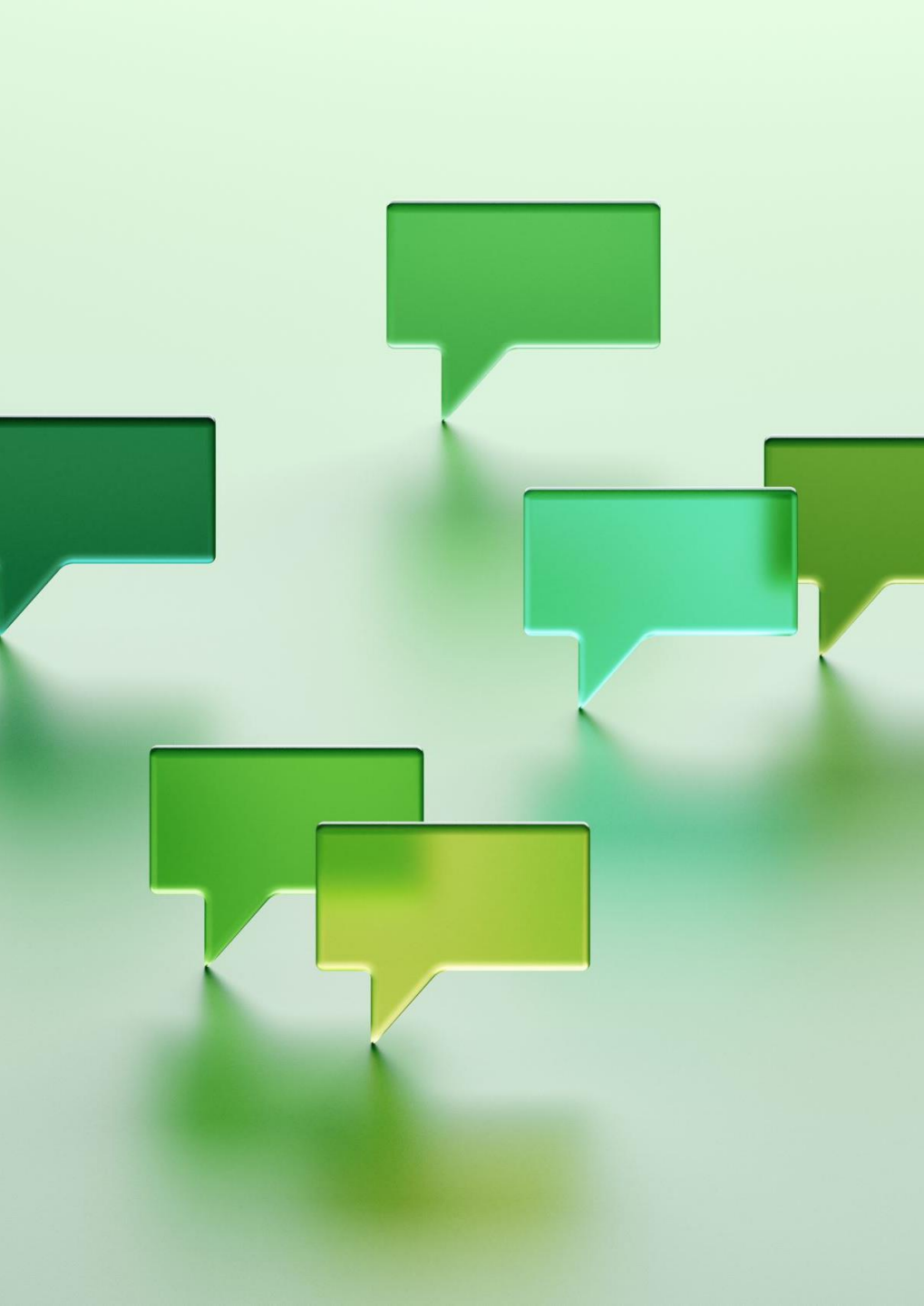


An abstract network diagram on the left side of the slide. It features a complex web of interconnected nodes (colored circles in blue, orange, green, purple, and grey) and lines (grey and black). The nodes are distributed across the frame, with a higher density in the center and some isolated nodes on the left. The lines connect the nodes in a non-linear, overlapping fashion, creating a sense of a dynamic, interconnected system.

ECDE7002: Introduction to Research Methods in Education

DAY 2



Focus for today

- Presentations and peer discussion/feedback
- Research tools
- Qualitative data analysis

Research presentations



Question

- *What experience do you have of qualitative research?*



Observation





Observation

It is part of a teacher/lecturer's role

You can see things in their natural context

You can see things that may escape conscious awareness

You can learn about things that people may be unwilling to talk about

It can be inconspicuous and part of normal classroom routine

It can be the least intrusive of all methods

Research Evidence: Can observers spot good teaching?

Strong et al. (2011) used value-added scores to identify 'effective' and 'ineffective' teachers, showed videos of them teaching to observers and asked them to say which teachers were in which group.

What do you think the figures showed?

The study found that:

In the experiments where the observers were not trained in observation, the proportion correctly identified by experienced teachers and head teachers was below the 50% that would be expected by pure chance.

At this level of accuracy, fewer than 1% of those judged to be 'Inadequate' are genuinely inadequate; of those rated 'Outstanding', only 4% are actually outstanding.

Overall, 63% of judgements will be wrong.

The authors concluded that:

(a) observers, no matter how experienced, are unable to identify successful teachers



(b) certain cognitive operations may be contributing to this outcome

In other studies:

If a lesson is judged 'Outstanding' by one observer, the probability that a second observer would give a different judgement is between 51% and 78%.

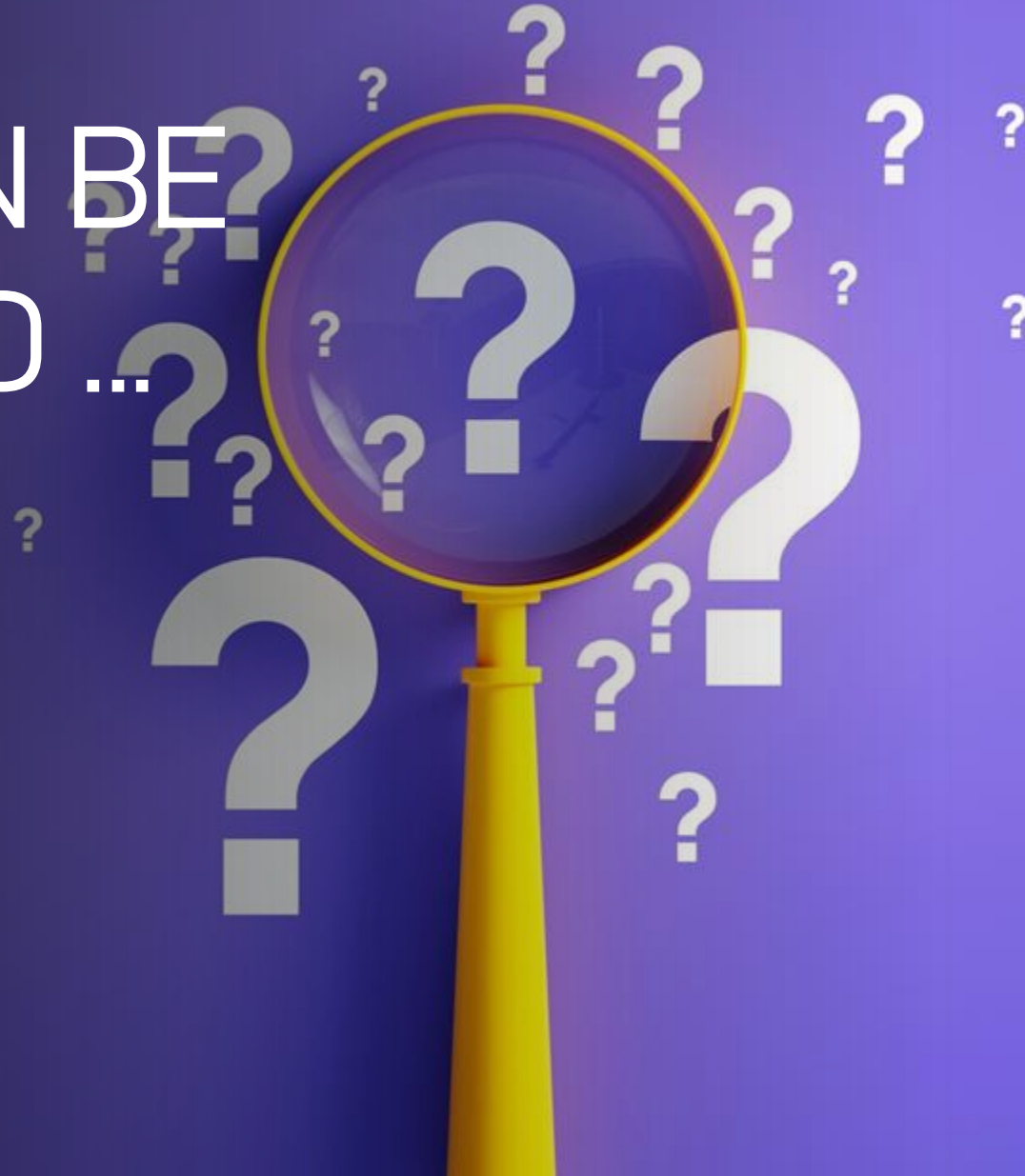




How can the research evidence be so out of line with our intuition?

- Observation produces a strong emotional response (is it difficult not to think about what we 'would have done'?);
- Learning is invisible (can we 'see' when / what pupils are learning?);
- We assume that if you can do it, you can spot it (can you describe everything you do explicitly?);
- We don't believe that our observation can miss things (in-attentional blindness).

WHAT CAN BE
OBSERVED ...





What can be observed?

- Human behaviour
- Physical actions and interactions
- Verbal behaviour
- Expressive behaviour
- Spatial locations
- Temporal patterns
- Physical objects



HOW CAN
WE
OBSERVE?

How can we observe?



QUALITATIVE
OBSERVATION



QUANTITATIVE
OBSERVATION

How can we observe?

QUALITATIVE OBSERVATIONS...

involve observing people, events, or physical characteristics in their **natural setting**.

They are made when you use your senses to observe the results.



QUANTITATIVE OBSERVATIONS...

could be made with instruments such as rulers, cylinders, beakers and thermometers.

These results are measurable.

OR.....



Quantitative observations...

Quantitative observation is used when the researcher wants to be able to numerically describe the phenomenon (Ellis, 2022)

could include **systematic observation** - used to count how often a particular phenomenon is observed.

The items and the manner of the observation are well defined; e.g. using a tick-box system or assigning a score to the observation.

2015 Pilot Implementation Activities	Teacher Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14
For the first 10 days of the pilot, all 14 teachers will be involved	1) Group all students into 10														
	2) Assign 10 students to each of 10 groups														
	3) Assign 10 students to each of 10 groups														
	4) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	5) Assign 10 students to each of 10 groups														
	6) Assign 10 students to each of 10 groups														
	7) Assign 10 students to each of 10 groups														
	8) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	9) Assign 10 students to each of 10 groups														
	10) Assign 10 students to each of 10 groups														
	11) Assign 10 students to each of 10 groups														
	12) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	13) Assign 10 students to each of 10 groups														
	14) Assign 10 students to each of 10 groups														
	15) Assign 10 students to each of 10 groups														
	16) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	17) Assign 10 students to each of 10 groups														
	18) Assign 10 students to each of 10 groups														
	19) Assign 10 students to each of 10 groups														
	20) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	21) Assign 10 students to each of 10 groups														
	22) Assign 10 students to each of 10 groups														
	23) Assign 10 students to each of 10 groups														
	24) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	25) Assign 10 students to each of 10 groups														
	26) Assign 10 students to each of 10 groups														
	27) Assign 10 students to each of 10 groups														
	28) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	29) Assign 10 students to each of 10 groups														
	30) Assign 10 students to each of 10 groups														
	31) Assign 10 students to each of 10 groups														
	32) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	33) Assign 10 students to each of 10 groups														
	34) Assign 10 students to each of 10 groups														
	35) Assign 10 students to each of 10 groups														
	36) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	37) Assign 10 students to each of 10 groups														
	38) Assign 10 students to each of 10 groups														
	39) Assign 10 students to each of 10 groups														
	40) Assign 10 students to each of 10 groups														
For the next 10 days, the 14 teachers will be involved	41) Assign 10 students to each of 10 groups														
	42) Assign 10 students to each of 10 groups														

Observations were recorded every 15 seconds and placed into behavioural categories					
Intensity	Proximity and contact seeking	Contact maintaining	Proximity and interaction avoiding	Proximity and interaction resisting	Searching
1					
2		✓			
3					✓
4	✓✓				
5					✓
6	✓				
7		✓			

Types of Observation

Structured

Sometimes we have something specific we want to observe – leadership skills; level of participation etc.

We use a structured, preset guide (schedule) of what to observe or a checklist.

Looking for

Unstructured

Sometimes we want to see what is naturally occurring or exists without predetermined ideas. We use have an open-ended approach to observation and record all that we observe.

Looking at

Observing what does not happen may be as important as observing what does happen.



Your role in observation

A choice between:

- *Non-participant observation – Researcher is not part of the activity taking place, but simply observes.

- *Participant observation – Researcher takes part in community, organisation or activity. Researcher attempts to learn what it is like to be part of the community, organisation, or participate in the activity.



Your role in observation

A choice between:

- *Overt observation = those being observed are aware of the fact that they are being observed.

- *Covert observation = the researcher is "undercover"; i.e. the participants are unaware that they are being observed.

If you are an overt, non-participant observer (i.e. 'fly-on-the wall'), how will you deal with interested participants?

OBSERVATION



STRENGTHS



LIMITATIONS

Advantages of Observation in Research

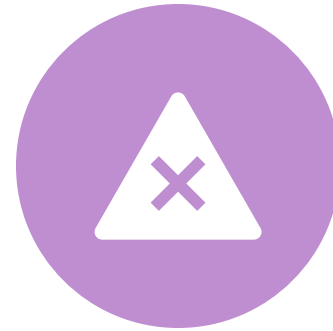
Provides the researcher the opportunity to watch what people actually do rather than relying on reports of what they **say** they do.

Can avoid biasing factors e.g. those caused by an interviewer.

Limitations of Observation Research



Only behaviour and physical personal characteristics can usually be examined. The researcher does not learn about motives, attitudes, intentions, or feelings.



Can be time consuming if the observed behavior occurs rather infrequently.



Interpretation of data may be a problem.



Possible invasion of privacy.

Observer Effect

- The presence of an observer can have a considerable effect on the behaviour of those being observed.
- Explaining to a participant what you are doing may affect their behaviour
- Behaviour or 'act'?

Roethlisberger and Dickson (1939)

Hawthorne effect – the presence of an observer increased productivity at the Hawthorne electrical works, Chicago





Observer Bias

- Certain attitudes may bias what you “see”
- Observer expectations
- Observer emotions

Steps in planning for observation

- **WHO:** Decide who will be observed.
- **WHY:** Establish why they are selected
- **WHAT:** Determine aspects that will be observed (characteristics, attributes, behaviours, etc.)
- **WHEN:** Determine when observations will be made.
- **WHERE:** Determine where observations will be made
- **HOW:** Develop the observation schedule
- **HOW:** Pilot / test the observation schedule
- **DO:** Conduct the observations
- **SO?:** Analyse and interpret the collected information.
- **SHARE:** Write up your findings.



QUESTIONNAIRES

Name _____

Signature _____

Date _____

```
graph TD; A[Depending on the nature of the questions, questionnaires can be classified as:] --> B[quantitative]; A --> C[qualitative]; B --> D[Answers obtained through closed-ended questions with multiple choice answer options are analysed using quantitative methods and they may involve pie-charts, bar-charts and percentages.]; C --> E[Answers obtained to open-ended questionnaire questions are analysed using qualitative methods and they involve discussions and critical analyses without use of numbers and calculations.];
```

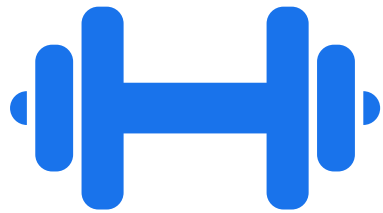
Depending on the nature of the questions, **questionnaires** can be classified as:

quantitative

Answers obtained through closed-ended questions with multiple choice answer options are analysed using quantitative methods and they may involve pie-charts, bar-charts and percentages.

qualitative

Answers obtained to open-ended questionnaire questions are analysed using qualitative methods and they involve discussions and critical analyses without use of numbers and calculations.



Strengths?



Limitations?

Questionnaires

STRENGTHS

- Practical
- Large amounts of information can be collected quickly
- Can be carried out by many people with limited affect to its validity and reliability
- Results can be quickly and easily quantified
- Can be analysed easily and objectively

LIMITATIONS

- Difficult to understand some forms of information
- No way of telling how truthful a respondent is being
- No way of telling how much thought a respondent has put in
- People answer based on their interpretation of the question (e.g. good, poor, difficult)
- Lacks [validity](#)

Discussion Points

- Reliability
- Validity
- Representative sample
- Generalisability

- the application of research results to cases or situations beyond those examined in the study

Generalisability

- the degree to which an assessment tool produces stable and consistent results.

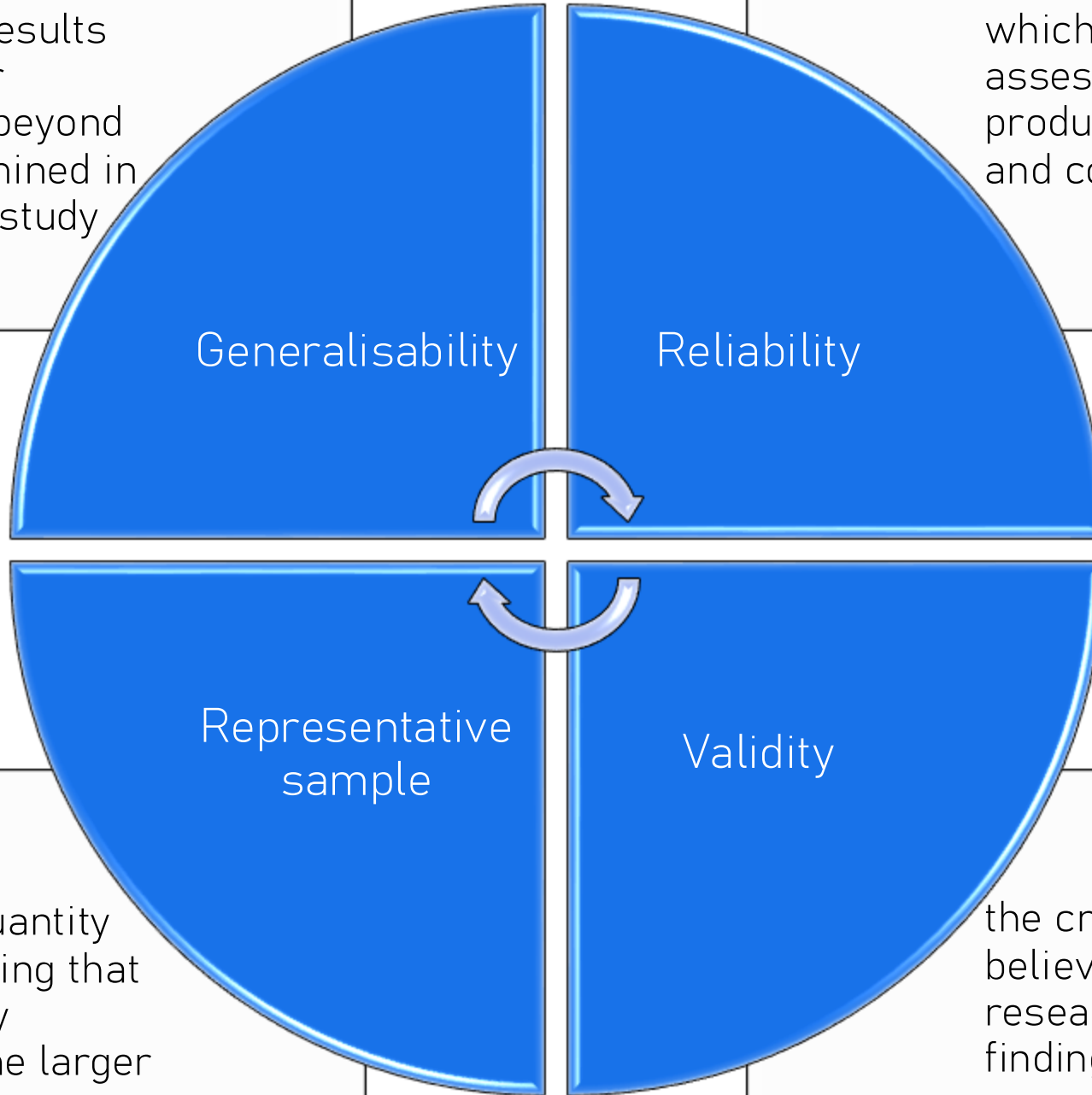
Reliability

Representative sample

- a small quantity of something that accurately reflects the larger entity

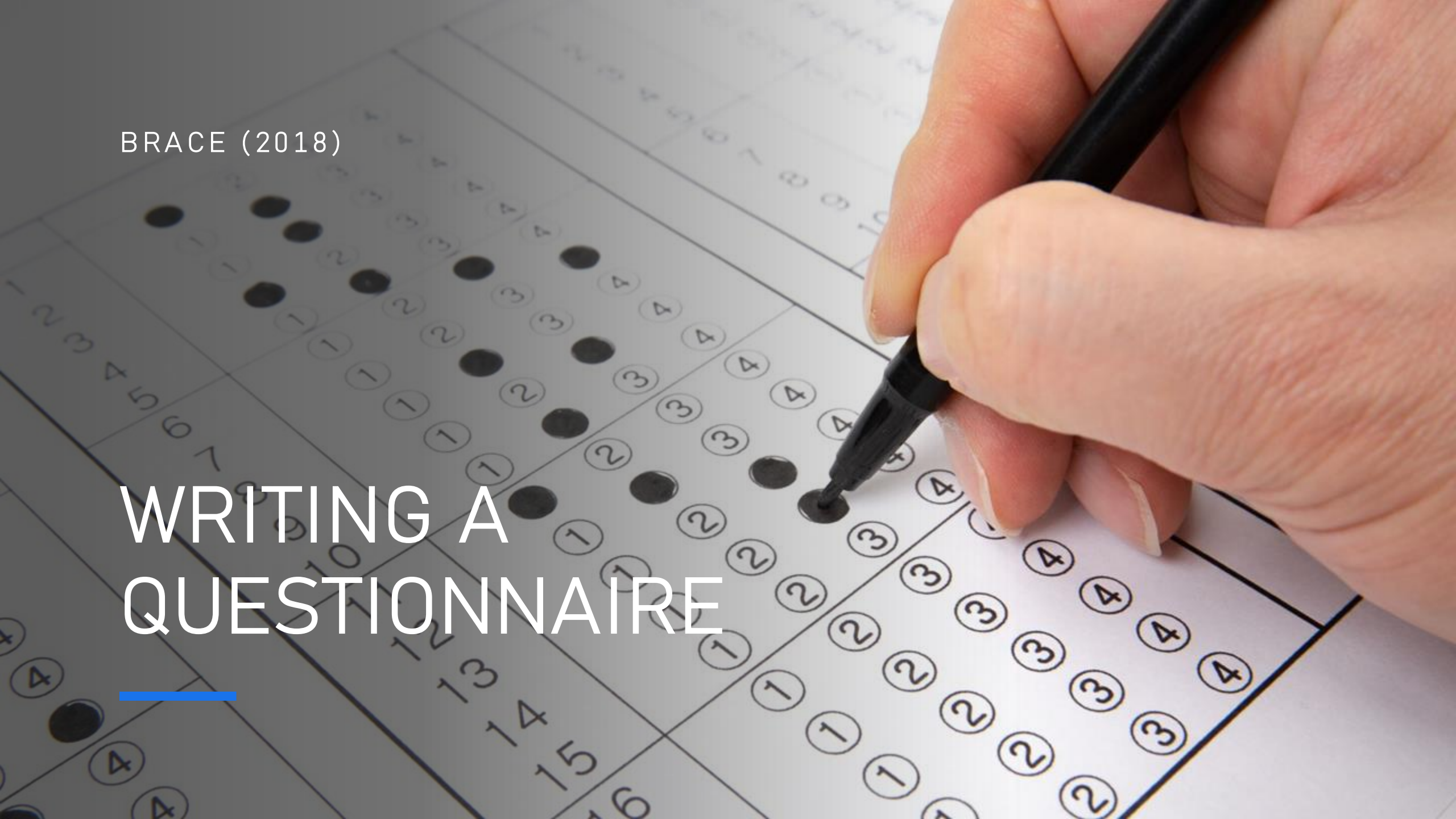
Validity

the credibility or believability of the research. Are the findings genuine?



BRACE (2018)

WRITING A QUESTIONNAIRE



Open questions

- ⊕ Open questions may produce unexpected results.
This can make the research more original and valuable.
- ⊖ However, it is difficult to analyse the results of the findings when the data is obtained through open questions.



Closed questions

The respondents are given a list of predetermined responses from which to choose their answer.

The list of responses should include every possible response and the meaning of the responses should not overlap. For example...



1. Please select your age group.

☐ Under 18

☐ 18 - 24

☐ 24 - 34

☐ 34 - 45

☐ Over 45

Closed questions

- The respondents are given a list of predetermined responses from which to choose their answer.
- The list of responses should include every possible response and the meaning of the responses should not overlap. For example...
- A [Likert](#) scale is a commonly used set of responses for closed questions.



Likert Scale

Example 1: How satisfied were you with your stay at our hotel?

1. Very dissatisfied.
2. Somewhat dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Somewhat satisfied.
5. Very satisfied.

Example 2: Which image best describes your experience with our product?



Agreement

Strongly agree
Agree
Undecided
Disagree
Strongly disagree

Frequency

Very frequently
Frequently
Occasionally
Rarely
Never

Examples of Likert Scales

Importance

Very important
Important
Moderately important
Of little importance
Unimportant

Likelihood

Almost always true
Usually true
Occasionally true
Usually not true
Almost never true

Dichotomous Questions

This type of questions gives two options to respondents to choose from:

yes / no

agree / disagree.

It is the easiest form of questionnaire for the respondent in terms of responding to it.



What do you think of Starbucks?



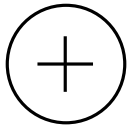
Love It



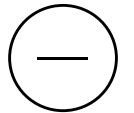
Hate it

Multiple choice questions

Respondents are offered a set of answers they have to choose from.



= easy to complete.



However, if there are too many answers to choose from, it can make the questionnaire boring.



— Best Multiple Choice Ever?

Which answer is correct?

1. All of the below.
2. None of the below.
3. All of the above.
4. One of the above.
5. None of the above.
6. None of the above.

Scaling / Ranking Questions

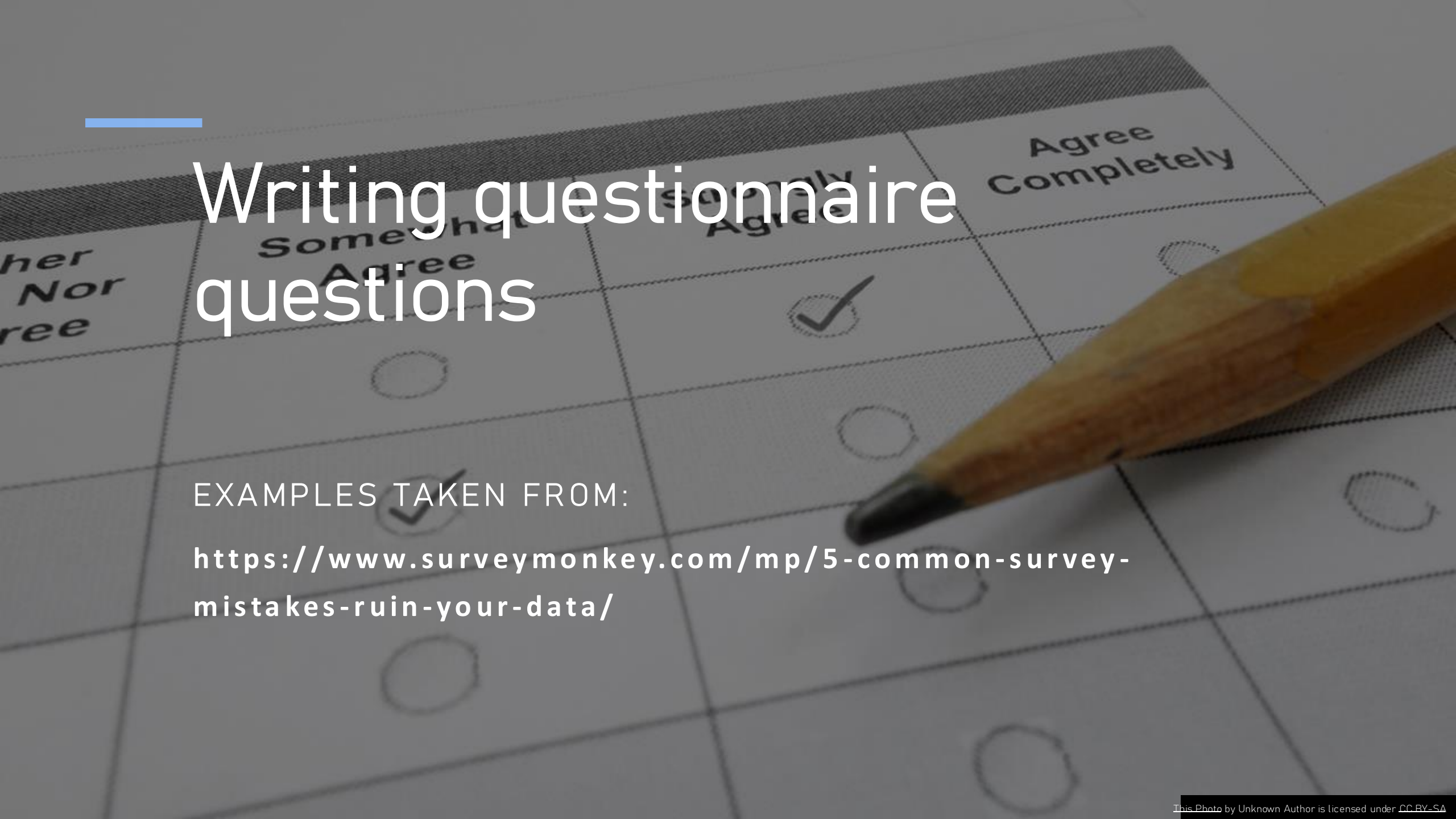
They present an option for respondents to rank the available answers to the questions on the scale of given range of values (for example from 1 to 10).



Points to consider

Social desirability –
individuals may lie
to put themselves
in a positive light

Anonymity – can
reduce social
desirability bias



Writing questionnaire questions

EXAMPLES TAKEN FROM:

<https://www.surveymonkey.com/mp/5-common-survey-mistakes-ruin-your-data/>

Writing Questions

How short was Churchill?

Good? / Bad?



Writing Questions

Avoid leading questions:

Better Question: How would you describe Churchill's height?

If the question is rewritten to be neutral-sounding, it can eliminate the leading bias.



Writing Questions

Where do you enjoy drinking
coffee?

Good? / Bad?



Writing Questions

Avoid loaded questions

Some people dislike coffee
and, therefore, can't answer
the question.



Writing Questions

How useful will this textbook be for students and newly qualified teachers?

Good? / Bad?



Writing Questions

Stay away from double-barreled questions

Better Questions:

How useful will this textbook be for students?

How useful will this textbook be for newly qualified teachers?



Writing Questions

Do you always eat breakfast?

Yes/No

Good? / Bad?



Writing Questions

Avoid absolutes in questions

Better Question: How many days
a week do you usually eat
breakfast?

Are there still issues with this?



Question testing – example 1

Do you have a personal computer (PC) at home?

(Tick one box)

Yes

☐

No

☐

Good / bad?

If bad, can you improve it?

Question testing – example 1 revised

Do you or your family have a computer at home?

(Tick one box)

Yes

☐

No

☐

Is this a better question?
Can you improve it?

Question testing – example 2

How often, if ever, are you punished at school; e.g. detention, sent to see the headteacher, sent out of the classroom?

- Never
- Rarely
- Sometimes
- Often



Good / bad?
If bad, can you improve it?

Question testing – example 2 revised

In the last four weeks, how many times have you been punished at school?

- Never
- Once or twice
- Three or more times



Good / bad?
If bad, can you improve
it?

A photograph of a man with short dark hair, wearing a light blue button-down shirt and a dark blue tie, sitting and talking to two young girls. The girl on the right is wearing a teal jacket over a dark blue shirt and is gesturing with her hands while speaking. The girl on the left is wearing a pink and grey striped shirt. The background is a blurred classroom setting with a window and some furniture. The word "INTERVIEWS" is overlaid in large white capital letters in the center of the image.

INTERVIEWS

Interviews

- An 'interview' is typically a face-to-face conversation between a researcher and a participant involving a transfer of information to the interviewer (Cresswell, 2012).
- Three types:
 - Structured
 - Unstructured
 - Semi-Structured



What is the difference?

Structured interviews...

can be a **quantitative** research method where the interviewer a set of prepared questions in the form of an interview schedule which he/she reads out exactly as worded.

Interview schedules have a standardised format which means the same questions are asked to each interviewee in the same order.

Structured interview example

- Q1 Can you tell me about the way in which you use IT in your work?
- Q2 What do you believe are the advantages and disadvantages of using IT?

The interviewer:

- will not deviate from the interview schedule (except to clarify the meaning of the question);
- will not probe beyond the answers received.

— Unstructured interviews...

have no set questions.

Instead, the interviewer asks open-ended questions based on a specific research topic and will try to let the interview flow like a natural conversation. The interviewer modifies his or her questions to suit the candidate's specific experiences.

More like a 'guided conversation' than a strict structured interview.

Unstructured interview example

Good morning. I am carrying out some research on teachers' use of IT in their work. Would you tell me about this?

Semi-structured interviews...

are widely used in qualitative research.

They take a slightly more open-ended approach than a structured interview.

The questions are loosely structured and give interviewees more opportunities to fully express themselves.

The unstructured part of semi-structured interview gives participants more space to ask for clarification on answers and to express free flow of thoughts, so the interviewees normally feel less stress during the interview.

Semi-structured interviews...

Main question
here.

- Q1 Can you tell me about the way in which you use IT in your work?

- Do you use specific programmes?/apps?/software?
- Do you use these for specific purposes?
- Is there a reason why you like / don't like?

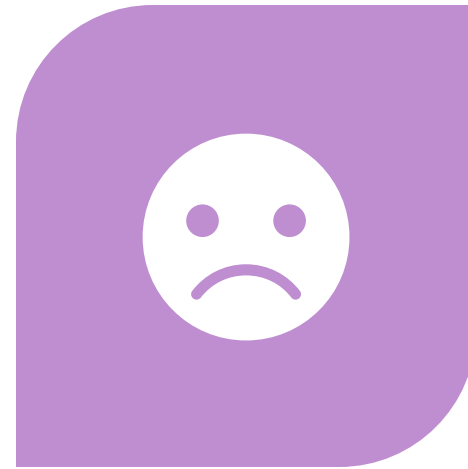
Pre-prepared sub-
questions here.

- Q2 What do you believe are the advantages and disadvantages of using IT?
 - You have spoken about several advantages. Are there any disadvantages? For yourself? For others?

Semi-structured Interviews



STRENGTHS?



LIMITATIONS?

Semi-structured Interviews

STRENGTHS

- ✓ Positive rapport between interviewer and interviewee
- ✓ People are able to talk about something in detail and depth
- ✓ Complex questions and issues can be discussed / clarified
- ✓ Easy to record

LIMITATIONS

- ❖ Depends on the skill of the interviewer
- ❖ Interviewer may give out unconscious signals
- ❖ Time Consuming
- ❖ Depth of information may be difficult to analyse
- ❖ Validity

- the application of research results to cases or situations beyond those examined in the study

Generalisability

- the degree to which an assessment tool produces stable and consistent results.

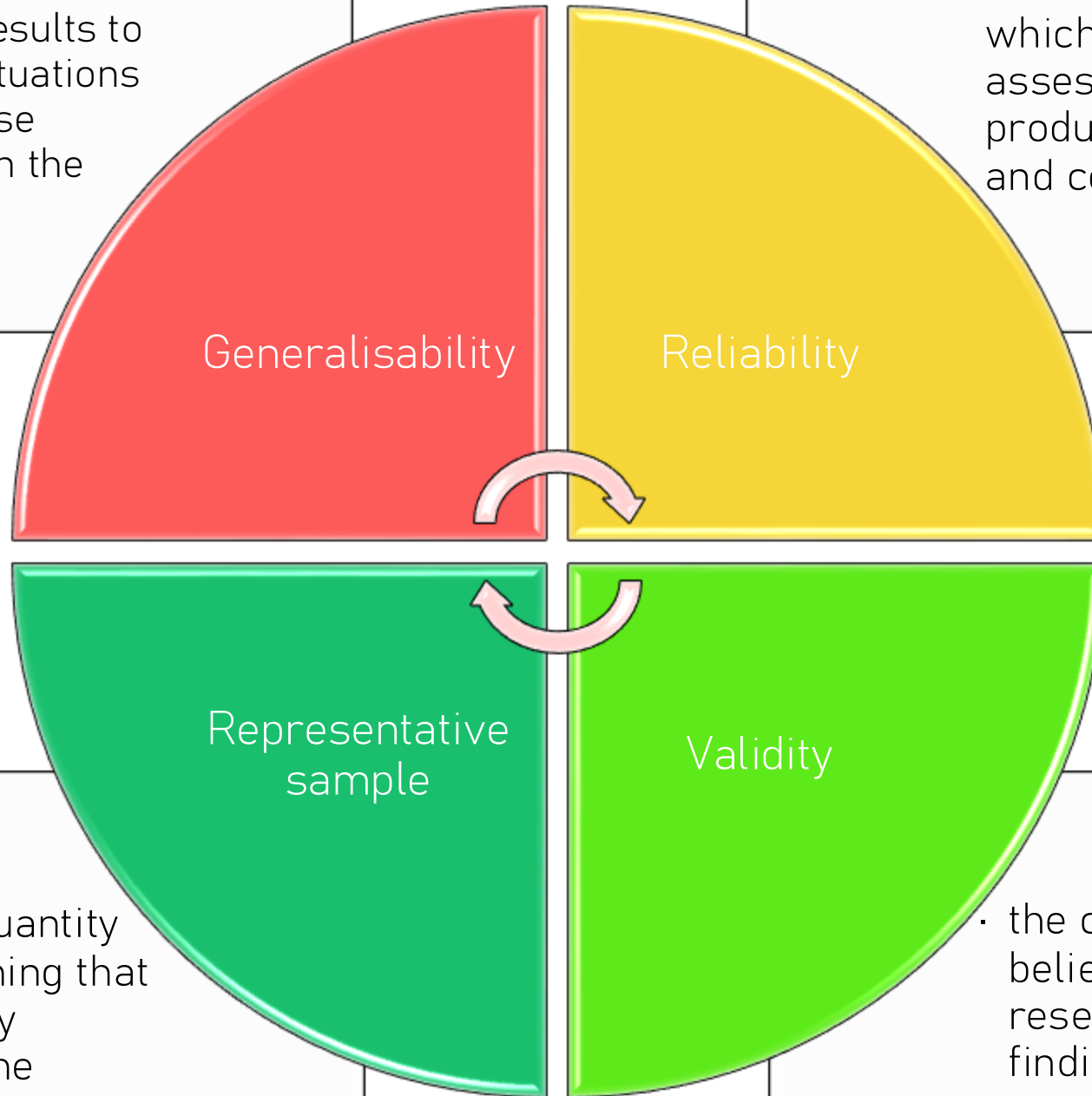
Reliability

Representative sample

- a small quantity of something that accurately reflects the larger entity

Validity

- the credibility or believability of the research. Are the findings genuine?



Issues with validity



- The researcher has no real way of knowing if the respondent is lying.
- The respondent may not consciously lie but may have imperfect recall.
- An interview can sometimes be a “second chance” to do something; having been given the time to reflect on something they did, the respondent tries to make sense of their behaviour by rationalising their actions. Their explanation for their behaviour, with hindsight, may be very different from what they actually felt at the time.

(RANDOM)
THINGS TO
CONSIDER...





Things to consider:

- **Budget:** do you need to travel?
- **Participant access:** can you ask anyone you would like to take part?
- **Quality:** can you build the same kinds of relationships over the internet or phone as you can in person? will this affect the quality of the responses?



How many interviews are
'enough'?

HOW WILL YOU DECIDE?

How many interviews are 'enough'?

Until relatively recently, researchers had to rely on personal experiences to estimate how many qualitative data collection events they needed for a study - data to support these sample sizes were virtually non-existent.



Morgan et al. (2002)

- * the first five to six in-depth interviews produced the majority of the data
- * approximately 80% to 92% of concepts were identified within the first 10 interviews
- * found that nearly no new concepts were found after 20 interviews

Guest, Bunce & Johnson (2006)

A systematic inductive thematic analysis of 60 in-depth interviews.

Of the 114 themes identified in the entire dataset:

- * 70% (80) turned up in the first six interviews
- * 92% (104) were identified within the first 12 interviews



Hennink & Kaiser (2022)

found that you can achieve saturation with fewer participants than previously believed.

Their review of **23 peer-reviewed articles** suggests that:

9–17 interviews

can be sufficient to reach saturation

(especially for studies with homogenous populations and narrowly defined objectives)

A homogeneous population = a group or thing where all members or parts are the same.
Narrowly defined objectives = very specific goals.

Interviewing children and young people

What might the challenges be?



What might be the challenges relating to interviewing children and young people?

- Easily distracted, limited attention span;
- Researcher seen as an authority figure (link to ethical considerations);
- Children are not always clear in their responses;
- Children may say what they think the researcher wants to hear rather than what they really think/feel;
- Interview may be seen as a test;
- Children may be unwilling to contradict an adult or assert themselves;
- Children may be inarticulate, hesitant and nervous.

Cohen,
Manion &
Morrison,
2018

Group Interview (or Focus Group Interview)

- A group interview is a form of qualitative research in which a group of participants are asked about their perceptions, opinions and attitudes towards, for example, a lesson/lecture, their learning, a teaching strategy.
- Questions are asked in an interactive group setting where participants are free to talk with other group members.
- The interview is conducted in an informal and natural way where participants are free to give views.

Group Interviews

Krueger, R.A. & Casey, M.A. (2000) *Focus Groups. A Practical Guide for Applied Research* (3rd Edition). Thousand Oaks, CA: Sage Publications.

Morgan D. L. (1997). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Vaughn S., Schumm J. S., Sinagub J. (1996). *Focus group interviews in education and psychology*. Thousand Oaks, Sage.

Keep in mind that people behave differently in groups

Understand why you are choosing a group of participants rather than individuals since responses may change – is it for a valid reason?

The researcher should have a marginal role in discussions

4-12 per group (Krueger & Casey, 2000, pp. 73-74) (more views on the next slide)

According to Morgan (1997) and Vaughn et al. (1996), well-designed focus groups usually last between 1 and 2 hours.

How many people should be included?

Johnson and Christensen (2004) = 6-12 people

Langford et al. (2002) = 6-10 people

Krueger (2000) = 6-9 people

Kuzel (1992) = 6-8 people

Johnson, B. & Christensen L. (2004) *Educational research: Quantitative, qualitative, and mixed approaches*. Needham Heights, MA: Allyn & Bacon.

Langford, B. E., Schoenfeld, G. & Izzo, G. (2002) *Nominal grouping sessions vs Focus groups*. Qualitative Market Research: An International Journal, 5 (1), 58-70.

Krueger, R. (2000) *Focus Groups: A practical guide for applied research*. Thousand Oaks, CA: Sage Publications.

Kuzel, A. J. (1992) Sampling in qualitative inquiry. In B. F. Crabtree, W. L. Miller (eds.), *Doing qualitative research* (pp. 33-45). Thousand Oaks, CA: Sage Publications.

Organisation

Because participants might not be available on the day of the focus group:

* Morgan (1997) suggested overrecruiting by at least 20% of the total number of participants required;

Wilkinson (2004) suggested an over-recruitment rate of 50%.

Wilkinson S. (1998). Focus group in health research: Exploring the meanings of health and illness. *Journal of Health Psychology*, 3, 329–348.

Group Interview

<https://youtu.be/bPjJ6TPkLV>
[M](#)



What are your views of this interview with students?



How many
group
interviews
are 'enough'?



Guest, Namey and McKenna (2017)

Their study revealed that:

- more than 80% of all themes were discoverable within two to three focus groups;
- 90% of themes could be discovered within three to six focus groups.

Also, they were able to identify the most prevalent themes within three focus groups.

[How Many Focus Groups Are Enough? Building an Evidence Base for Nonprobability Sample Sizes - Greg Guest, Emily Namey, Kevin McKenna, 2017 \(sagepub.com\)](https://www.sagepub.com/journalsPermissions.nav?doi=10.1177/1043986217305555)



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4–8 focus group discussions

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(especially for studies with homogenous populations and narrowly defined objectives)

A homogeneous population = a group or thing where all members or parts are the same.
Narrowly defined objectives = very specific goals.

Resources

Krueger, R. (2002) Designing and Conducting Focus Group Interviews.

www.eiu.edu/ihec/Krueger-FocusGroupInterviews.pdf

Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A Qualitative Framework for Collecting and Analyzing Data in Focus Group Research. *International Journal of Qualitative Methods*, 8(3), 1-21.

<https://doi.org/10.1177/160940690900800301>

Writing Interview Questions



Writing questions

Use open-ended questions

- What did you think of ...?
- How did you feel about ...?
- What did you like best about ...?

Be cautious of phrases such as
'how satisfied' or 'to what extent'.





Writing questions

Avoid dichotomous questions

These questions can be answered with yes/no, true/false and may not allow participants to extend their answers.

Writing questions

Use "think back" questions.

- Take participants back to an experience and not forward to the future
(particularly if they are children)





Writing questions

Use different types of questions:

Don't be afraid to use questions that get participants **involved**.

For example;

- Reflection
- Examples
- Choices
- Ranking
- Drawings, etc.

Writing questions

Avoid leading questions:

- Don't you think...?
- Wouldn't you say that...?
- That must have been...?
- Don't you agree that...?



Writing Questions

- Be clear.
- Use clear, concise, and uncomplicated language while trying to avoid acronyms, technical terms or jargon that may confuse your participants.
- Consider the age of the participants.



Writing questions

Focus the questions:

in a sequence that goes from
general to specific.



Collecting data

Whilst in the interview:

- * Listen for inconsistent comments and probe for understanding;
- * Listen for vague or cryptic comments and probe for understanding;
- * Consider asking each participant a final preference question (so that all pupils can contribute);
- * Offer a summary of key points and seek confirmation.

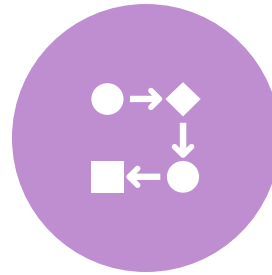
If possible, audio record the interview.

(You would permission from the interviewee to do this.)

If you select interviewing as a research method, you should:



1. Write a long list of questions relating to your research focus;



2. Narrow down your list so that you have a suitable number;



3. Order the questions so that they make sense;



4. Pilot the questions.



Piloting



What is a 'pilot' in research?

A pilot study can be defined as:

“a small study to test research protocols, data collection instruments, sample recruitment strategies, and other research techniques in preparation for a larger study”

Hassan, Z.A., Schattner P. & Mazza, D. (2006) Doing A Pilot Study: Why Is It Essential? Malays Fam Physician. Aug 31;1(2-3):70-3.

[Key considerations for testing and piloting surveys.pdf](#)
([unhcr.org](#))

Piloting research tools – why bother?



Piloting is **crucial** – in order to:



ensure that the researcher has included questions that are necessary to measure the concept being studied (Dikko, 2016)



help identify any flaws or limitations within the interview design that allow necessary modifications to the study (Kvale, 2007)



ensure validity and reliability

Why pilot...

QUESTIONNAIRES

- Check that respondents understand the **terminology** used in the questionnaire;
- Check that respondents understand the **instructions** (e.g. 'If yes, go to Q4);
- Check that leading questions have not been used;
- Ensure that the questionnaire can be completed in a reasonable amount of time.

[Key considerations for testing and piloting surveys.pdf](#)
([unhcr.org](#))

INTERVIEW QUESTIONS

- Identify flaws or limitations in the questions – can the questions be answered?;
- Test the validity – are the questions clear and asking what you think you are asking?
- Is the interview too long / short?

[\(PDF\) Piloting for Interviews in Qualitative Research: Operationalization and Lessons Learnt](#)
([researchgate.net](#))



Data analysis



What is data analysis in qualitative research?

Data analysis in qualitative research involves examining and interpreting non-numerical data to identify patterns, themes, and insights.



Why do I need to choose a data analysis method?

- Choosing a method of data analysis is essential for ensuring that your research is conducted rigorously, ethically, and in a way that best addresses your research questions and objectives.
- The chosen method shapes the way you collect, interpret, and draw conclusions from your data, ultimately influencing the validity and reliability of your research findings.



How will I know which method of data analysis to use?

Determined by:

- the nature of your **research question**;
- the **approach** and **paradigm** within which your research operates;
- the **methods** used;
- the type of data gathered.



What are my options?

- **Content analysis:** used to identify the patterns that emerge from text by grouping content into words, concepts and themes
- **Narrative analysis:** focuses on the stories people tell and the language they use to make sense of them.
- **Discourse analysis:** used to get a thorough understanding of the political, cultural and power dynamics that exist in specific situations.
- **Thematic analysis:** used to deduce the meaning behind the words that people use. This is accomplished by discovering repeating themes in text.
- **Grounded theory:** formulates a theory around a single data case based on actual data and not entirely speculative. Then, additional cases can be examined to see if they are relevant and can add to the original theory.
- **Interpretative phenomenological analysis (IPA)**



Method #1: Content Analysis

(or Qualitative Content Analysis)

Used to **evaluate patterns** within a piece of content (for example, words, phrases or images) or across multiple pieces of content or sources of communication.



Examples

Using a collection of newspaper articles, political speeches or on social media, you could:

- identify the **frequency** with which an idea is shared or spoken about; e.g. by counting how many times Donald Trump is mentioned on X (conceptual data analysis)
- identify **patterns** of deeper underlying interpretations; e.g. identifying phrases or words in tourist pamphlets that highlight India as an ancient country (relational content analysis – the relationship between the words).



Method #1: Content Analysis

It is important to go into your analysis with a **very specific question** and goal.

- Group large amounts of text into 'codes'
- Summarise these into categories
- Possibly tabulate the data to calculate the frequency of certain concepts or variables.

(Because of this, content analysis provides a little **quantitative thinking** within a qualitative method.)



When is this method most helpful?

Topics focused on:

- Changes
- Patterns

in communication around social, economic or political issue.

e.g. changes in a specific government policy.





Strengths

- **Flexible** – can use a wide range of data sources
- **Unobtrusive** – can analyse existing data

Limitations

- **Time-consuming** – requires lots of reading and re-reading of the text.
- Tends to concentrate on a **very specific timeline** and doesn't take into account what happened before or after that timeline.
- **Reliability** – subjective
- Cannot usually be generalised



Method #2: Narrative Analysis

- Focused on interpreting individual human experiences and motivations
- About listening to people **telling stories** (narratives) and analysing what that **means**.
- Gain insights into the ways that people deal with and make sense of reality by analysing their stories and the ways that they tell them.

Two approaches

Inductive approach – text speaks for itself
(without the influence of preconceived notions)

Deductive approach – testing data against an existing theory
(looking for evidence in the data to support or refute them)

Examples

Exploring whether **how** something is being said is important.

e.g.

- the narrative of a prisoner trying to justify their crime could provide insight into their **view of the world** and the justice system.
- analysing the ways entrepreneurs talk about the struggles in their careers could provide powerful insights into their **mindsets and perspectives**.

It is about paying attention to the stories that people tell – and more importantly, the **way** that they tell them.

When is this method most helpful?

When you want to understand topics that focus on:

- social
- personal
- cultural or
- ideological

events or phenomena and how they are understood at an individual level.

e.g. investigating the stories of people within the same situation.





Strengths

- Flexible – can be used on primary and secondary data
- Generates a rich insight of the participant's experience – reveals details that might be missed in other methods
- Can be used in a range of topics

Limitations

- Sample sizes are generally quite small due to the time-consuming process of capturing narratives = can be quite difficult to reproduce in subsequent research.
- **Researcher bias** can have a strong influence on the results here, so you need to be particularly careful about the potential biases you can bring into your analysis when using this method – be careful not to draw broad conclusions.

Method #3: Discourse Analysis

- About **analysing language** within its **social** context.
- i.e. analysing language – such as a conversation, a speech, etc – within the **culture** and **society** it takes place.

Discourse = a fancy word for written or spoken **language** or **debate**.

Example



e.g. you could analyse:

- how a lecturer speaks to the Vice Chancellor
- how politicians speak about terrorism

To truly understand these conversations or speeches, the **culture**, **history** or **power** dynamics of those involved in the communication are important factors to consider.



When is this method most helpful?

When you want to understand how social groups communicate or the relationship between language and social phenomena.





Strengths

- Flexible – the potential use of discourse analysis is vast due to the many social influences in terms of how we speak to each other
- Can incorporate different types of sources – interview transcripts, written records

Limitations

- Time-consuming – you need to analyse the data to the point of saturation (i.e. until no new information emerges.)
- Relies on the researchers' ability to analyse the text and to understand the language being used
- Subjectivity of interpretation of data

Method #4: Thematic Analysis

- Looks at **patterns of meaning** in a data set, e.g. using a set of interviews or focus group transcripts.
- Takes bodies of data (which are often quite large) and groups them according to similarities – in other words, themes.
- These themes help us make sense of the content and derive meaning from it.



Example

- Analyse 100 online reviews of a popular ice cream parlour to find out what patrons think about it.
- You could identify the themes that crop up repeatedly within the data; for example, “friendly staff” or “flavour”.

“friendly staff”



●●●●● Reviewed 28 August 2019  via mobile

Best vanilla ice cream

Friendly staff and the vanilla ice cream is just the best ever. We had the chocobockaglory, amazing but doesn't need Nutella. We will be returning but just for the vanilla ice cream as it's out of this world.

●●●●● Reviewed 16 December 2018

Grand daughter visit

How can you fault "Joe's" ice cream, Pleasant surrounding's, clean, friendly staff, never heard a wrong word about the place.



●●●●○ Reviewed 19 October 2018

Gorgeous ice cream

Good quality ice cream at a fair price. Staff really friendly and a tables to sit outside with your four legged family.

●●●●● Reviewed 13 February 2019

Best in U.K.

Absolutely stunning ice cream. I have never tasted an ice cream anywhere in the world that tastes as good as joe's. Staff were friendly and efficient. Can't wait to go there again.

●●●●● Reviewed 21 October 2018

Toffee Apple Sundae

Have not written a review of "Joe's" for almost a year although we are there (St. Helen's Road) almost weekly, sometimes a couple of times a week. This morning we called in and treated ourselves to the "October Special" Toffee Apple Sundae. Quite Delicious. As the name suggests plenty of apple with toffee sauce and, of course, the wonderful Joe's ice-cream. Always very busy whatever time of year and the staff are always very friendly.

“flavour”



Reviewed 5 June 2019

Amazing Vanilla Ice Cream

We visited Joe's at my daughter's request when we were visiting Swansea. The vanilla ice cream is amazing - smooth, creamy, velvety with a delicious vanilla flavour. Reasonably priced too.



Reviewed 7 August 2019

Yummy chocolate sunda

We very often visit Joe's ice cream and it never disappoints. There's plenty of different flavours to choose from and the seating arrangements are very nice and comfortable. We highly recommend giving Joe's a visit if you're in the area. There's also a Joe's in Mumbles too where the views are wonderful across the bay.



Reviewed 18 August 2019 via mobile

Not enough options

This ice cream restaurant did not have enough ice cream flavours, other people would probably be fine with this but it was not for me



Reviewed 3 May 2021

No taste at all

I wanted to give it another chance as the first time I had an ice cream there I was very disappointed. I love ice cream and have been to many places in different countries but honestly this is the tasteless ice cream I have had in all my life. I honestly don't know why there are queues all the time for a thing with no flavour, maybe I don't get it?



Reviewed 21 August 2019 via mobile

Best Ice Cream in the World

If you haven't been for a Joe's, you haven't been to Swansea. This place was so busy during the Winter, we struggled to get a seat! The classic vanilla is all you need, flavours simply complicate things! You can also buy merchandise as a souvenir. Couldn't recommend this place enough!



Reviewed 18 July 2023 via mobile

Best Ice Cream

Always a must to stop over for Joe's ice cream wherever we are in Swansea/Mumbles. The rum and raisins was really good and vanilla flavour was different from other vanilla ice creams from other places. The kids loved it. Parking can be tricky but worth the walk especially on a sunny day.

When is this method most helpful?

When you want to understand people's opinions, experiences or values.



Strengths

- Useful for finding out about people's experiences, views, and opinions.
- Can analyse large amounts of data
- Can investigate underlying concepts and explains why they occur.
- Easy for you to explain new concepts that affect human behaviour
- Can use interviews, conversations, open-ended survey responses, social media posts.
- Useful for large sample sizes when you want to identify overarching patterns across the full dataset

Limitations

- **Time-consuming** - data needs to be re-reviewed if a research question is adjusted.
- Subjective – relies on the researcher to analyse
- Coding system is subjective and open to interpretation = inaccurate results and unreliable conclusions

Method #5: Grounded Theory

- The intention is to create a new theory (or theories) using the data at hand, through a series of 'tests' and 'revisions'.
- Strictly speaking, grounded theory is more a research design type than an analysis method, but it is often referred to as a method.
- What's most important with grounded theory is that you go into the analysis with an open mind and let the data speak for itself (and not by using existing hypotheses or theories).
- In other words, your analysis must develop from the ground up.

Example

You are interested in developing a theory about the factors that influence students to watch a YouTube video about qualitative analysis. You would start with this general overarching question about the given population (i.e. graduate students).

1. Approach a small sample – for example, five graduate students in a department at a university. Ideally, this sample would be representative of the broader population.
2. Interview these students to identify what factors lead them to watch the video.
3. Analyse the interview data. Here, you may see a general pattern, e.g. you might notice that graduate students are more likely to watch a video if they are just starting on their thesis, or if they have an upcoming test about research methods.
4. Next, you will look for another small sample, e.g. five more graduate students in a different department and interview them to see whether this pattern holds true for them.
5. If not, you'll look for commonalities and adapt your theory accordingly.

As this process continues, the theory would develop.

When is this method most helpful?

When you want to understand or analyse social processes and relationships when little is already known.



Strengths

- Usually produces richer and more diverse data than traditional research methods
- A very useful method when you're researching a topic that is completely new or has very little existing research about it, as it allows you to start from scratch and work your way from the ground up.
- Offers a systematic and rigorous process of data collection and data analysis so a research problem can be studied in a great level of depth.

Limitations

- Has comparatively little structure
- Requires the collection of a great deal of data
- Time consuming
- Difficult to conduct
- Researcher-induced bias = subjectivity



Method #6: Interpretive Phenomenological Analysis (IPA)

- IPA is designed to help you understand the personal experiences of a subject (for example, a person or group of people) concerning a major life event, an experience or a situation.
- This event or experience is the 'phenomenon' that makes up the 'P' in IPA.

Examples

Can range from relatively common events; e.g.

- motherhood
- being involved in a car accident

to those which are extremely rare; e.g.

- someone's personal experience in a refugee camp.

So, IPA is a great choice if your research involves analysing people's personal experiences of something that happened to them.

Points to remember:

1. IPA is **subject-centred** i.e. it is focused on the experienter.

This means that, while you'll likely use a coding system to identify commonalities, it's important not to lose the depth of experience or meaning by trying to reduce everything to codes.

2. The sample size will generally be very small so you often won't be able to draw broad conclusions about the generalisability of your findings.

But that's okay, as long as it aligns with your research aims and objectives.

When is this method most helpful?

When you want to understand what it is like to experience a specific situation or life event from the perspective of someone who actually lived it.



Strengths

- Provides a chance to examine more personal perspectives on the issue than other research approaches – to reach, hear and understand the experiences of the participants.
- Helps us to understand what it is like to experience a specific situation or life event. By describing the stories of people who actually lived through a particular experience and their perceptions of it, the research can get to the heart of what it was truly like.

Limitations

- Very small sample size so results cannot be generalisable
- Personal bias can have a significant impact on the results
- Subjectivity
- Time-consuming

How do I choose the right analysis method?

Selecting the right qualitative analysis method largely depends on your research aims, objectives and questions.

The best tool for the job depends on what you're trying to build.

Each of the following research aims are distinctly different = different analysis methods would be suitable for each one.



How do I choose the right analysis method?

1. Your research aims to analyse the ways entrepreneurs talk about the struggles in their careers in order to discover insights into their mindsets and perspectives;
2. Your research aims to develop an understanding of the unique personal experiences of people that have experienced a certain event;
3. Your research includes several interviews and aims to find out if there are commonalities in the responses of different participants.

Narrative
analysis

IPA

Thematic
analysis

How do I choose the right analysis method?



- All these qualitative analysis methods make use of coding and theme-generating techniques,
- However, the intent and approach of each analysis method differ.
- It is very important to come into your research with a clear intention before you decide which analysis method to use.
- Start by reviewing your research aims, objectives and research questions to assess what exactly you are trying to find out – then select a qualitative analysis method that fits.
- Never choose a method just because you like it or have experience using it – your analysis method must align with your broader research aims and objectives.

What is coding?

Coding is a systematic process of categorising and labelling the data to identify patterns, themes, and concepts.

Coding is a crucial step in the analysis of qualitative data as it helps researchers organise, condense, and make sense of large volumes of information collected through methods such as interviews, focus groups, observations, or textual analysis.

	INTERVIEWER: So, what do you think of the current strategies to prevent road traffic collisions and neurotrauma in your city and country?	Codes
	PARTICIPANT: You know, the government has instituted things like traffic rules and all that, but these are not being enforced properly. There don't seem to be enough traffic police to cover the many areas in the city where there is a lot of traffic, and I suppose what you could call accident-prone areas. I have read on the internet that many other countries are having things like speed cameras and all that to prevent speeding. I know we have things like speed bumps and maybe the signs which show the speed limit. The problem is people are not following the rules. For that reason, it would be good to have these speed cameras, for example, so that people will	Gov. role Lack of compliance Lack of enforcement Accident reduction strategies Lack of compliance Accident reduction

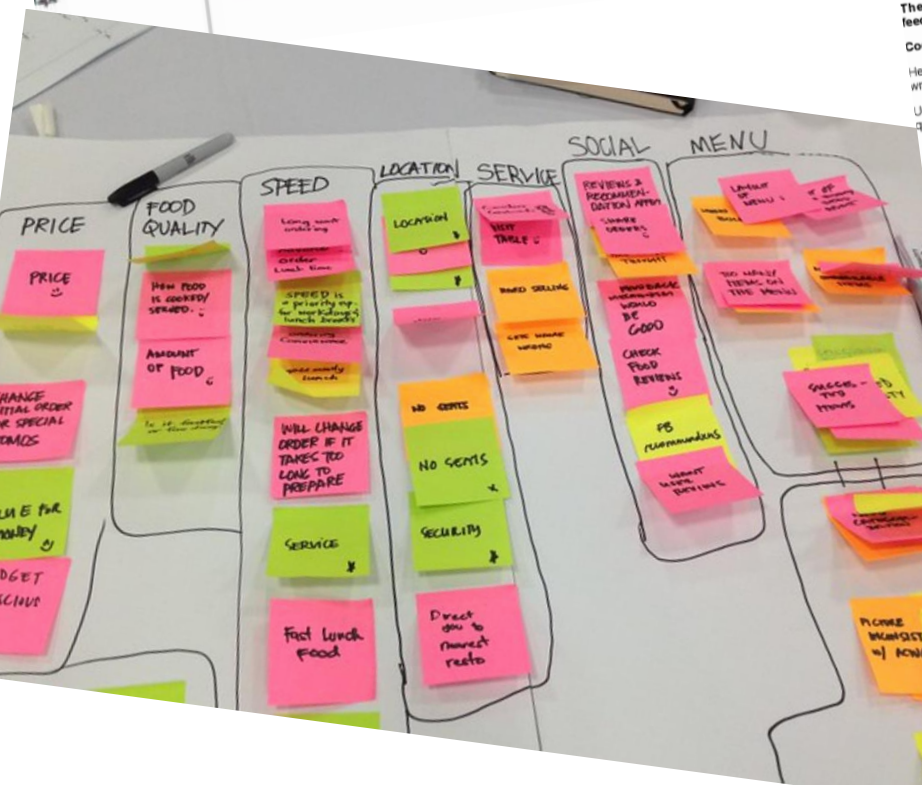
Nodes

Name	Files	References
Adopted Nomenclature	3	6
Causes and cost impact of delays	1	4
Distribution list of MoOSTs report	3	3
Dynamics of maintenance team	3	5
Estimated duration	2	2
Formalised approach for learning	3	3
ICT for storing Knowledge	3	4
Knowledge use	3	3
Major activities during MoOSTs	3	2
Mode of communication	3	3
Barriers to learning	2	1
Personal experience of learning	3	4
Prediction phase	3	2
Procedure for debriefing contractors	2	6
Responsibility for Knowledge and experience	3	3
Review sequence and structure	3	3

References

- Reference 1 - 0.74% Coverage
- Reference 2 - 2.34% Coverage
- Reference 3 - 3.95% Coverage
- Reference 4 - 1.17% Coverage
- Reference 5 - 2.26% Coverage

think anything that is 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 you know, trying to get them to relate to viewer gestures towards the wellbeing indicators in the classroom [C6]. But to be quite honest, I think it's w...



Theme: The purpose of feedback. Codes Help to learn what you're doing wrong. Unable to judge whether question has been answered properly. Improving grade. Improving structure.	Theme: Lecturers. Codes Ask some Ls. Some Ls more approachable, Some Ls give better advice. Reluctance to admit difficulties to L, Fear of unspecified disadvantage. Unlikely to approach L to discuss fdbk. Lecturer variability in framing fdbk. Unlikely to make a repeated attempt. Have discussed with tutor. Example: Wrong frame of mind.	Theme: Reasons for using feedback (or not). Codes To improve grade. Limited feedback. Didn't understand fdbk. Fdbk focused on grade. Use to improve grade. Distinguish purpose and use. Unlikely to approach L to discuss fdbk. Improving structure improves grade. Can't separate grade and learning. New priorities take precedence = forget about feedback.
Theme: How feedback is used (or not). Codes Read fdbk. Usually read fdbk. Refer to fdbk if doing same subject. Not sure fdbk is used. Used fdbk to improve referencing. Example: using fdbk to improve referencing. Refer back to example that went right. Forget about fdbk until next assignment. Fdbk applicable to similar assignments. Fdbk on referencing.	Theme: Emotional response to feedback. Codes Like to get fdbk. Don't want to get fdbk if haven't done well. Reluctance to hear criticism. Reluctance to hear criticism (even if constructive). Fear of possible criticism. Experience: unrealistic fear of criticism. Fdbk taken personally initially. Fdbk has an emotional impact. Difficult for L to predict impact. Student variability in response to fdbk. Want fdbk in L's office as emotional response difficult to manage in public. Worded doesn't make much difference. Lecturer variability in framing fdbk. Negative fdbk can be constructive. Negative fdbk can be framed in a supportive way.	Theme: What students want from feedback. Codes Usable fdbk explains grade and how to improve. Want fdbk to explain grade. Example: uninformative fdbk. Very specific guidance wanted. More fdbk wanted. Want dialogue with L. Dialogue means more. Dialogue more personalised/ individual. Dialogue more time consuming but better. Want dedicated class for grades and fdbk. Compulsory fdbk class. Structured option to get fdbk. Fdbk should be constructive. Fdbk should be about the work and not the person. Experience – fdbk is about the work. Difficulties judging own work. Want fdbk to explain what went right. Fdbk should focus on understanding.

Difficult to find videos

not easy to find something

using search

voice recognition

And how concretely did you discover the different videos she suggested?

Peter: She was just sort of browsing around on our apple TV. You know when we decided to look for it, even though we had watched it before without finishing so she had to search for it, and search with our remote is really a hassle... something, there's so much stuff and they seem to suggest a bunch of things.

I: oh yeah?

Peter: Yeah, it has this little sort of joystick and you have to move it around to get to the different letters... it's a delay so it's really slow... We've tried using Siri, but it doesn't understand our accents at all.

I: so how did that make you feel?

Peter: I think it's a bit of a nuisance.