G., Pawson R, and Greenhalgh, T. (2012)

# Arriving at methods and sources

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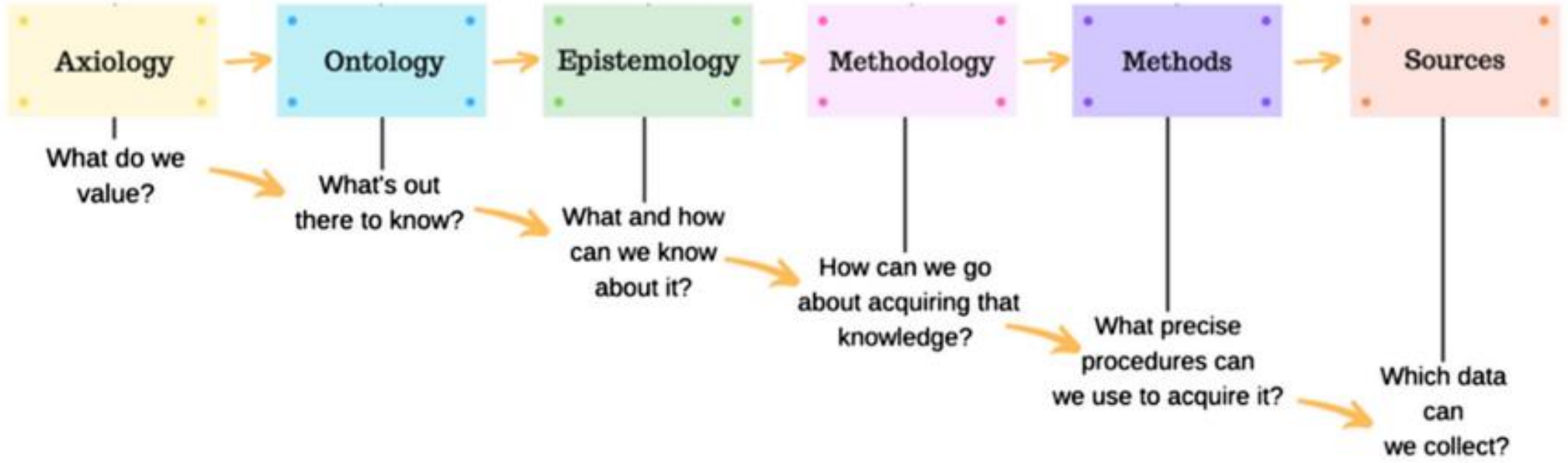


Brown et al (2019)
https://link.springer.com/article/10.1007/s40670-019-00898-9

# Types of interviews

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- Structured interviews: standardised format.
- Unstructured interviews: not set questions.
- Semi-structured interviews: bit of both.
- Narrative interviews: interviewee tells their story in their own words.
- Group interviews (focus groups): involve a group of individuals interviewed at the same time.

Different Formats:
Problem centred interviewing (PCI)
'Expert witness'
Behavioural (situation focused)
… etc

**Structured interviews**
**Quantitative**

**Semi-structured**

**Unstructured**
**Qualitative**

# Analysing your data

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- **Thematically by content**
- Identifying themes or patterns in relation to the research question. - deductive or inductive approach
- **Narrative analysis**
- Examines the structure, content, and context with attention to the language, themes, and symbols used e.g. look for patterns or recurring motifs
- **Phenomenological Analysis**
- Focuses on the subjective experience and sense-making, language used, emotions etc e.g. understanding how people make sense of their own lives and experiences.
- **Critical Analysis**
- Examining the political, social, and ideological implications and questioning underlying assumptions and values
- **Autoethnography**
- Pulling out the personal narratives – e.g. how individuals negotiate and navigate complex cultural identities.
- **Discourse analysis**
- Focuses on the language and discourse e.g. for understanding how narratives are influenced by larger social and cultural structures.

# Narrative analysis – pros and cons

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| Advantages | Limitations |
| --- | --- |
| Rich and detailed data | Subjectivity in interpretation |
| Humanizing approach | Limited generalisability |
| Holistic understanding | Ethical considerations |
| Flexibility | Limited control over data |
| Interpretive insights | Time-consuming |
| Appropriate for sensitive topics | Interpretation challenges |
| Can lead to policy implications | Limited statistical analysis |

# Coding process

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- Analysis is breaking up, separating or disassembling of research materials into pieces, parts, elements of themes
- With the items broken down into manageable pieces, the researcher sorts and sifts them, searching for
  - Types
  - Classes
  - Sequences
  - Processes
  - Patterns or wholes

# Quick example

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- A group of students have just gone on a summer school. They were asked to write down three words that describe that experience.
- Any ideas of possible different ways you could split the responses into categories?

# Example of category analysis

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- Category/Number of responses

| | |
|---|---|
| **Positive** | **265** |
| Interesting | 149 |
| Entertaining | 65 |
| Educational | 51 |
| **Neutral** | **45** |
| Content | 33 |
| Difference | 22 |
| **Negative** | **82** |
| Too long/too slow | 48 |
| Boring | 34 |
| Other | 18 |

# Using excel for simple thematic analysis

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- **Assumptions**
  - Rigorous data collection process.
  - Structured interview checklist and intentional probing.
  - High quality response and good data.
  - Accurate or verbatim transcriptions.
- **Preparing a spreadsheet**
  - Create a template first and copy it to different tabs – one question per tab (within same workbook)
  - Make a note of the question and label tabs accordingly
  - Label columns include Interviewee ID
  - Create a column for responses (extend width and wrap text)
  - The plan is to paste responses to incorporate the data in the spreadsheet

| ID | Sex | Year | Course | CODE | Extract |
|---|---|---|---|---|---|
| 1 | M | 2 | Social science | B | I went through a few prospectuses and found a course which sounded good |
| 2 | F | 1 | Science | A | My kids influenced me, I need to set a good example. |
| 3 | F | 1 | Arts | C/D | I'm friends with a lecturer here, he's so good looking |
| 4 | F | 1 | Arts | B | Commercials on social media for Poppleville university |
| 5 | M | 2 | Social science | D | Someone I worked with was a student and it sounded good fun |
| 6 | M | 2 | Social science | C/D | My careers adviser told me about it |
| 7 | F | 1 | Science | A | My sister, she's older than me and went to university a few years ago |
| 8 | M | 2 | Science | C | My teachers really encouraged me |
| 9 | F | 2 | Arts | A | My family, I wanted to get away from home |
| 10 | M | 1 | Arts | A/C | I just always knew I'd go to university, it was kinda expected of me, and the teachers at my school made everyone apply |

| Coding key: | |
|---|---|
| A | family |
| B | advertising |
| C | professionals |
| D | friends |

| ID | Sex | Year | Course | CODE | Extract |
|---|---|---|---|---|---|
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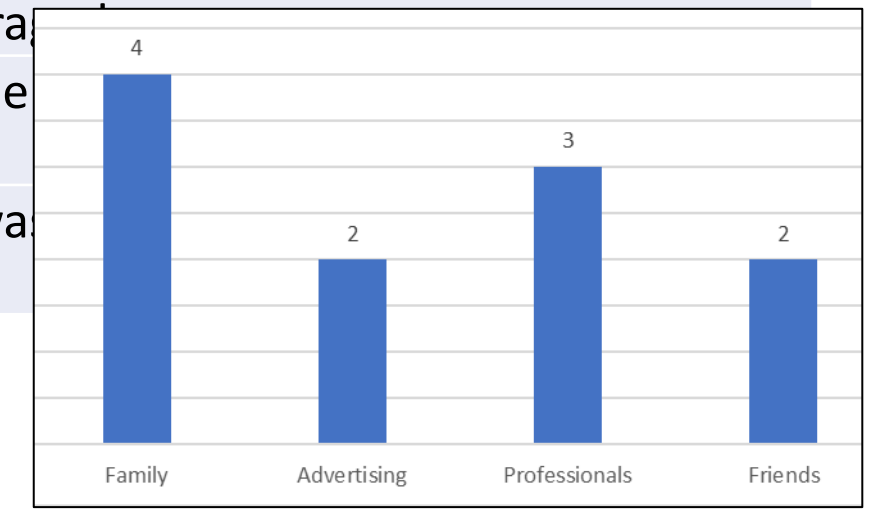

# Thematic analysis & theorising

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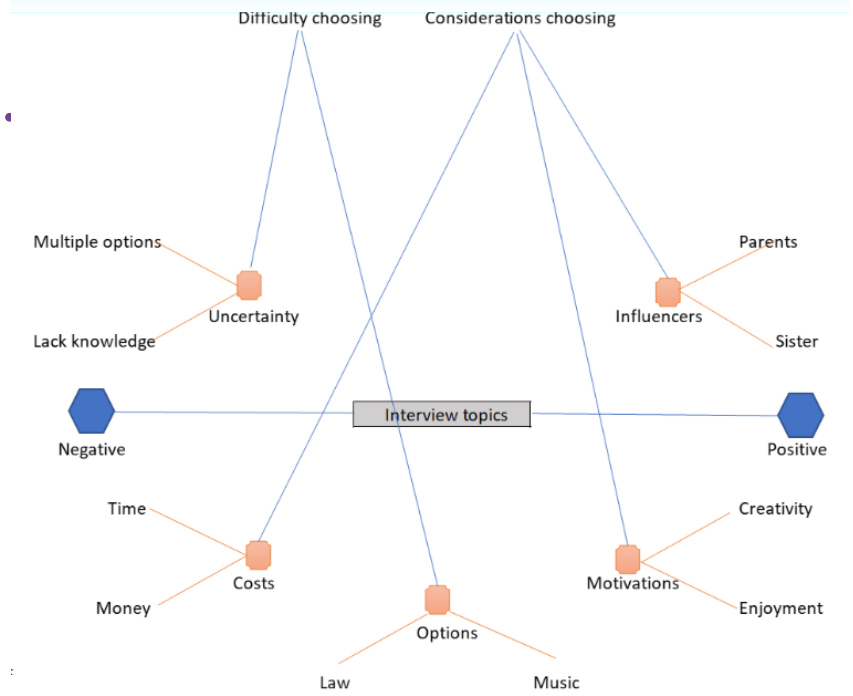
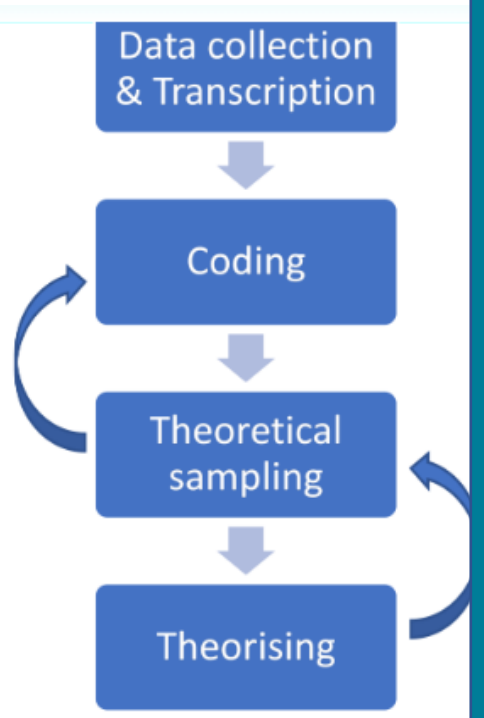
- Frequency of occurrences (e.g. in different samples, or at different times)
- Patterns of co-occurrence (e.g. 'Boolean operators', cluster analysis)
- Sequence of occurrences.




Adapting and refining codes

- Don't fit in any category
- More than one category
- Subcategory within categories
- A whole new category
- One of their kind

# Types of reasoning

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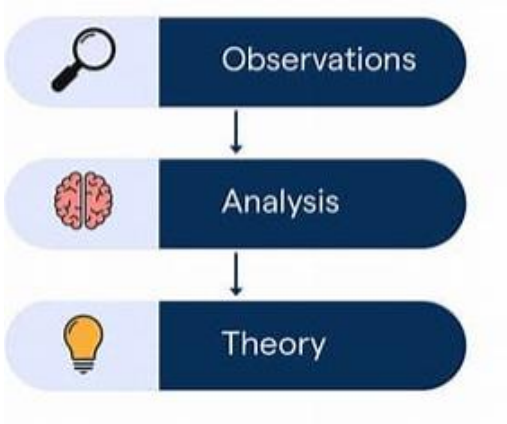
## Inductive Reasoning

Inductive reasoning is the act of making generalized conclusions based off of specific scenarios.

## Deductive Reasoning

Deductive reasoning is the act of backing up a generalized statement with specific scenarios.




*Deductive reasoning*
*If A = B and B = C, then*
*A must equal C.*

# Braun and Clarke (2012) Six steps to reflexive thematic analysis

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- Phase 1: Familiarizing Yourself With the Data (immersion)
- Phase 2: Generating Initial Codes
- Phase 3: Searching for Themes (shifting from codes to themes)
- Phase 4: Reviewing Potential Themes
- Phase 5: Defining and Naming Themes
- Phase 6: Producing the Report

# Example of preliminary coding (phase 2)

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I think anything that you do in school that's on paper is difficult to relate to students [C1]. And, this is the great thing about the new junior-cycle, there's a lot more of the hands on approach in most academic subjects [C2]. I think, that needs to be brought into areas like SPHE[C3]. Theory is fine – I don't know if you want me to talk about the wellbeing indicators [interviewer gestures to continue]. I have them there on my wall, this is maybe my third year to have them on the wall [C4]. To be honest, I feel that that's just way too abstract! It means nothing to a 13 or 14 year old, absolutely nothing [C5]. So, that's what I mean by simplifying it, just to say, you know, we might do a topic and I'll say; "how does that make you feel?" Can you imagine – if you didn't feel connected, what would that be like. You know, trying to get them to relate to those [interviewee gestures towards the wellbeing indicators on the wall] [C6]. But to be quite honest, I don't use those indicators in the classroom. I don't use that vocabulary. I think it's way too vague [C7]. The ideas behind them are fantastic and if you had all of those you'd be feeling very well [C8], but it's…I just think

[C1] The wellbeing curriculum is not relatable for the students

[C2] A practical approach to learning is beneficial for students

[C3] Wellbeing promotion should be practical

[C4] The wellbeing guidelines lack clarity

[C5] The wellbeing guidelines are not relatable for students

[C6] The wellbeing guidelines can be made relatable for students through practical measures

[C7] The wellbeing indicators are not used to promote student wellbeing

[C8] Positivity regarding the wellbeing guidelines

[C9] The wellbeing guidelines lack

Byrne, 2021

# Example of thematic map

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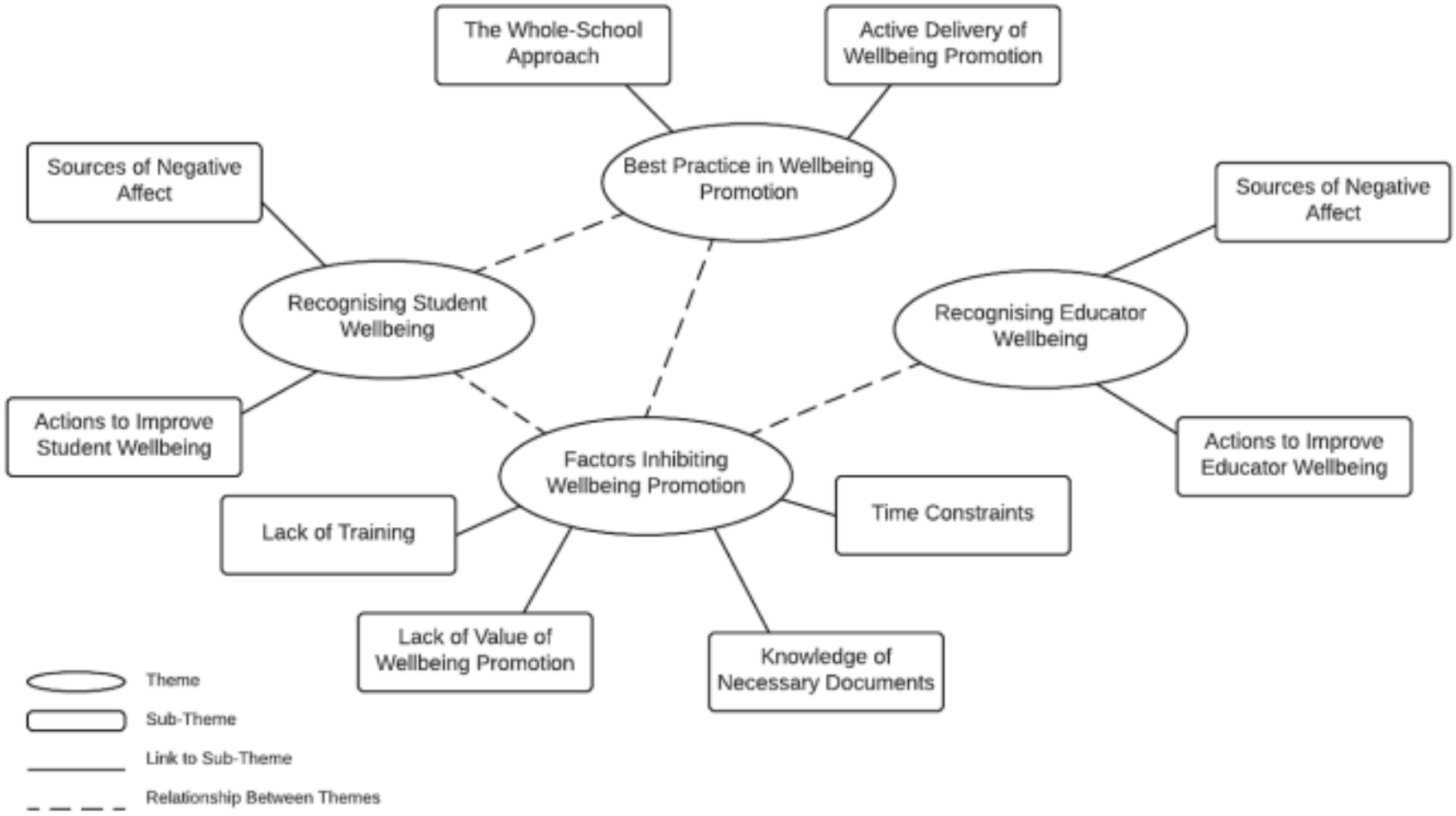


Byrne, 2021

# Identifying and refining themes

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- Is this a theme (it could be just a code)?
- If it is a theme, what is the quality of this theme (does it tell me something useful about the data set and my research question)?
- What are the boundaries of this theme (what does it include and exclude)?
- Are there enough (meaningful) data to support this theme (is the theme thin or thick)?
- Are the data too diverse and wide ranging (does the theme lack coherence)?

# Some Issues

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- Objectivity and subjectivity
- Finding the facts…. or making value judgements
- Rigour
- Professionalism
- Acknowledging limitations

- Practical issues
- Time
- Access
- Background knowledge

# Activity

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Extract from semi-structured interviews that were conducted with HE students at Poppleville. These students had received a bursary targeted at WP students.

The students were contacted via an intermediary to ask whether they would be prepared to take part in the study and were subsequently invited for interview.

At each stage a significant proportion of the sample did not respond.

You have received transcripts of interviews undertaken by WP officers and have been asked to write the report.

## Male, Planning and Transport studies, year 2

INTERVIEWER: *Are you enjoying your course?*

**Yes, Um.., I am, I am. Um…There are a couple of modules that I don't really take to but I mean that's life isn't it? But no, it's all alright and I think that the reason that I chose this course was because, you know, I mean doing my A Levels and all that in school, I always enjoyed Geography and History and I could have easily taken up one of those subjects or English again, But I thought I will do something a bit practical where you are that step ahead and will more than likely get a job from it.**

*How did you find the course? I mean in terms of……..*

**How did I find the course?**

*You went here from school?*

**Straight from school, yes, straight from my grammar school back home in West Wales. Yeah, I just…um…it was in the Library, rows and rows of prospectuses. I always knew I was destined for Popple and there was nothing at Popplebridge but there was a planning course here and so I checked it out and….**

# Discussion

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- What thoughts or issues does this extract bring up for you?
- Please identify at least one piece of information (a key word or theme) from this extract that could inform your findings when writing up the report

# Discussion

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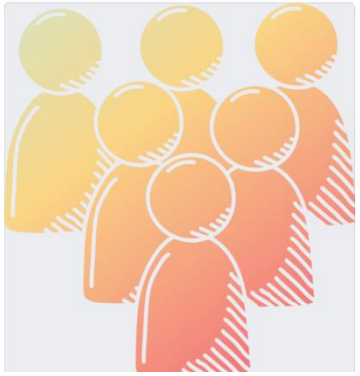

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# Case study approaches

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- Basic approach – detailed and intensive analysis of a case e.g. school, cohort, course, module, event
- Qualitative or quantitative or both
- Can be used as a comparative techniques (e.g. different courses, different institutions)
- Can you generalise from different cases?

Methods guide:

https://www.nerupi.co.uk/members/resources/case-studies

# Reporting

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- Have this in mind from the start
  - Purpose – what difference will your research make?
  - Audiences – what do they want to know?
- Answer the research questions
- Report themes in a logical order
- Apply reporting standards (e.g. confidentiality)

Effect of the research on participants?

- Ontological authenticity (e.g. participants more informed)
- Educative authenticity (e.g. appreciation of others)
- Catalytic authenticity (e.g. insights into possible actions)

# Quality criteria for qualitative research I

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- **Lincoln and Guba (1985)**

| Quantitative | Qualitative |
|---|---|
| Internal validity | Credibility (confidence) |
| External validity | Transferability (applicability) |
| Reliability | Dependability (consistency over time) |
| Objectivity | Confirmability (neutrality) |

Schwandt, T., Lincoln, Y.S, and Guba, E.G. (2007) Judging interpretations: But is it rigorous? trustworthiness and authenticity in naturalistic evaluation, *New Directions for Evaluation*, 115, pp.11-25. DOI: 10.1002/ev.223

# Quality criteria for qualitative research 2

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- **Yardley (2016)**
  - Sensitivity to context
  - Commitment and rigor
  - Transparency and coherence
  - Impact and importance

"…there are many ways in which each could be fulfilled; their aim is not to prescribe a particular approach to qualitative research but to help researchers to reflect on and justify the methods they use" (Yardley, 2016, p.296)

Yardley, L. (2016) Demonstrating the validity of qualitative research. *Journal of Positive Psychology*, 12:3, pp.295-296. DOI: 10.1080/17439760.2016.1262624

# Techniques for trustworthiness

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| Qualitative | Techniques |
|---|---|
| Credibility (confidence) | Prolonged engagement/Persistent observations; Triangulation; Researcher and peer debriefing; Analysis of negatives cases |
| Transferability (applicability) | Thick descriptions; Contextualisation |
| Dependability (consistency over time) | Inquiry audit |
| Confirmability (neutrality) | Reflexivity; Triangulation; Audit trail |
| Sensitivity to context | Awareness of the participants' perspectives and setting, the sociocultural and linguistic context; how these may influence participants response and interpretation by the researcher |
| Commitment and rigour | In-depth engagement with the topic: thorough data collection; expertise and skills in methods employed; undertaking detailed, in-depth analysis |
| Transparency and coherence | Showing how the interpretation was derived from the data |
| Impact and importance | Generation of useful knowledge (practical utility, generating hypotheses, changing thinking) |

# Reflexivity

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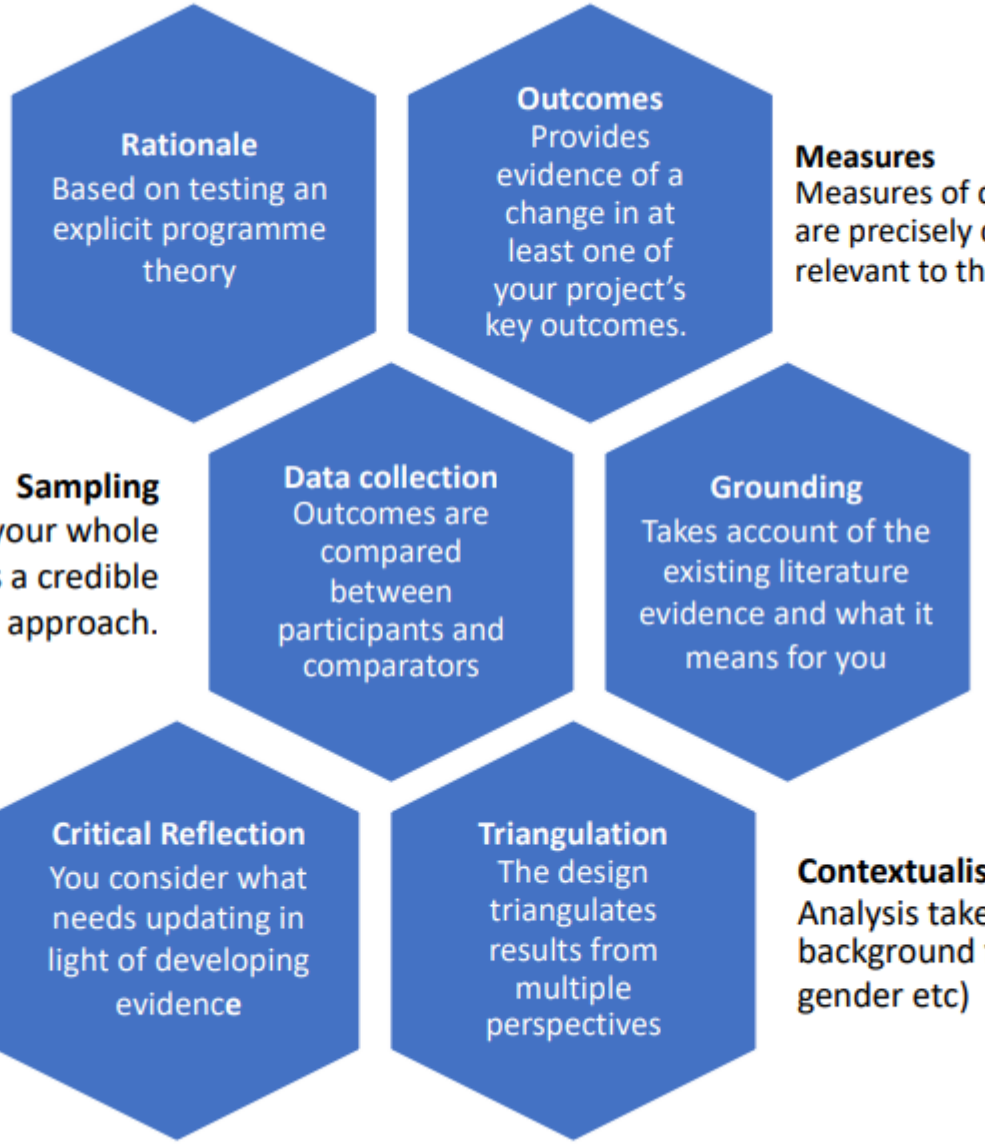
- Epistemological reflexivity
- How research design/question has defined topic and 'limited' what can be found
- Personal reflexivity
- How researcher(s)' subjectivity shapes understanding of research topic
- Reflection on how your values, beliefs, assumptions and experiences are influencing
  - how you are conceptualising the problem/issue
  - your decisions as a researcher/evaluator

Reflexivity, however, means more than acknowledging personal 'biases'; reflexivity invites us to think about how our own reactions to the research context and the data actually make possible certain insights and understandings.' (Willig, 2013, p. 25)

# Ideas for strengthening the evidence base




**Measures**
Measures of change are precisely defined and relevant to the intervention

**Sampling**
Covers your whole cohort or uses a credible sampling approach.

**Joining up**
Between different evaluations and connects these as part of a coherent programme of knowledge building

**Limitations**
You acknowledge the likely limitations of the approach

**Contextualisation**
Analysis takes account of background factors (location, gender etc)

# Nerupi methods guides

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| | Quantitative | Qualitative |
|---|---|---|
| Using symbols | ✓ | ✓ |
| Interviews | ✓ | ✓ |
| Focus groups | | ✓ |
| Feedback from stakeholders and interested parties | ✓ | ✓ |
| Creative expression | | ✓ |
| Reflective accounts | ✓ | ✓ |
| Evaluation wheel | ✓ | |
| Photo elicitation | | ✓ |
| Questionnaire surveys | ✓ | ✓ |
| Structured observation | ✓ | ✓ |
| Tracking | ✓ | |
| Voting | ✓ | |
| Use of Validated tools | ✓ | |
| Experimental and Quasi-experimental methods | ✓ | |
| Case studies | ✓ | ✓ |

www.nerupi.co.uk

Triangulation of sources
Mixed Methods approaches

# Six steps to thematic analysis

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- https://www.thematicanalysis.net/


- Braun, V. and Clarke, V. (2012). Thematic analysis. In Cooper, H., Camic, P. M., Long, D. L., Panter, A. T., Rindskopf, D., and Sher, K. J. (Eds.), American Psychological Association handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological (pp. 57–71). American Psychological Association. DOI: 10.1037/13620-004
- Byrne, D. (2022) A worked example of Braun and Clarke's approach to reflexive thematic analysis. Qual Quant 56, 1391–1412 (2022). DOI: 10.1007/s11135-021-01182-y

# Software for data analysis

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Examples include:
MAXQDA: http://www.maxqda.com/
NVIVO: https://lumivero.com/products/nvivo/

An overview of specialist tools for qualitative data analysis is available at:
Choosing a CAQDAS package | University of Surrey

Silver and Lewins (2014, 2nd edition) Using Software in Qualitative Research: A Step-by-Step Guide, Sage Publications, London.