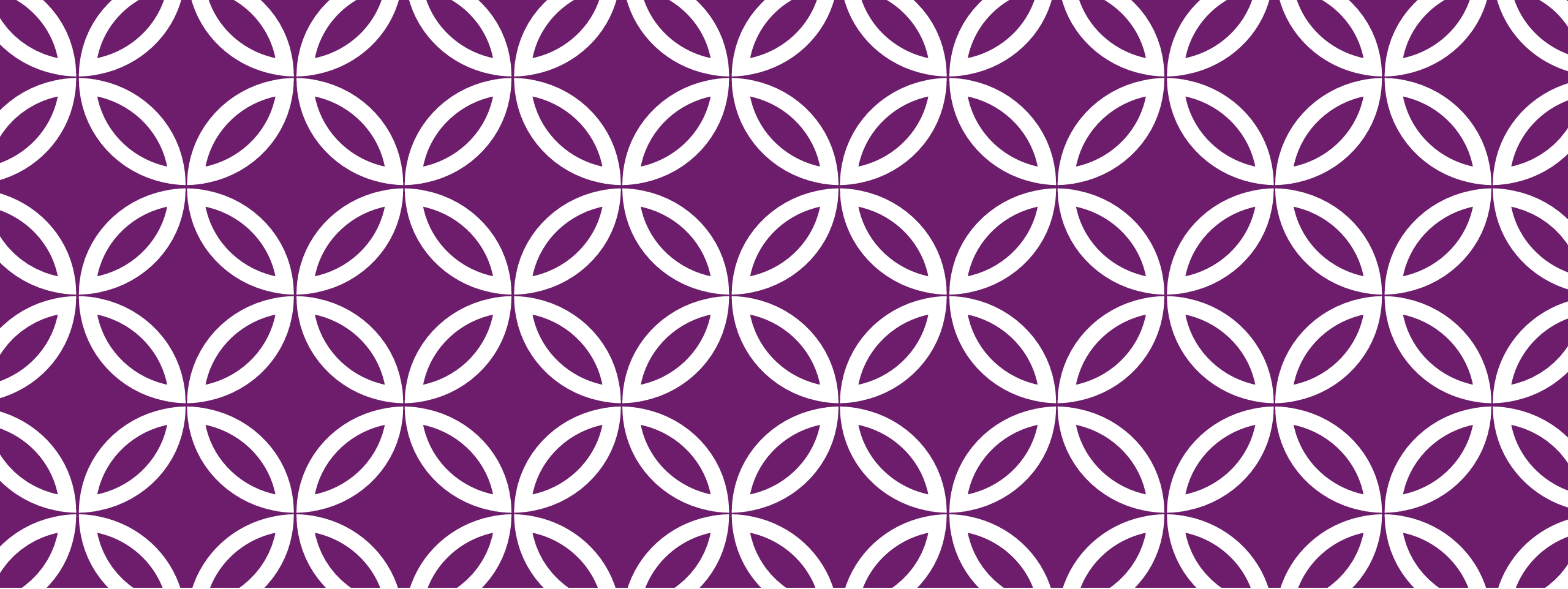




WRITING UP

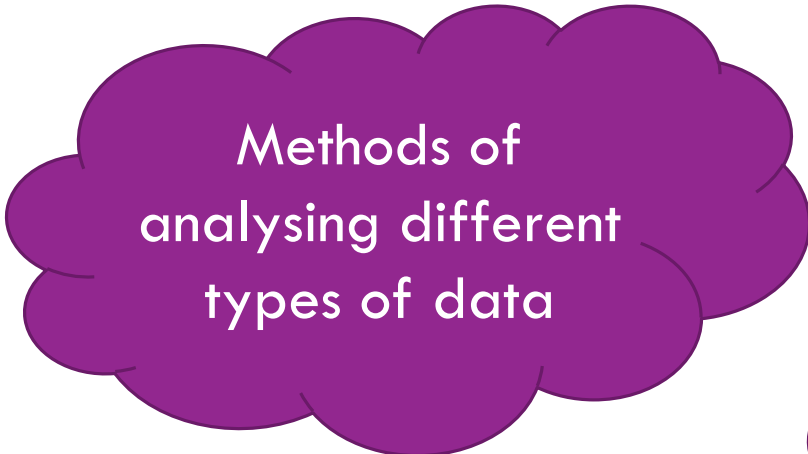
Analysing Data:
Processing and
Presenting Data

AIMS AND OBJECTIVES

Clearly present your research findings and critically evaluate in context of other research and literature evidence thus making an informed contribution to the knowledge of the research field.



Relationship
between data
collection and
data analysis

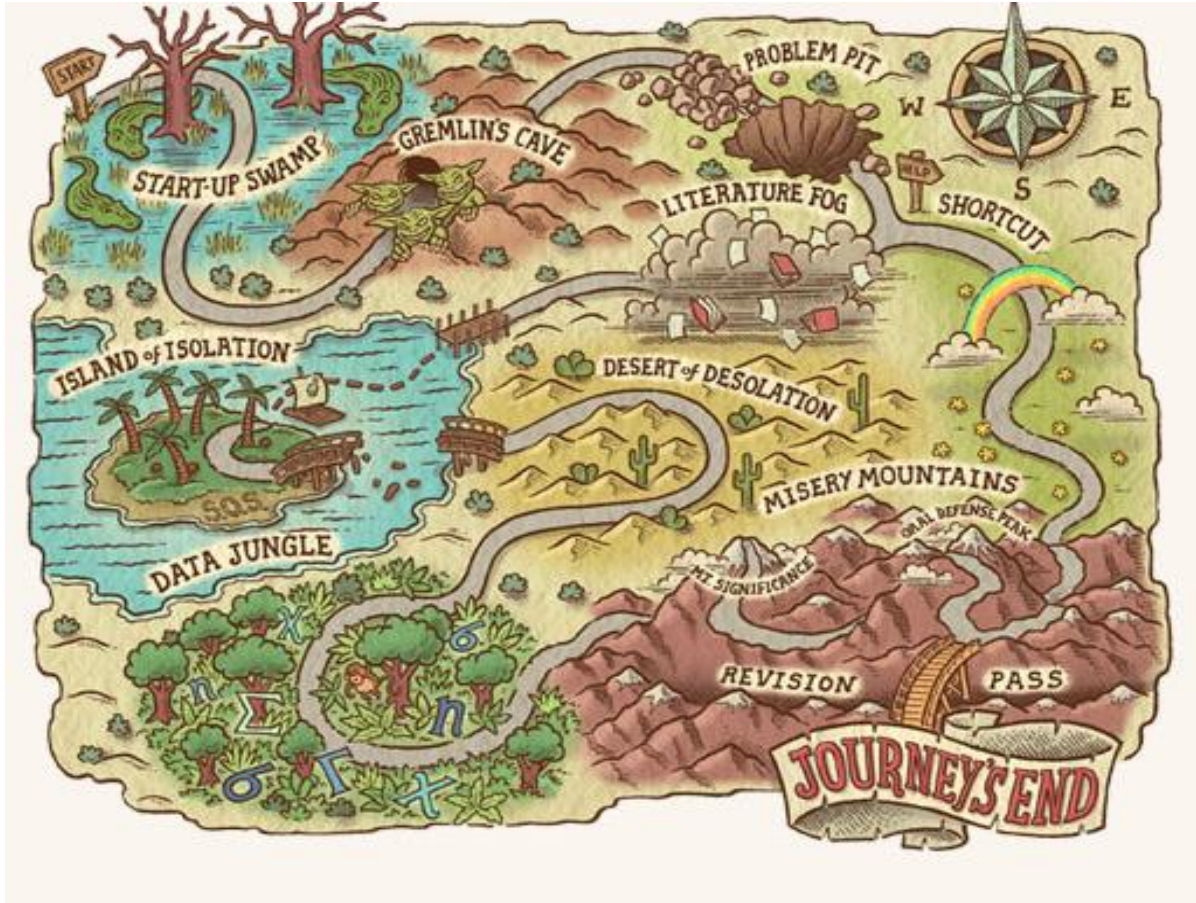


Methods of
analysing different
types of data



Final presentation
of data in your
dissertation

THE RESEARCH JOURNEY



Source: [Academic Coaching and Writing](#)

Which stage or process are you currently working on?

What are your thoughts/feelings/concerns/hopes about your project at this point?

Timings? What next?

ANALYSING AND PRESENTING DATA

The ways in which you analyse and present data will depend on the nature of the data which you have collected.

1. Are you analysing words or numbers?
2. If you are analysing words, have you decided upon a method of summarising and presenting the data?
3. If you are analysing numbers, have you decided upon a method of summarising and presenting the data?
4. Have you thought about how you will organise your analysis and discussion? Will you split it into two chapters, or integrate the analysis and discussion in one chapter?
5. Have you considered how you will tie strands together and connect ideas such that you offer synthesis and theory?

Checklist adapted from
Thomas, 2013

SO, YOU'VE COLLECTED YOUR DATA...

Interpretivist paradigm.

The rich and complex nature of qualitative data – but how to make sense of words not numbers?

Inherent ambiguities – being sensitive to bias when seeking meaning.



WHAT DOES IT MEAN TO 'ANALYSE' DATA?

A hundred separate pieces of interesting information will mean nothing to a researcher or a reader unless they have been categorized and interpreted. We are constantly looking for similarities and differences, for groupings, patterns and items of particular significance.

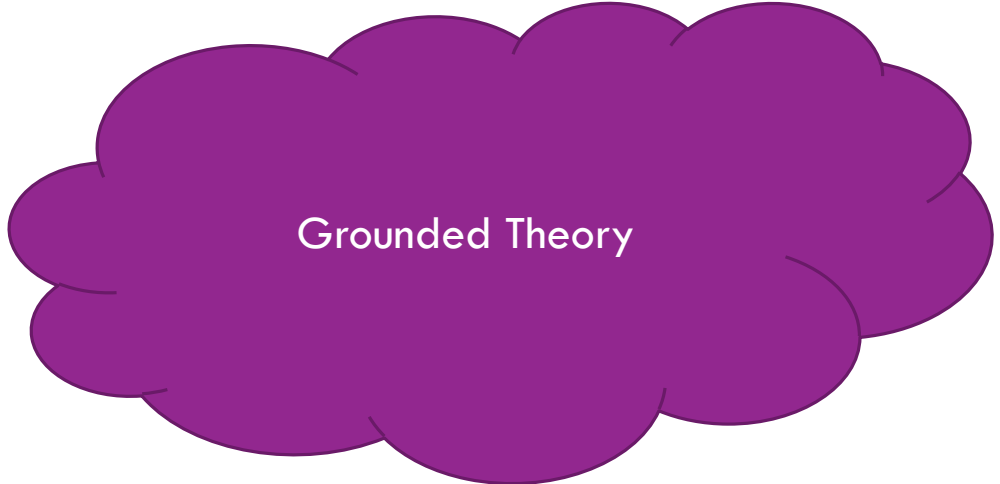
Bell, 2005, p. 203

ANALYSING WORDS

SOME OF THE VARIOUS METHODS...



Constant Comparative Method



Grounded Theory



Thick Description

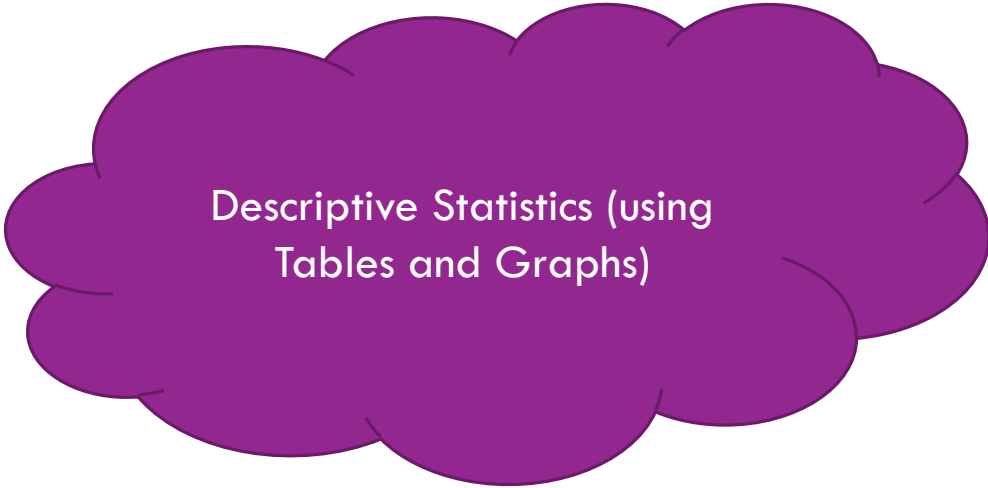


Discourse and Content Analysis

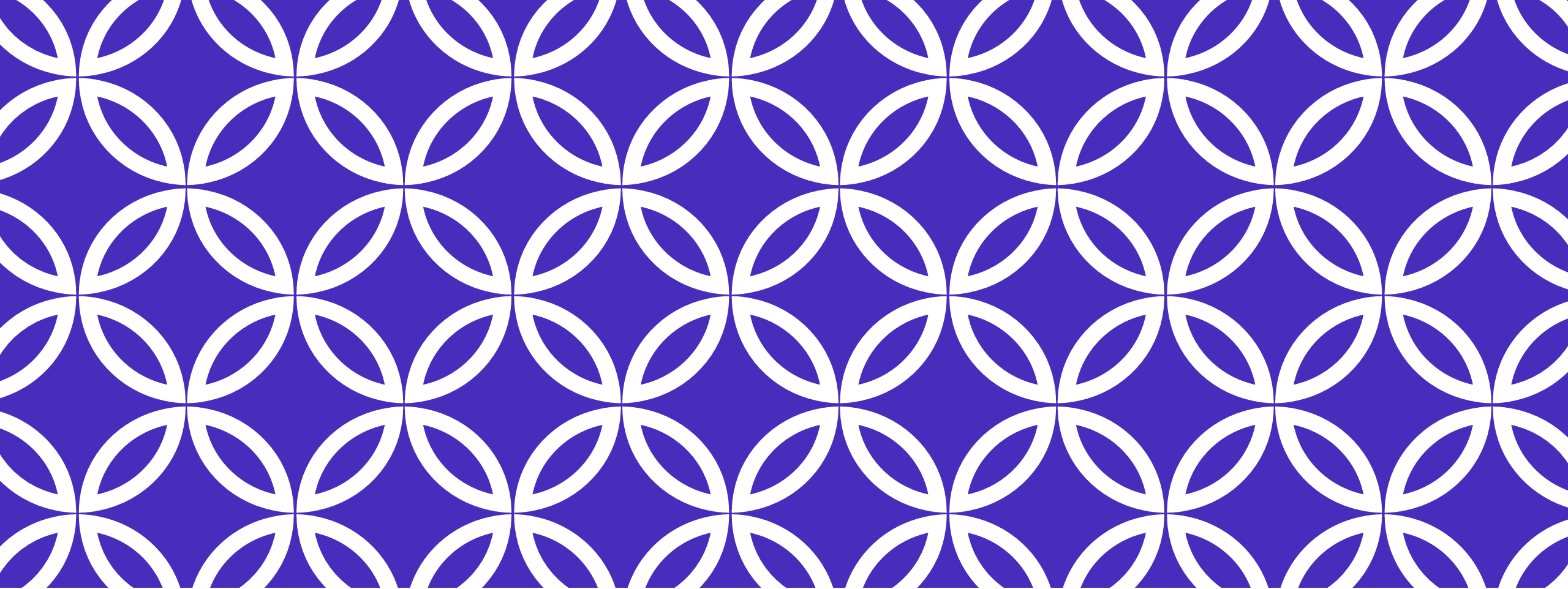
ANALYSING NUMBERS



Statistics



Descriptive Statistics (using
Tables and Graphs)



PART 1

Questionnaires

STEP 1: RECORDING DATA (AS YOU RECEIVE IT)

METHOD 1

Question 1

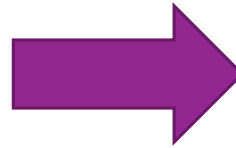
What qualifications did you have before you started your degree course?
(Please tick the appropriate box or boxes)

None ☐ Professional qualification* ☐

Successful completion of Access or Return to Study course ☐ A level or equivalent* ☐

Other* ☐

Please specify* _____



Summary sheet for Question 1

Question 1 Qualifications before entry				
None	Professional	Access/Return to Study	A level	Other
1	1111 1111 1111 1111 1111 111	1111 1111 1111 1111 1111 1111 11	1111 1111 11	1111 1111 1111 1
6	28	32	12	16

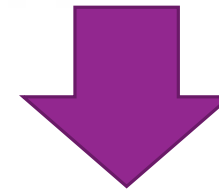


Table 12.1 Qualifications of mature students before entry to their degree course

None	A level	Professional	Access/Return to Study	Other
6	12	28	32	16

Source: Bell, J. (2005) *Doing Your Research Project*. New York: Open University Press.

RECORDING DATA: *METHOD 2*

What do I do if
my answers
aren't in
categories?

You could
consider
coding.



“Codes are tags or labels for assigning units of meaning to descriptive or inferential information compiled during a study. Codes are usually attached to ‘chunks’ of varying size...

... Codes are used to retrieve and organize the chunks...the organizing part will entail some system for categorizing the ‘chunks’...and cluster the segments...”

(Miles and Huberman, 1994 in Bell, 2005)

EXAMPLE: CODING

Example coding spreadsheet

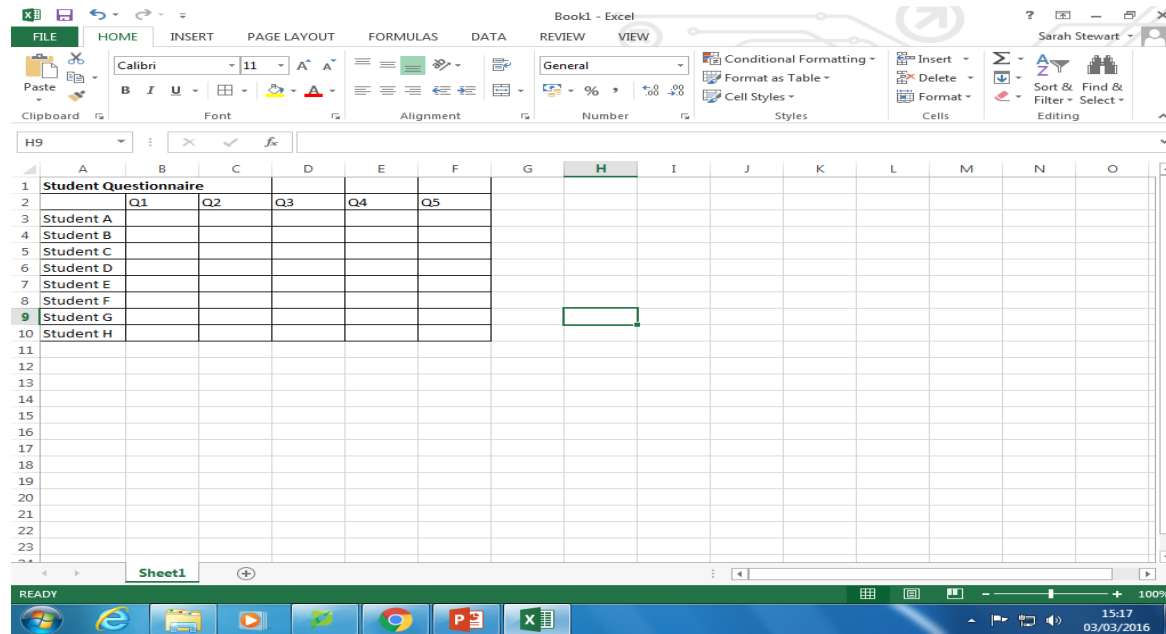
Student questionnaire			
	Q1	Q2	Q3
Student A	4	4	5
Student B	1	1	2
Student C	1	2	3
Student D	1	1	1

In this example, the codes are:

- strongly agree = 1
- agree = 2
- neither agree nor disagree = 3
- disagree = 4
- strongly disagree = 5

We can see, for example, that student A disagreed on questions 1 and 2, and strongly disagreed on question 3. Student D strongly agreed with questions 1, 2 and 3.

EXCEL TO EXCELL!



Skills
Reminder:

Graphs and
Tables – How
To

Developing your use of Excel Spreadsheet for data analysis:

Thomas, G. (2013) *How to do your Research Project*. London: Sage, pp. 249-

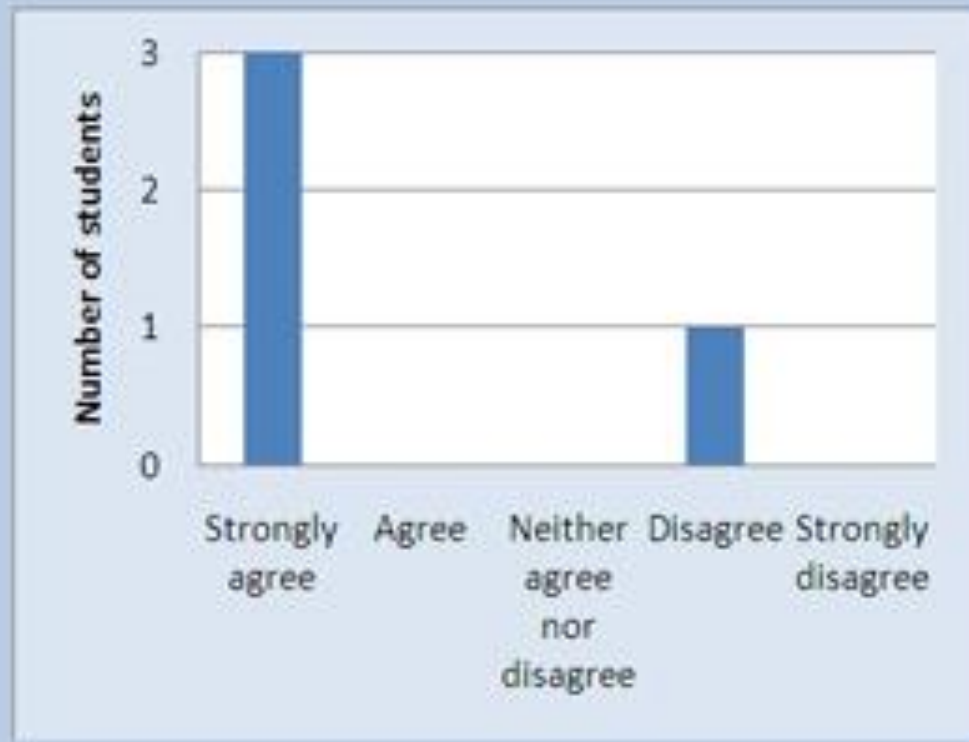
271

Example table

Question 1: I like maths lessons	
Response	Number of respondents
Strongly agree	3
Agree	0
Neither agree nor disagree	0
Disagree	1
Strongly disagree	0

Based on four responses

Example chart



Source: NFER, 2015



SOME POINTS...

If your sample is less than 100, it is misleading to use percentages. Your dissertation should therefore refer to the actual number of respondents.

If you have enough questionnaires, you could look at whether there is any variation in the way that different types of people responded. For example, you could look at just the females' responses, compared to just the males' responses.

However, if you have a small number of questionnaires, be wary of doing sub sample analysis because the results are likely to be misleading.

SO TELL ME WHAT YOU WANT...

Once you have the data – ask yourself, what will I do with it now? What do I really want to know?



You may wish to consider averages:

- *Arithmetic Mean*
- *The Median*
- *The Mode*

Arithmetic Mean

Add together each item or value and divide by the total number of values.

The Median

To calculate the **median** of any set of numbers, you need to write the numbers in order. To find the **median** number: Put all the numbers in numerical order. If there is an odd number of results, the **median** is the middle number. If there is an even number of results, the **median** will be the mean of the two central numbers.

The Mode

This is not used often in small studies and relates to the most frequently occurring value.

WHEN PRESENTING QUALITATIVE DATA...

Don't get bogged down in the detail - tell the reader about the main themes as they relate to the research question, rather than reporting everything that respondents or interviewees said.

Triangulate the data where possible and tell the reader what level of consensus there was - did all the different types of people you spoke to agree, or did views differ by group?

If you are supporting your writing with tables or graphs then state that 'most people said ...' or 'few people felt ...' rather than giving the number of people who said a particular thing.

Use brief quotes where these illustrate a particular point really well.

WHEN PRESENTING QUANTITATIVE DATA...

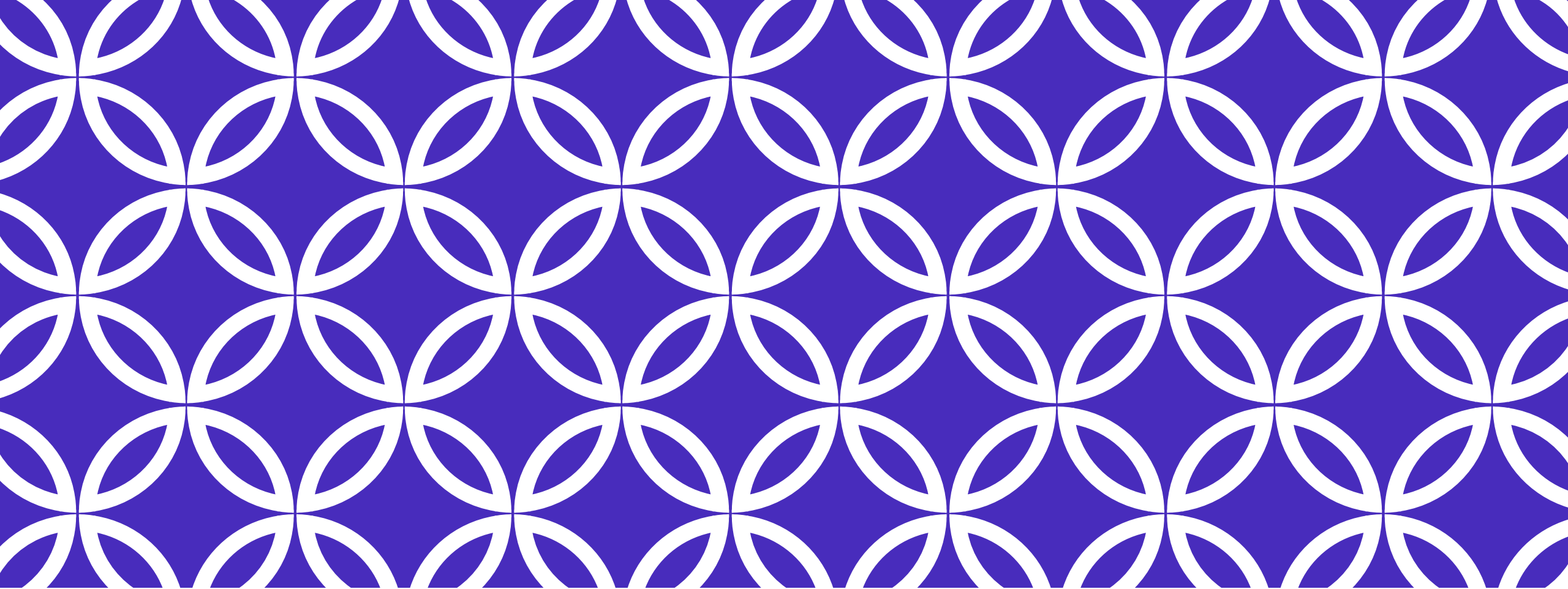
use charts or tables to help the reader understand the data and then highlight the most interesting findings

don't feel that you have to report every detail

analyse the data rather than just describing it - use it to tell a story that focuses on answering the research question

don't use percentages or proportions to report findings if you have fewer than 100 filled in questionnaires, as this can be misleading. Instead, use numbers rather than percentages when you report your findings. For example, if you received 25 questionnaires back, say that '20 students felt that ...' rather than '80% of students felt that...'

If the group has used more than one method in the research, comment on the research findings across the different methods. For example, do the survey findings back up those from the focus groups? How does the research fit with the wider literature on the topic?



PART 2

Focus on Interviews



Qualitative analysis process

Data collection and management



Organising and preparing data



Coding and describing data



Conceptualisation, classifying,
categorising, identifying themes



Connecting and interrelating data



Interpretation, creating explanatory
accounts, providing meaning



INTERVIEW DATA

How you analyse your data may depend on how you plan to present it. There are three ways you can write about qualitative findings:

- Developing a narrative to describe a situation, episode or event;
- Identifying main themes from transcripts and quoting extensively word-for-word;
- Some quantification, through indicating the frequency of occurrence, the main themes.

[Coding Data from Interviews](#)

[Various Methods of Analysing
Interview Data](#)

CONTENT ANALYSIS AND DEVELOPING THEMES

Case Study: Read through the case study with your partner.

- What do you notice about the way that the original interview data has been analysed?
- What do you notice about the way that it is presented as a final written analysis?



DISCUSSING YOUR ANALYSIS

“Your research itself enables you to complete the circuit of questioning, thinking, finding out, rethinking and answering.” (Thomas, 2013).

Analysis and *Synthesis*

Drawing out the **theory**

WRITING UP YOUR ANALYSIS

Present the evidence from your primary research. This may include:

- Quantitative Models
- Descriptive Statistics
- Qualitative Techniques (e.g. content analysis, case study descriptions etc)

Link your analysis to your lit. review – consider a repeated thematic structure

Use graphs, tables, diagrams and figures as appropriate to illustrate your points

Make effective and judicious use of appendices

Avoid a superficial or descriptive style

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Bell, J. (2005) *Doing Your Research Project*. New York: Open University Press.

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Kumar, R. (2014) *Research Methodology: A Step-by-Step Guide*. London: Sage.

NFER (2015) *How to Analyse Questionnaire Responses*. Available at:
<http://www.nfer.ac.uk/schools/developing-young-researchers/how-to-analyse-questionnaire-responses.cfm> Accessed: 02/03/2016.

Thomas, G. (2013) *How to do your Research Project*. London: Sage