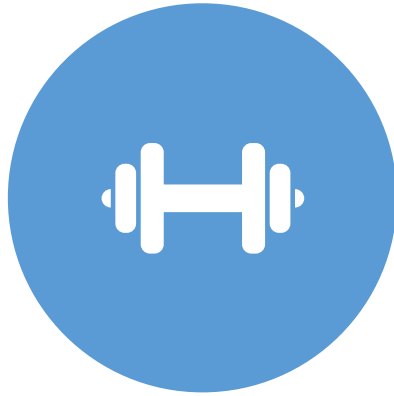




ECDE7002

Session 4

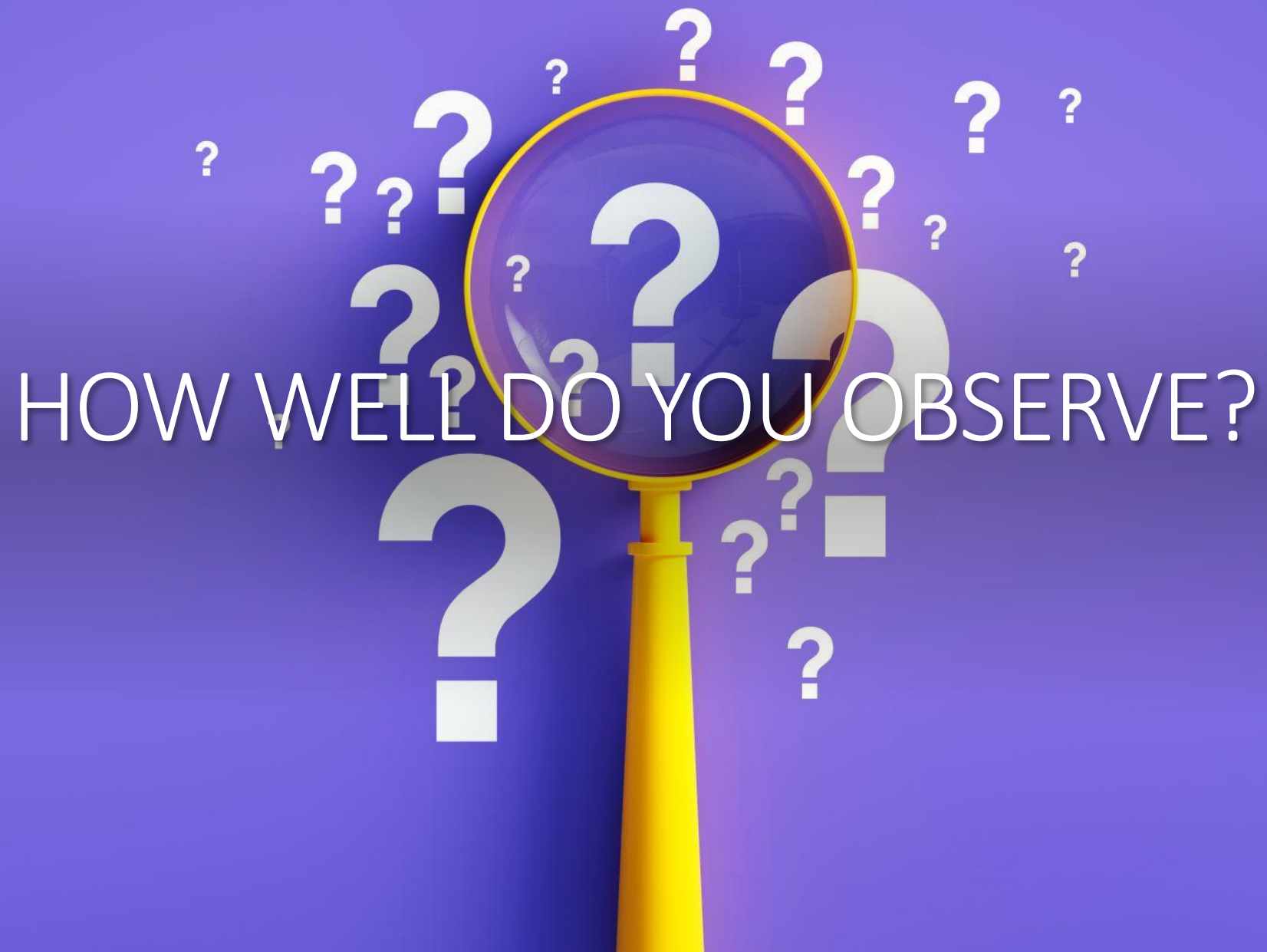
OBSERVATION



STRENGTHS



LIMITATIONS



HOW WELL DO YOU OBSERVE?



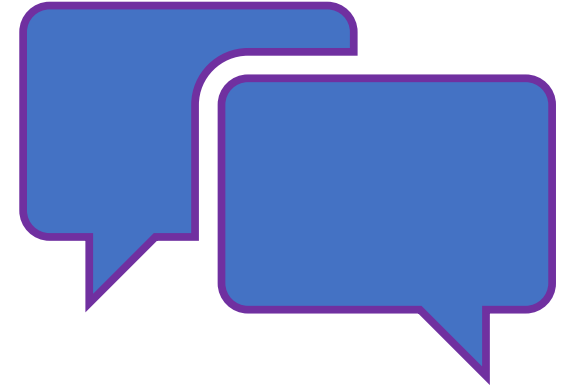
WHAT NEXT?



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.

Discussion Points



- Reliability
- Validity
- Representative sample
- Generalisation

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

Generalisation

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

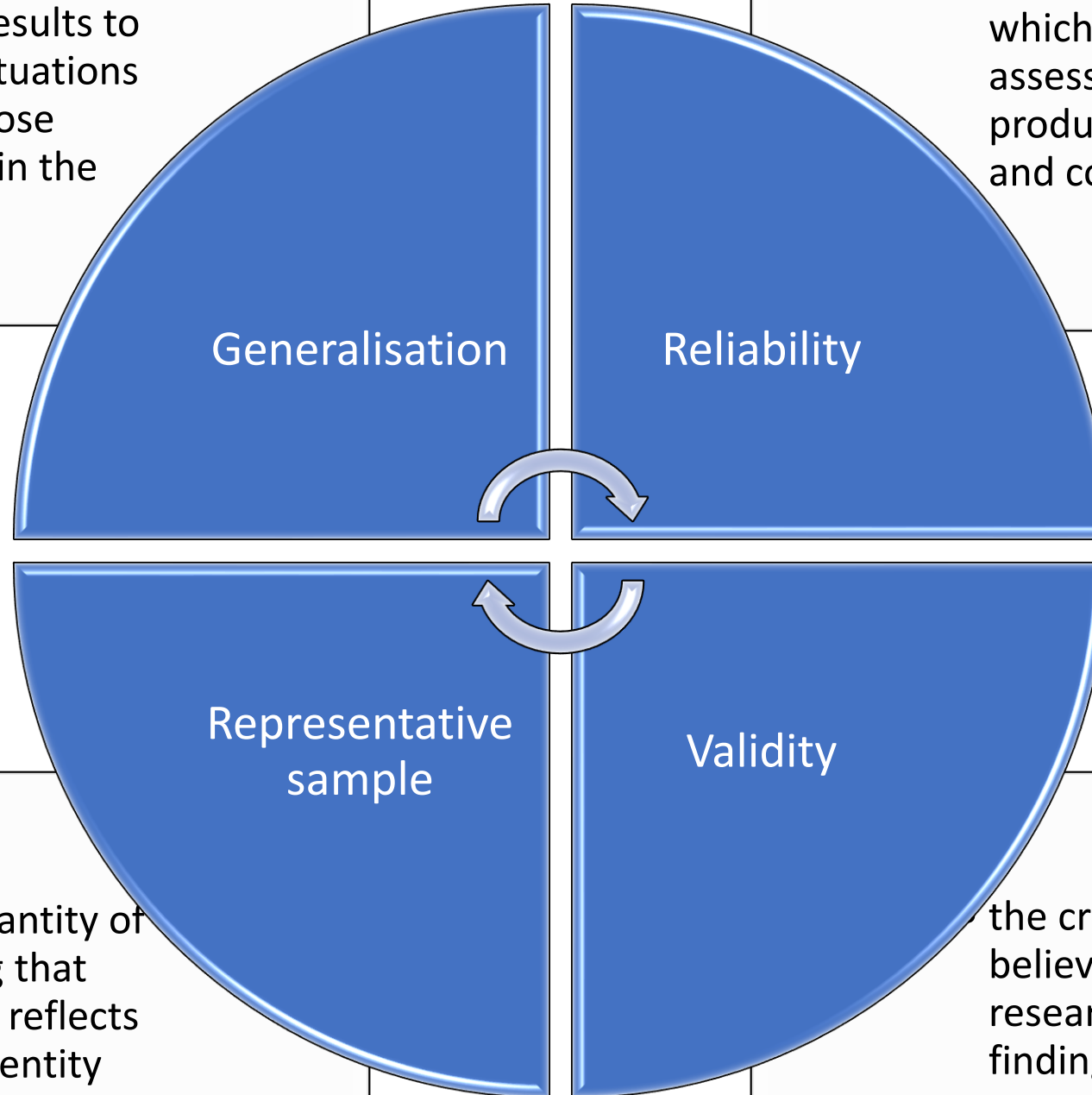
Reliability

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?



Observation schedules

Strengths and challenges???

For what reason(s) would you use your observation schedule?

How would you use it?

What type of data would you collect?



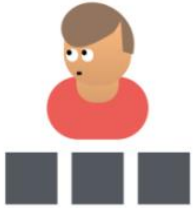
Leuven Scale

The Leuven Scale for Involvement (in learning)

It's time for an honest observation of your students

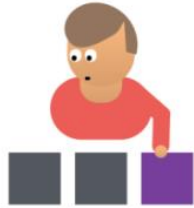
Based on: <http://www.plymouth.gov.uk/documents-ldtoolkit/leuven.pdf>

Let's hope teachers are designing and evaluating classroom activities with an aim that every learner might reach a state of **flow**.



Extremely low

Activity is simple, **repetitive** and passive. The child seems **absent** and displays no energy. They may stare into space or look around to see what others are doing.



Low

Frequently interrupted activity. The child will be engaged in the activity for some of the time they are observed, but there will be **moments of non-activity** when they will stare into space, or be distracted by what is going on around.



Moderate

Mainly continuous activity. The child is **busy** with the activity but at a fairly **routine** level and there are few signs of real involvement. They make some progress with what they are doing but don't show much energy and concentration and **can be easily distracted**.



High

Continuous activity with **intense moments**. The child's activity has intense moments and at all times they seem involved. They are **not easily distracted**.



Extremely High

The child shows **continuous and intense activity** revealing the greatest involvement. They are concentrated, creative, energetic and persistent throughout nearly all the observed period.

Look out for: focused concentration on the present moment; loss of self-consciousness; activity that's intrinsically rewarding; Distorted awareness of time; personal agency.

By Richard Wells
Twitter: @EduWells
EduWells.com



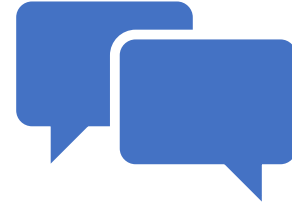
Ferre Laevers

A man with short dark hair, wearing a light blue button-down shirt and a dark blue tie, is seated and smiling while talking to two young girls. The girl on the right is wearing a bright teal jacket over a dark blue shirt and is gesturing with her hands as she speaks. The girl on the left is wearing a pink and grey striped sweater. In the foreground, the back of a boy's head and shoulders in a dark blue hoodie are visible. The background is a bright, out-of-focus classroom with large windows.

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 interviews 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.

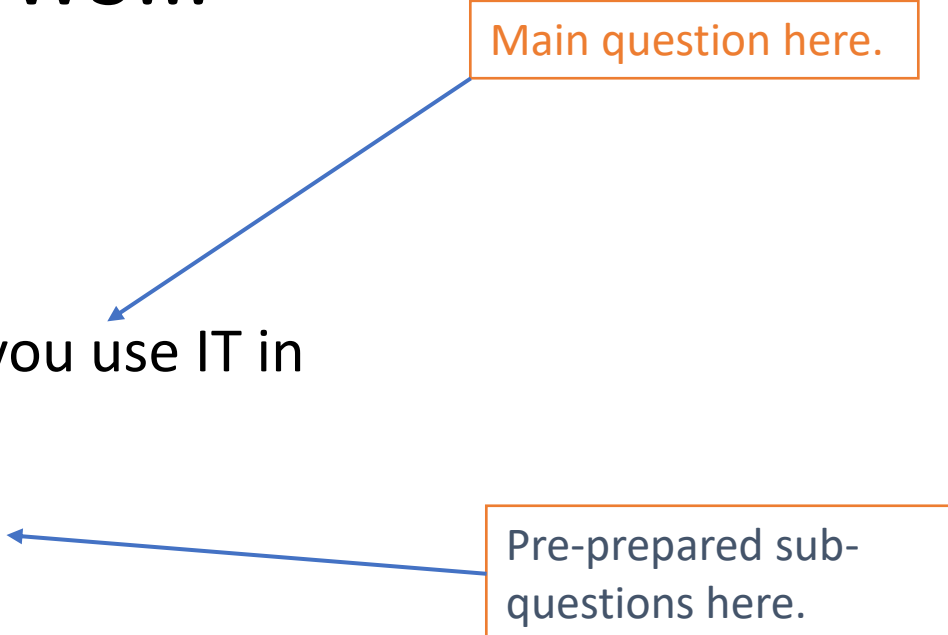
They take a slightly more open-ended approach than a structured interview.

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?

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

Generalisation

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

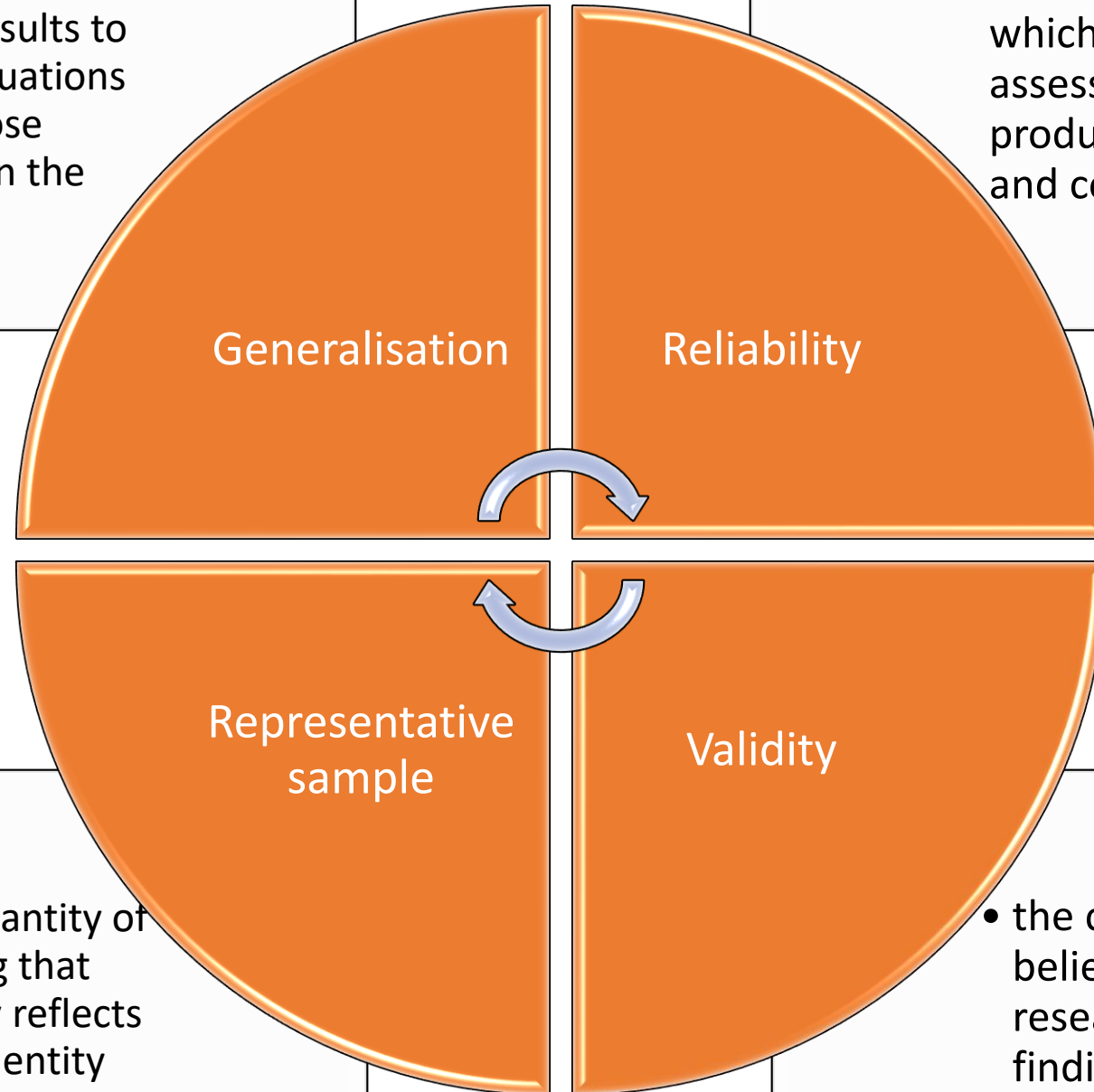
Reliability

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.

THINGS TO
CONSIDER...



In-person or
remote

Factors to consider:

- **Budget:** do you need to travel?
- **Participant access:** can you ask anyone you'd 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 needed?

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)

[How Many Interviews Are Enough?: An Experiment
with Data Saturation and Variability - Greg Guest,
Arwen Bunce, Laura Johnson, 2006 \(sagepub.com\)](#)

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

Of the 114 themes identified in the entire
dataset:

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

What might be the difficulties 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.

Group Interview (sometimes called a 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

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

Can be 6 - 8 participants...

Group interview



<https://youtu.be/bPjJ6TPkLVM>

What are your views of this interview with pupils?



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

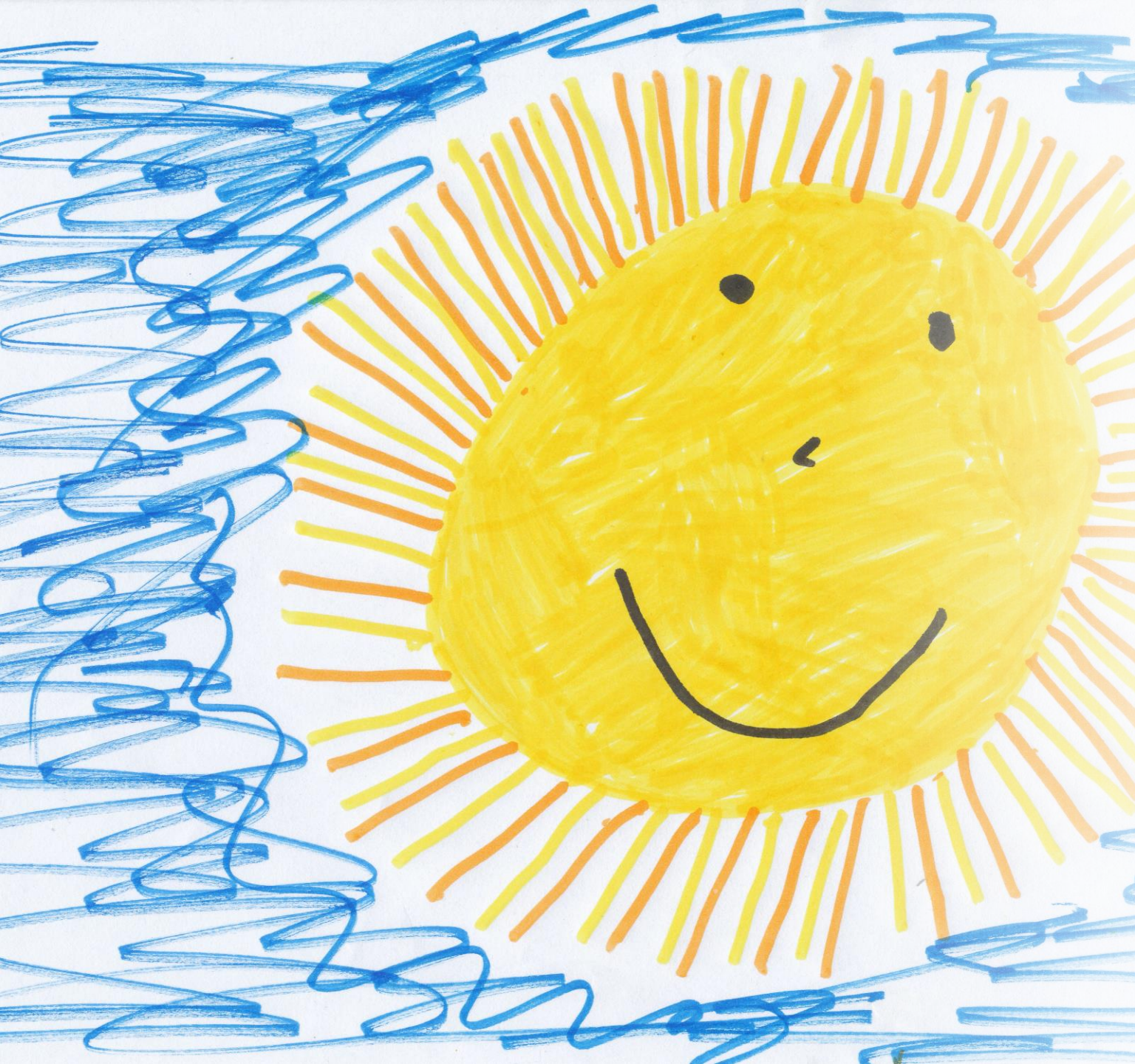
These questions can be answered with yes/no, true/false and may not allow participants to extend their answers.

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:

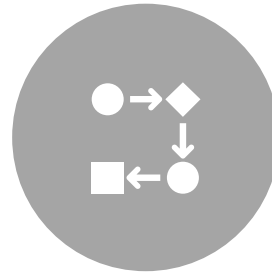
- * Listen for inconsistent comments and probe for understanding;
- * Listen for vague or cryptic comments and probe for understanding;
- * Consider asking each participant a final preference question (so that all pupils can contribute);
- * Offer a summary of key points and seek confirmation.

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

Piloting research tools – why bother?

Interviews & questionnaires



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.

Ensuring...

Validity

The extent to which the results really measure what they are supposed to measure.

- Can participants answer the questions? We must ensure that we should ask the questions that they are capable of providing answers.
- In a questionnaire, are the response codes provided sufficient? Missing response codes can lead to answers being forced to fit into the codes provided, or to large numbers of 'other' answers.
- Do the response codes provide the sufficient discrimination? If most respondents give the same answer, then the pre-codes provided may need to be reviewed to see how the discrimination can be improved and, if that cannot be achieved, queries should be raised regarding the value of including the question.
- Do questions and responses allow us to answer the research question(s)? We need to ensure that the answers which respondents give to those questions are the responses to the questions that we think we are asking.

Reliability

The extent to which the results can be reproduced when the research is repeated under the same conditions.

- In an interview situation, do the questions sound right? It is surprising how often a question looks acceptable when written on piece of a paper but sounds false, stilted or simply silly when read out loud. Might the question need to be paraphrased so that it sounds more natural?
- Do the participants understand the questions? It is easy for technical vocabulary and jargon to creep into questions, so we need to ensure that it is eliminated.
- Have we included any ambiguous questions, double barrelled questions, loaded or leading questions?
- Does the interview retain the attention and interest of participants throughout? If attention is lost, then the quality of the data may be in doubt. Changes may be required in order to retain the respondent's interest.
- Does the interview flow properly?
- In a questionnaire, can the respondent understand the routing instructions? Particularly with paper questionnaires, we should check that the routing instructions can be understood.
- Does the questionnaire unfolds in a logical sequence, with a minimum of jumps between different ideas?

The background is a dark, abstract composition featuring blurred, curved light trails in shades of blue, purple, and yellow. A sharp, diagonal line representing a pen nib or a similar object cuts across the frame from the bottom right towards the center. The word "SAMPLING" is centered in a white, sans-serif font, with a thin white horizontal line underneath it.

SAMPLING

Research Question:

Do university students think that they are cleverer than their peers?
(i.e. others of the same age who are not university students)

The target population is the 10,000 undergraduate students at my university.

I recruit 200 participants.

They are studying in the Faculty of Science and Engineering.

Most of them are British, male, 18–20 years old and from a high socio-economic background.

I give them a maths test.

I then ask them to rate how well they think performed compared to everyone else.

The findings show that the average participant believes that they are cleverer than 66% of the population.

Can I conclude that most people believe themselves to be cleverer than their peers?

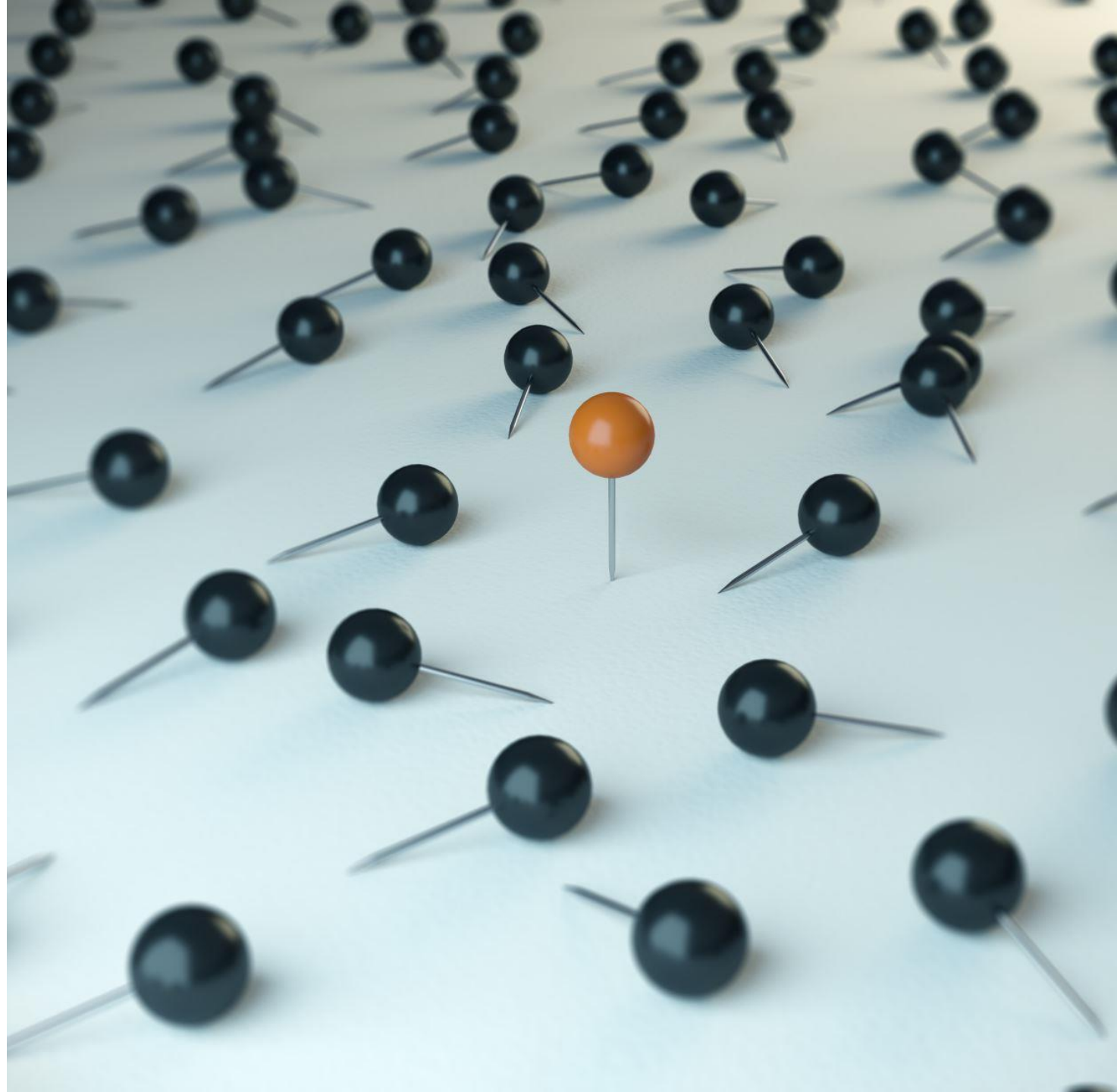
What is a sample?
Why use a sample?

Should the sample always be representative?



Random and non-random sampling techniques

(Flick, 2014)



CONVENIENCE SAMPLING

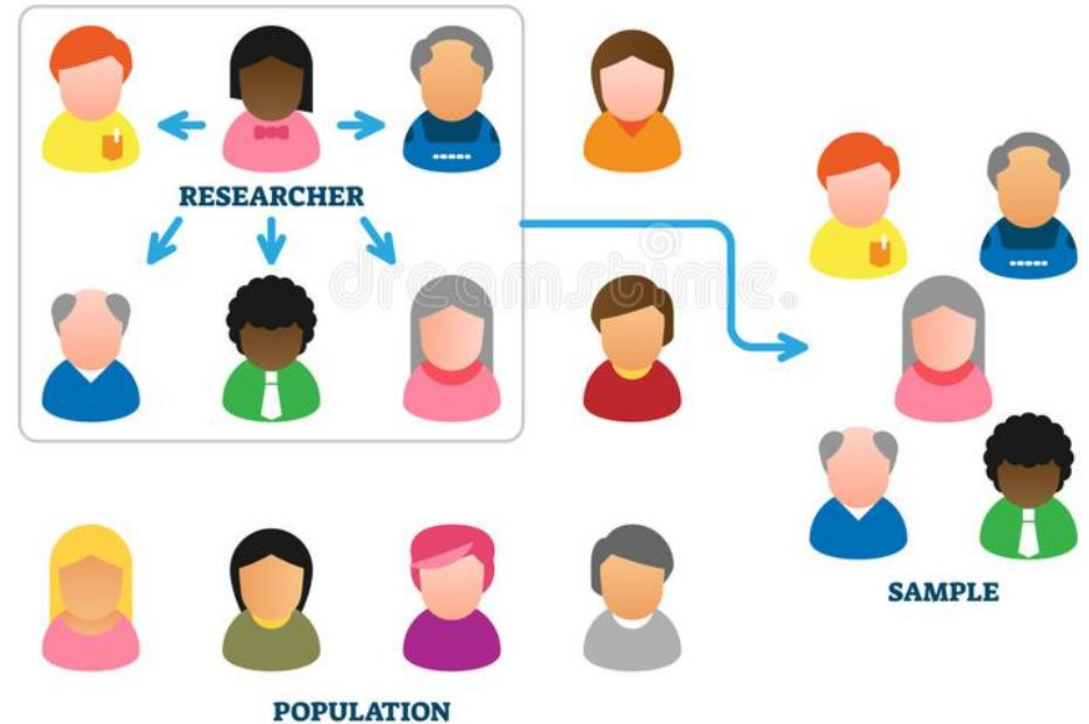
Convenience sample

Example:

Deliberately choose a group of people who are most likely to provide information that will answer your research question (e.g. teachers from a school who you know use a specific strategy)

Benefit:

You have participants that are likely to give you the information you want to get



Limitations:

Does not produce a representative sample of the population and this can distort the results.

Findings cannot be generalised to the wider population.

Simple random sample

Example:

Assign a number to all 100 students. Then, use a random number generator to select 10 random numbers and use the corresponding students as members in the sample.

Benefit:

Simple random samples are usually representative of the population we are interested in since every member has an equal chance of being included in the sample.



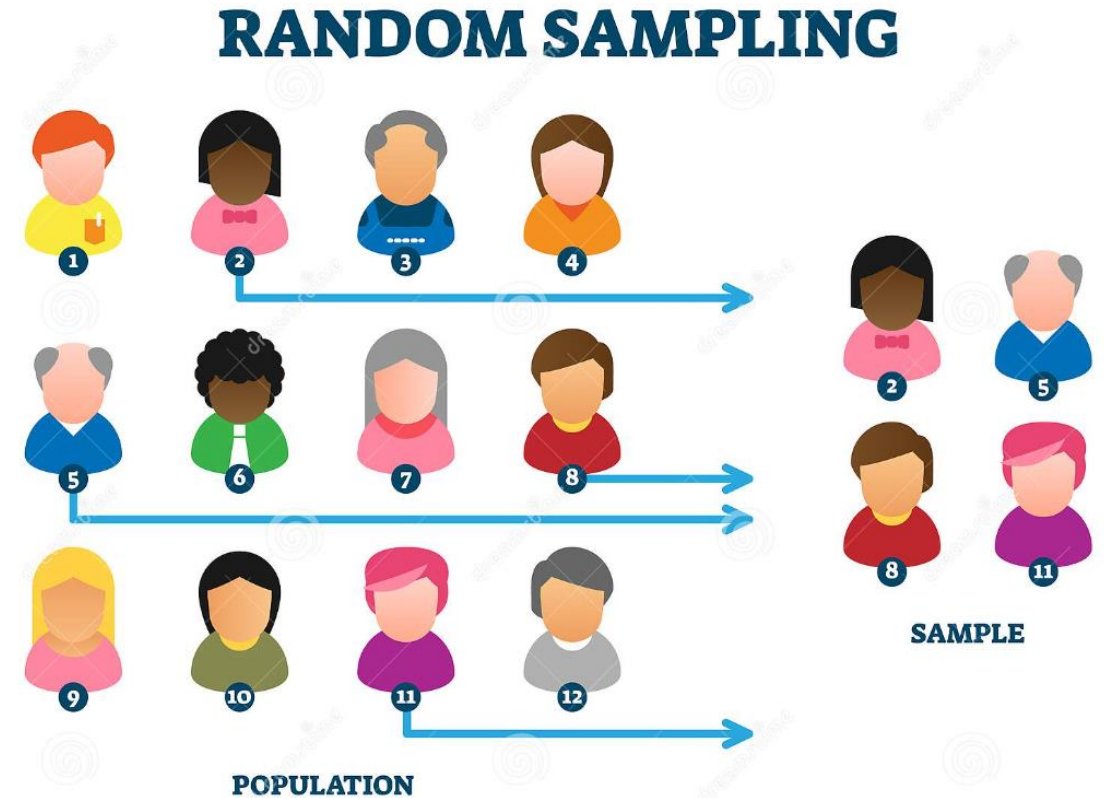
Systematic random sample

Example:

Create a list in alphabetical order based on the surname of all your students, randomly choose a starting point, and pick every 3rd student to be in the sample.

Benefit:

Systematic random samples are usually representative of the population we are interested in since every member has an equal chance of being included in the sample.



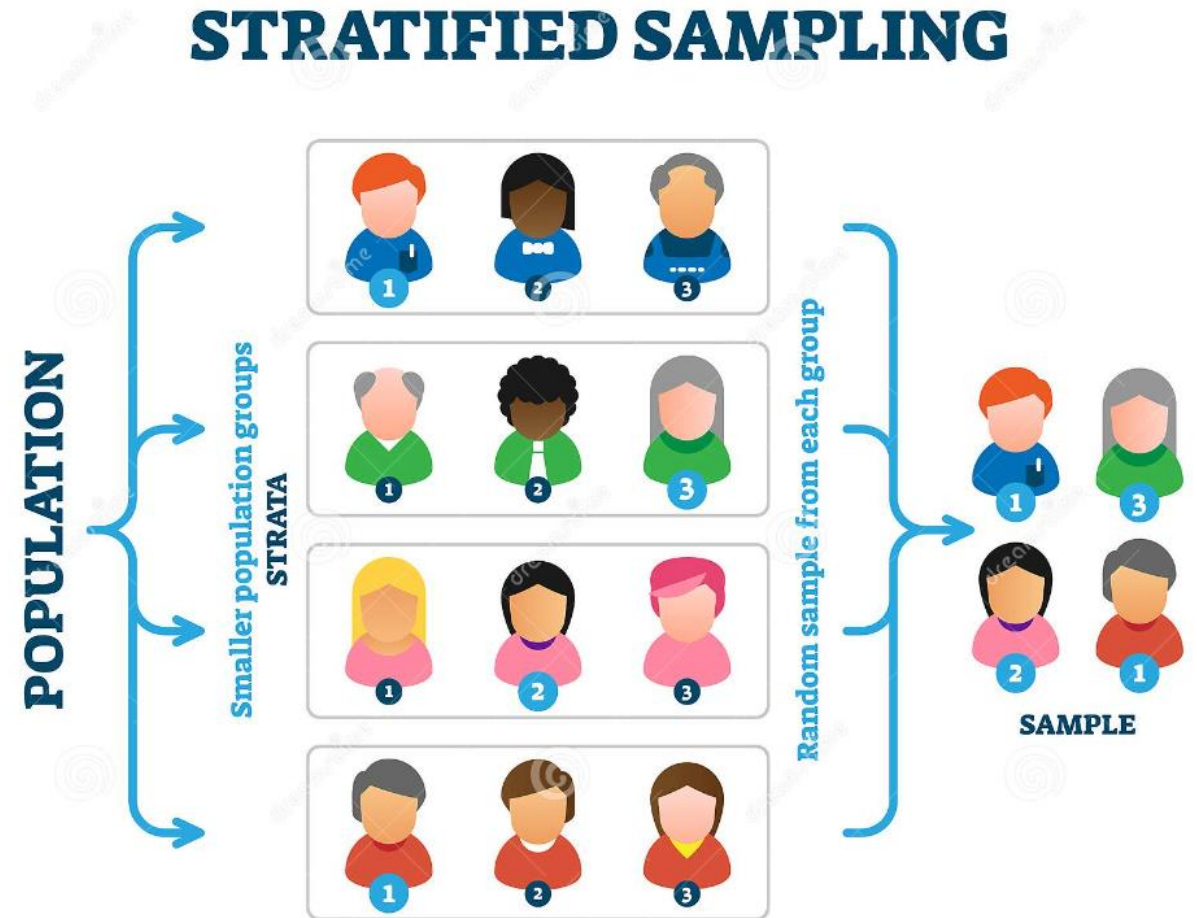
Stratified random sample

Example:

Split up all students according to their year group – Year 5, Year 7, Year 9 and Year 11. Randomly select 25 students from each grade to be in the sample.

Benefit:

Stratified random samples ensure that an equal number of students from each year group are included in the sample.



Assessment Component 2: 3500 words

Outline your preferred approach (qualitative/quantitative/mixed methods) to this enquiry by focusing on ONE of your research questions. Plan an appropriate data collection process and associated analysis of the data, reflecting on its strengths and limitations. Critically reflect upon the ethical issues surrounding the research process.

Section	Suggested content	Allocated word count
Introduction	Briefly introduce your topic and have chosen to focus on in the study. What is the aim of your study?	
Chosen method	What is/are your chosen method(s)? Quantitative Qualitative ~~Mixed methods approach~~	
Sampling	What is/are your sampling method(s)?	500
Ethics	What are the ethical considerations that relate to your study?	700
Research tool(s)	What is/are the research tool(s) that you have selected?	1000
Data analysis method(s)	Which method(s) of data analysis have you chosen?	400
Conclusion	<u>Summarise</u> your intentions.	100

Once you have chosen your sampling method, you should read some literature about it so that you can refer to the work of authors to support your decision.

Next session

Thursday, the 9th November
10-4



Follow-up task (2 weeks)

Prepare a presentation of the plans that you have for your research study. Aim to speak for five minutes. You can prepare a PowerPoint presentation to help you, but you do not have to do so.

You could answer some or all of the following questions:

- What is your research about?;
- Why have you chosen this topic?;
- Why is it important (to you/to others)?;
- Is there literature available that relates to your proposed study? Can you give examples?
- Can you suggest some suitable research questions?;
- Do you have some ideas about the research tools that might be appropriate for data collection?

Suggested reading

Interviews:

www.imperial.ac.uk/staff/educational-development/teaching-toolkit/educational-research-methods/methods/interviews/

Cohen, L., Manion, L. & Morrison, K.
(2011) Research Methods in Education,
7th ed.; Routledge.

Pages 409-442: Chapter 21 - Interviews
Pages 143-163: Chapter 8 - Sampling

Follow-up tasks

1. Choose two journal articles that relate to your developing area of research interest;
2. Use Higgins' '6As of the usefulness of research' questions to make a judgement about the quality and trustworthiness of the articles.
<https://my.chartered.college/research-hub/introduction-to-research-judging-the-quality-and-trustworthiness-of-research-evidence/>
3. Compare and contrast the content of the two articles:
 - What do they have in common? What is similar?
 - What differences are there between them?
4. Write 200 words about how the research discussed in the articles applies to your own research interest. Email your work to Catherine (c.morgan@uwtsd.ac.uk) before next week's session.

These tasks will help you to prepare for the first part of Assessment Component 1: 'With reference to relevant literature, identify an area of research you may want to explore'.

Suggested reading

Questionnaires:

www.imperial.ac.uk/staff/educational-development/teaching-toolkit/educational-research-methods/methods/questionnaires/

Observations:

www.imperial.ac.uk/staff/educational-development/teaching-toolkit/educational-research-methods/methods/observations/

Cohen, L., Manion, L. & Morrison, K. (2011) Research Methods in Education, 7th ed.; Routledge.

Pages 377-408: Chapter 20 - Questionnaires

Pages 456-474: Chapter 23 - Observation

Assessment Component 1: 3500 words

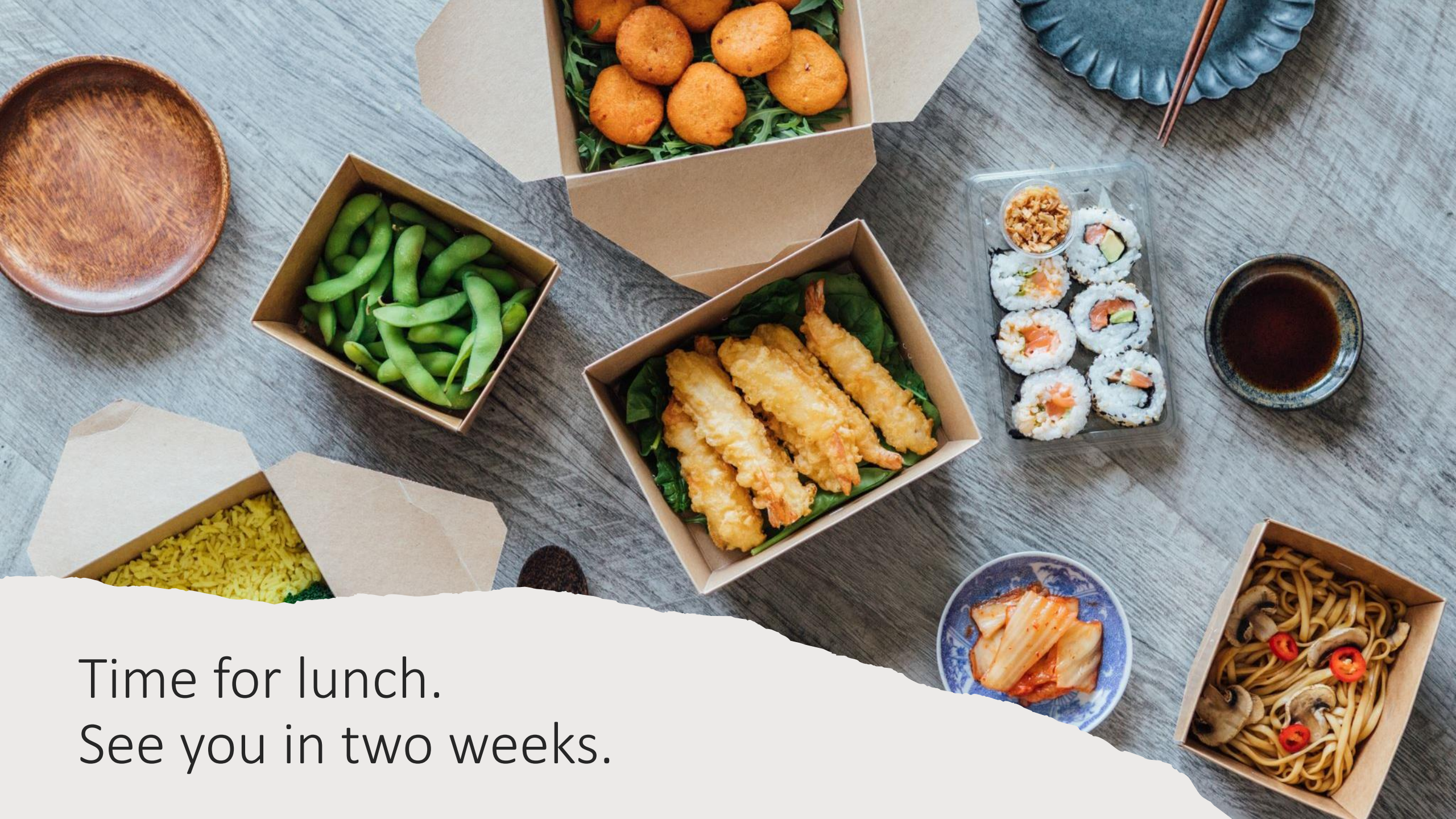
Critically reflect on research paradigms that would enable you to conduct a mixed methods enquiry that would meet identified research questions. With reference to relevant literature, identify an area of research you may want to explore. Create between 1 and 3 research questions that would be answerable through a mixed methods approach to data collection. Critically appraise qualitative and quantitative research paradigms which link to your research questions, justifying why they are appropriate.

Section	Suggested content	Suggested
Introduction & rationale 	What is your research about? Why have you chosen this topic? Why is it important (to you/to others)? Refer to literature to support your decisions.	
Literature review 	What does the published literature say about your topic? Do authors agree or disagree? Are there studies available that are similar to the studies you are proposing? Is there a gap in the literature that you intend to fill?	
Theoretical framework / methodology 	What is your positionality with regard to your topic? How do the following elements have an impact on your research? • Ontology • Epistemology • Research paradigm (e.g. positivism, constructivism, pragmatism) Refer to literature to support your points.	
Research methods/tools 	Why might a mixed-methods approach be useful in your research? What are the strengths and limitations of this approach? (You could include a discussion of qualitative and quantitative data here.) Refer to literature to support your points.	
Research Questions 	What are your research questions? Why have you chosen them? Within which paradigm do they sit? What type of data do you need to be collected in order to answer each one? You could introduce each research question separately here. Refer to literature to justify your decisions.	
Conclusion 	Summarise your intentions.	100

Assessment Component 2: 3500 words

Outline your preferred approach (qualitative/quantitative/mixed methods) to this enquiry by focusing on ONE of your research questions. Plan an appropriate data collection process and associated analysis of the data, reflecting on its strengths and limitations. Critically reflect upon the ethical issues surrounding the research process.

Section	Suggested content	Suggested word count
Introduction 	Briefly introduce your topic and the research question that you have chosen to focus on in this part of the assignment. What is the aim of your study?	200
Chosen method 	What is/are your chosen method(s)? Quantitative Qualitative Mixed-methods approach	600
Sampling 	What is/are your sampling method(s)?	500
Ethics 	What are the ethical considerations that relate to your study?	700
Research tool(s) 	What is/are the research tool(s) that you have selected?	1000
Data analysis method(s) 	Which method(s) of data analysis have you chosen?	400
Conclusion 	Summarise your intentions.	100



Time for lunch.
See you in two weeks.