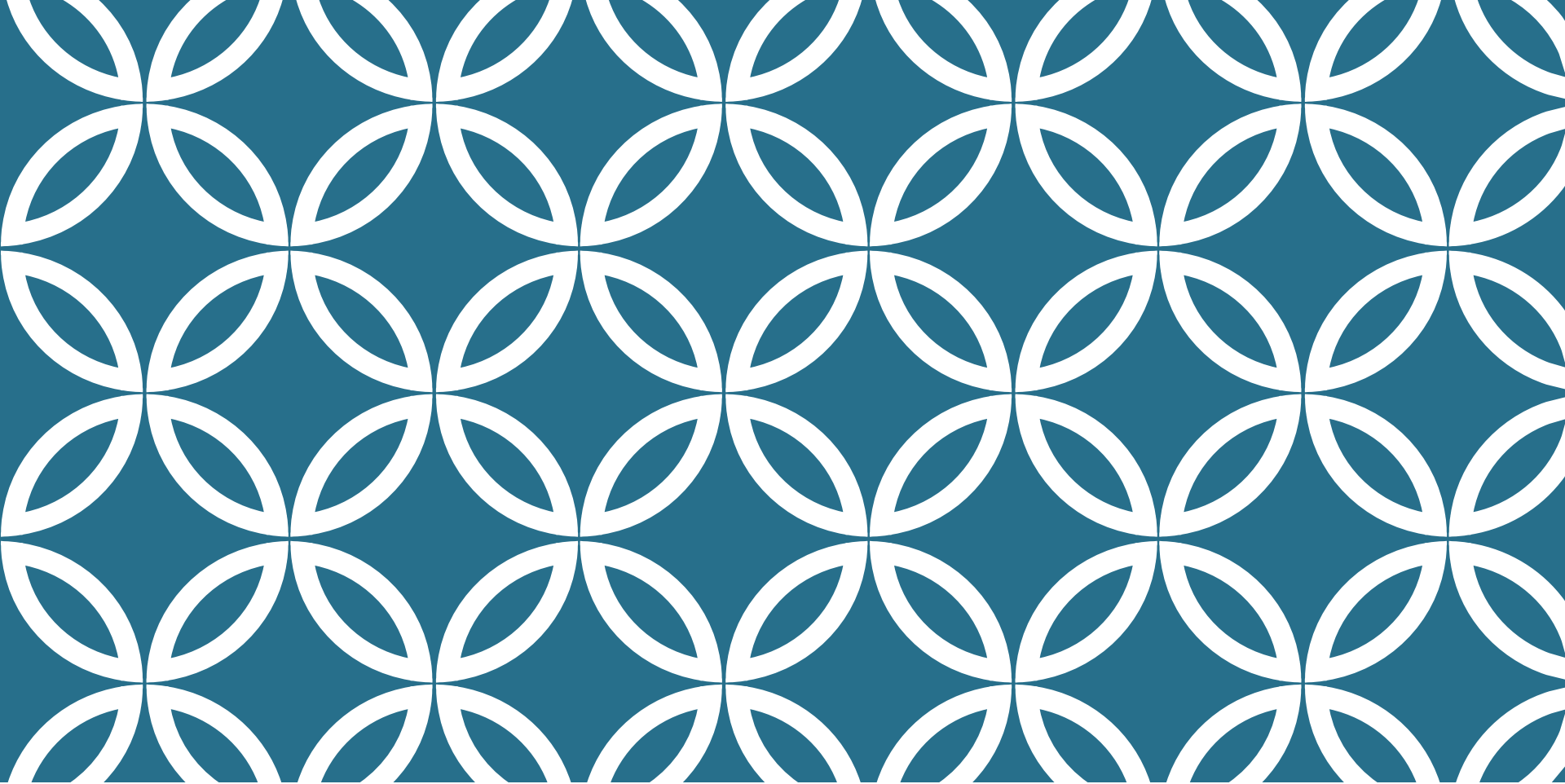




ECGE7004P

Session 3 - Research Tools
(Part 1)

NOW CONSIDER **YOUR** RESEARCH...

What?

What is your research?

Why?

Why do you want to do the research?
(Consider the reason you're conducting this research!)

When?

When are you going to complete each stage?

Where?

Where are you going to conduct your research?

Who?

Who will be your participants?



Partner A: Explain the 5 Ws of your research to your partner.

Partner B: Challenge your partner on any words or ideas you are unsure about. What questions do you have about your partner's research?

METHODOLOGY

Methodology – the study of the method used

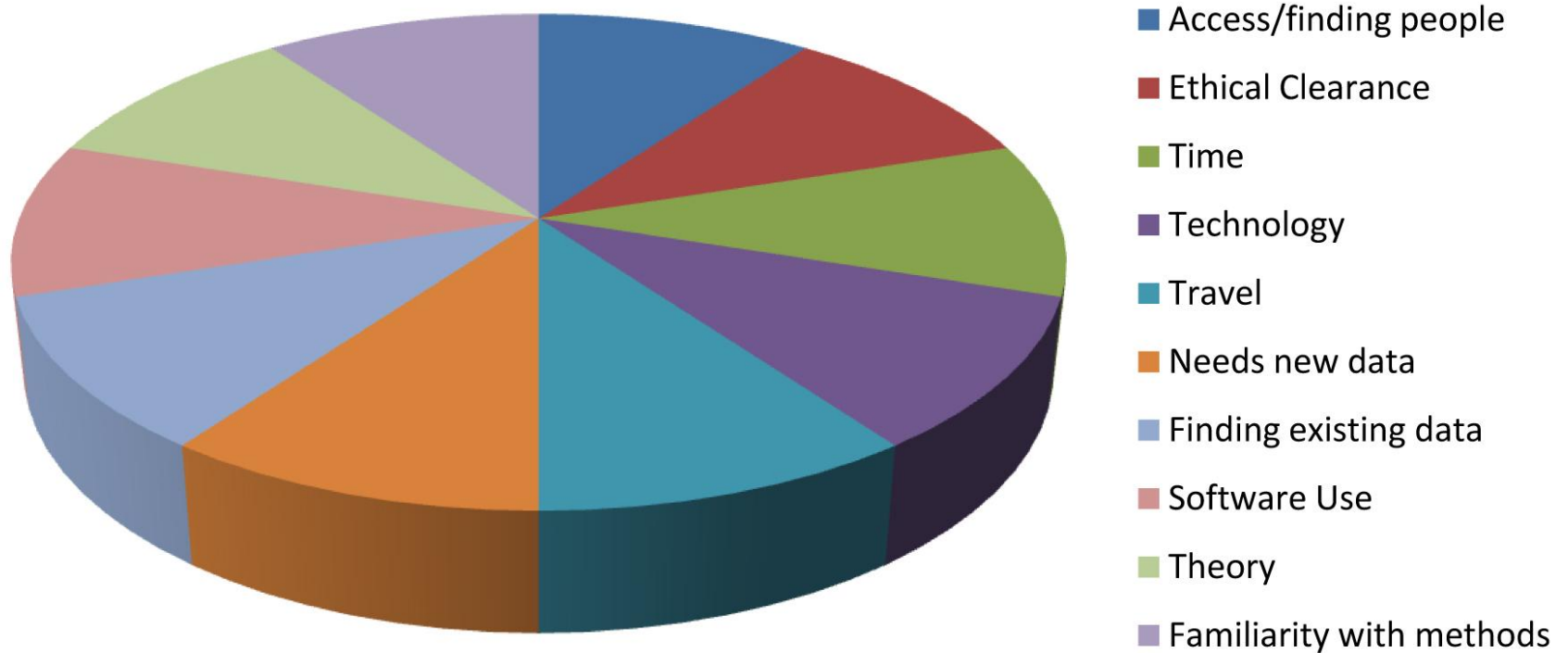
Therefore, your **methodology** section needs to present a discussion of:

- Which methods you will use
- Why you will use them

This forms the basis of your **research design** – so you need to be explicit about how you are using particular methods to answer your research questions.

(Thomas, 2017)

Practical Issues Which Can Inform Methodology



Thomas, 2017

EPISTEMOLOGY

i.e. the way in which you choose to investigate the world

Two main schools are **positivism** and **social constructionism**:

Positivists believe that the best way to investigate the world is through objective methods, such as observations.

Social constructionists believe that reality does not exist by itself. Instead, it is constructed and given meaning by people. Their focus is therefore on feelings, beliefs and thoughts, and how people communicate these.

Which one are you and how might this impact upon your research design?

CHOOSING YOUR APPROACH

Your approach may be influenced by your colleagues' views, your organisation's approach, your supervisor's beliefs, and your own experience.

There is no right or wrong answer to choosing your research methods.

Whatever approach you choose for your research, you need to consider five questions:

CHOOSING YOUR APPROACH

- What is the **unit of analysis**?

For example, country, school or individual.

CHOOSING YOUR APPROACH

- Are you relying on universal theory or local knowledge?

i.e. will your results be generalisable, and produce universally applicable results, or are there local factors that will affect your results?

CHOOSING YOUR APPROACH

- Will theory or data come first?

Should you read the literature first, and then develop your theory, or will you gather your data and develop your theory from that?

CHOOSING YOUR APPROACH

- Will your study be cross-sectional or longitudinal?

Are you looking at one point in time, or changes over time?

CHOOSING YOUR APPROACH

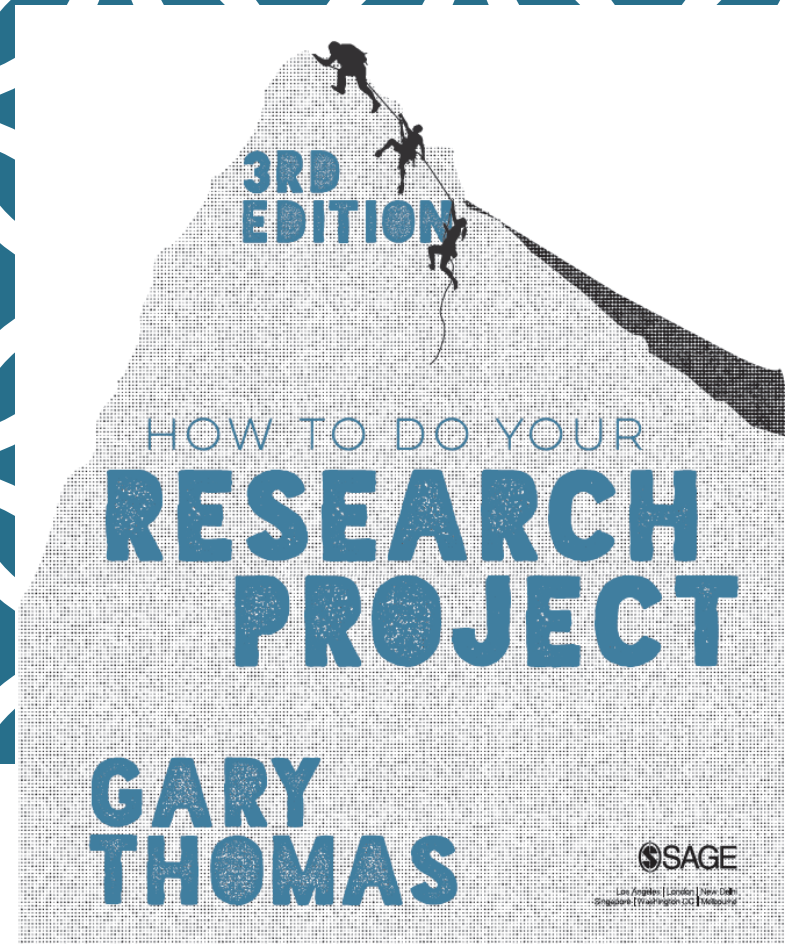
- Will you verify or falsify a theory?

You cannot conclusively prove any theory; the best that you can do is find nothing that disproves it. It is therefore easier to formulate a theory that you can try to disprove, because you only need one 'wrong' answer to do so.

CHAPTER 6

**Methodology Part 2:
The Design Frame**

The following screens are a resource from Thomas, 2017



DESIGN FRAMES

Provides a superstructure for the research project and connects purposes with questions with the ways in which data can be collected

Doesn't prescribe how the data will be collected

Seven common frames in small-scale research:

- Action research
- Case study
- Comparative research
- Ethnography
- Evaluation
- Experiment
- Longitudinal, cross-sectional studies and survey

ACTION RESEARCH

Undertaken by practitioners (e.g. teachers, social workers, nurses or doctors) for the purpose of helping to develop their practice

Central aim is *change* and the emphasis is on problem-solving in whatever way seems most appropriate

Involves a commitment to change and to action based on reflection

Involves moving forward, always building on what you are discovering, using the process of planning, reflection and replanning

CASE STUDY

In-depth research into one case or a small set of cases

The data you collect can be from different facets of the question you are examining

The case is not simply a story: it has to illuminate some theoretical point; it has to be a case *of* something

Comprised of a subject and analytical frame

Will need to consider single vs multiple, boundary, shape, and type of case(s)

COMPARATIVE STUDY

Any comparison, but most frequently cross-national,
cross-societal and/or cross-cultural comparison

Examines

- Contrasting patterns of development across different societies
- How specific or how general forms of social and institutional structures are between different societies – how they are the same and how they are different
- Cultural determinants of difference across societies

Be aware of

- Equivalence of comparative situations
- Equivalence of measuring instruments
- Language
- Integrity of regions being compared

ETHNOGRAPHY

Studying a situation from within – becoming part of the situation to understand it like the other ‘players’

Record findings through field notes and diaries

Positioning yourself as an instrument of investigation

Small-scale ethnography research won’t involve time for full immersion, and you’ll likely be familiar with or connected to the environment you’re studying

ETHNOMETHODOLOGY

Dramaturgy and narrative research: telling the story as you see it unfolding; the raw materials have been provided by the situation but you are the one who sees how things fit together

Autoethnography: an ethnography about the person doing the research

Evaluation research: assessing how effective a programme of activity has been

EXPERIMENTS

To experiment is to:

- Demonstrate cause and effect
- Understand the extent to which we have to control the conditions in the situation of interest to demonstrate that cause–effect relationship

Randomised Control Trials: minimise the possibility of allocation bias to the different groups (experiment and control)

Confounding Variables: other uncontrolled variables that could affect the outcome of the experiment

What can go wrong?

- **Type I error:** you accept your hypothesis as true, but in fact it is false
- **Type II error:** you reject your hypothesis as false, but in fact it is true

LONGITUDINAL STUDIES, CROSS-SECTIONAL STUDIES, AND SURVEYS

Make use of data relating to large numbers of individuals or groups

Do not attempt to manipulate any variables

Longitudinal studies: studying a group of individuals/cases over *an extended period*, regularly examining them for the effect of time on the variable or variables of interest

Cross-sectional studies: group or groups are studied at the same time – as a snapshot

Surveys: not a design frame, but involves collecting data from a varied number of respondents

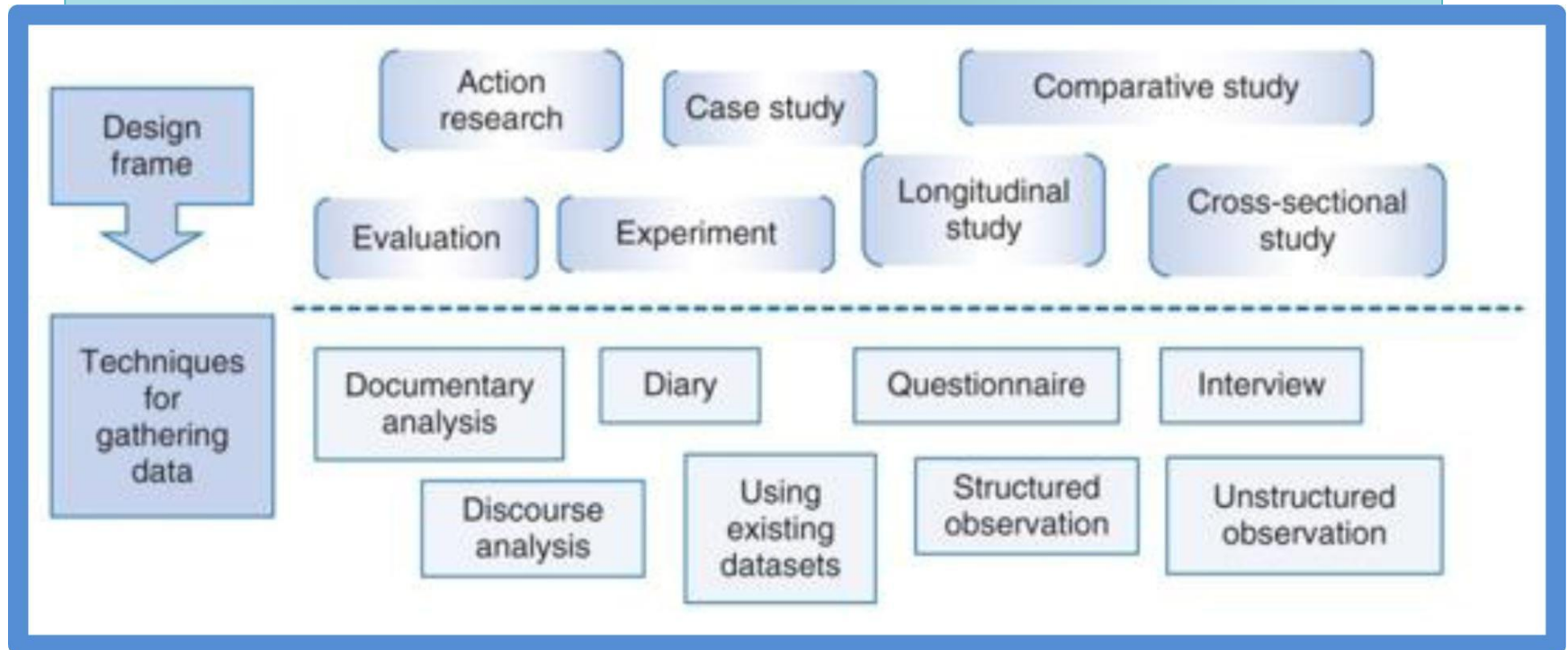
CAN I MIX AND MATCH?

Yes!

- (But...)

Mixed methods design

DESIGN IMPACTS ON GATHERING DATA



DESIGN ISSUES

Sampling

Variables

Reliability

Validity

Experimenter effects

Generalisation and generalisability

Triangulation

TYPES OF RESEARCH

Quantitative research refers to research using numbers, and **qualitative research** refers to that which does not use numbers;

Can complement each other rather than be in opposition;

Start with your research question and determine different ways to answer it.

QUALITATIVE RESEARCH

Qualitative research is any which does not involve numbers or numerical data;

It often involves words or language, but may also use pictures or photographs and observations;

Tends to start with a broad question rather than a specific hypothesis;

Almost any phenomenon can be examined in a qualitative way;

QUALITATIVE RESEARCH

Often the preferred method of investigation in the UK and the rest of Europe;

Don't need large sample sizes (in comparison to quantitative research);

Qualitative analysis results in rich data that gives an in-depth picture and it is particularly useful for exploring **how** and **why** things have happened.

PITFALLS?

If respondents do not see a value for them in the research, they may provide inaccurate or false information.

Ethics - there may be particular difficulties with qualitative research because the researcher may be party to confidential information.

It is generally harder for qualitative researchers to remain apart from their work.

SOURCES OF QUALITATIVE DATA

Interviews (structured, semi-structured or unstructured)

Focus groups

Questionnaires or surveys

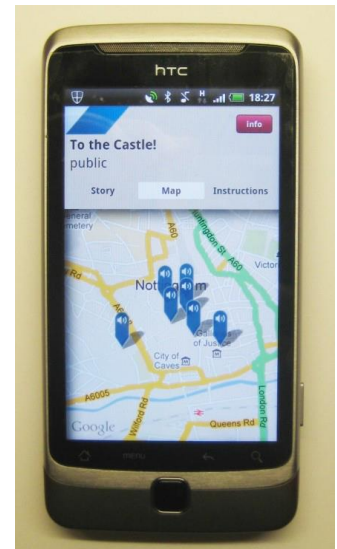
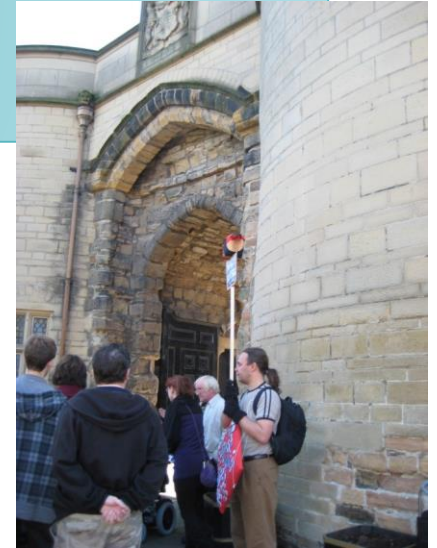
Secondary data, including diaries, self-reporting, written accounts of past events/archive data and company reports;

Direct observations – may also be recorded (video/audio)

EXAMPLE OF QUALITATIVE DATA RESEARCH*

Describing and comparing two types of audio guides: person-led and technology-led

Data sources: questionnaires, researcher observations, and small focus groups



* Taken from: FitzGerald, E.; Taylor, C. and Craven, M. (2013). To the Castle! A comparison of two audio guides to enable public discovery of historical events. Personal and Ubiquitous Computing, 17(4) pp. 749–760. <http://oro.open.ac.uk/35077/>

DATA ANALYSIS AND FINDINGS

Comparison of the two different walks

- Differences/similarities of the walks
- Issues surrounding participant engagement

Thematic analysis

- Mode of delivery
- Number of participants and social interactions
- Geographical affordances of places and locations
- User experience
- Opportunities for learning
- Other factors

Findings, lessons learned, recommendations

WHAT QUALITATIVE RESEARCHERS WORRY ABOUT

Have I coded my data correctly?

Have I managed to capture the situation in a realistic manner?

Have I described the context in sufficient detail?

Have I managed to see the world through the eyes of my participants?

Is my approach flexible and able to change?

WHAT'S WRONG WITH QUALITATIVE RESEARCH?

It can be very subjective;

It can't always be repeated;

It can't always be generalisable;

It can't always give you definite answers in the way that quantitative research can;

It can be easier to carry out (or hide) 'bad' (poor quality) qualitative research than 'bad' quantitative research.

ANALYSING QUALITATIVE DATA

Content analysis

Grounded analysis

Social network analysis (can also be quant)

Discourse analysis

Narrative analysis

Conversation analysis

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Thomas, G. (2017) *How to do your Research Project*, London: Sage.

Cohen, L., Manion, L., & Morrison, K. (2018) *Research Methods in Education*, (8th ed.) London: Routledge.