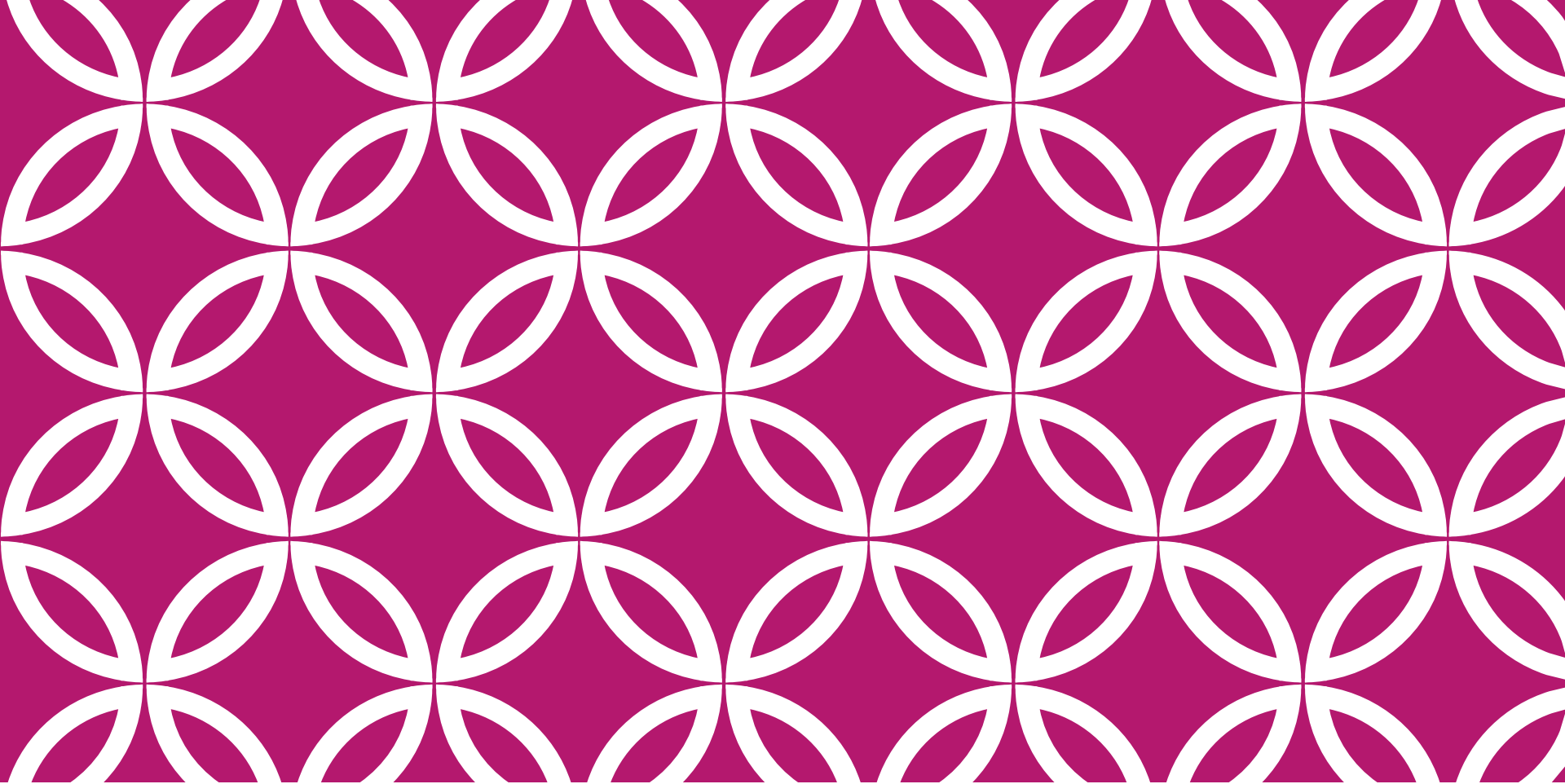




ECGE7004P

Session 5 - Research Tools
(Part 3)

OBSERVATION

It is part of a teacher's role

You can see things in their natural context

You can see things that may escape conscious awareness

You can learn about things 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

You can be creative – flexibility to yield insight into new realities or new ways of looking at old realities

RESEARCH EVIDENCE: CAN OBSERVERS SPOT GOOD TEACHING?

A number of research studies have looked at the reliability of classroom observation ratings;

E.g. in the USA, the 'Measures of Effective Teaching Project'.

Despite this, using Ofsted's categories, 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%.

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 did the figures show?

HOW CAN THE RESEARCH EVIDENCE BE SO OUT OF LINE WITH OUR INTUITION?

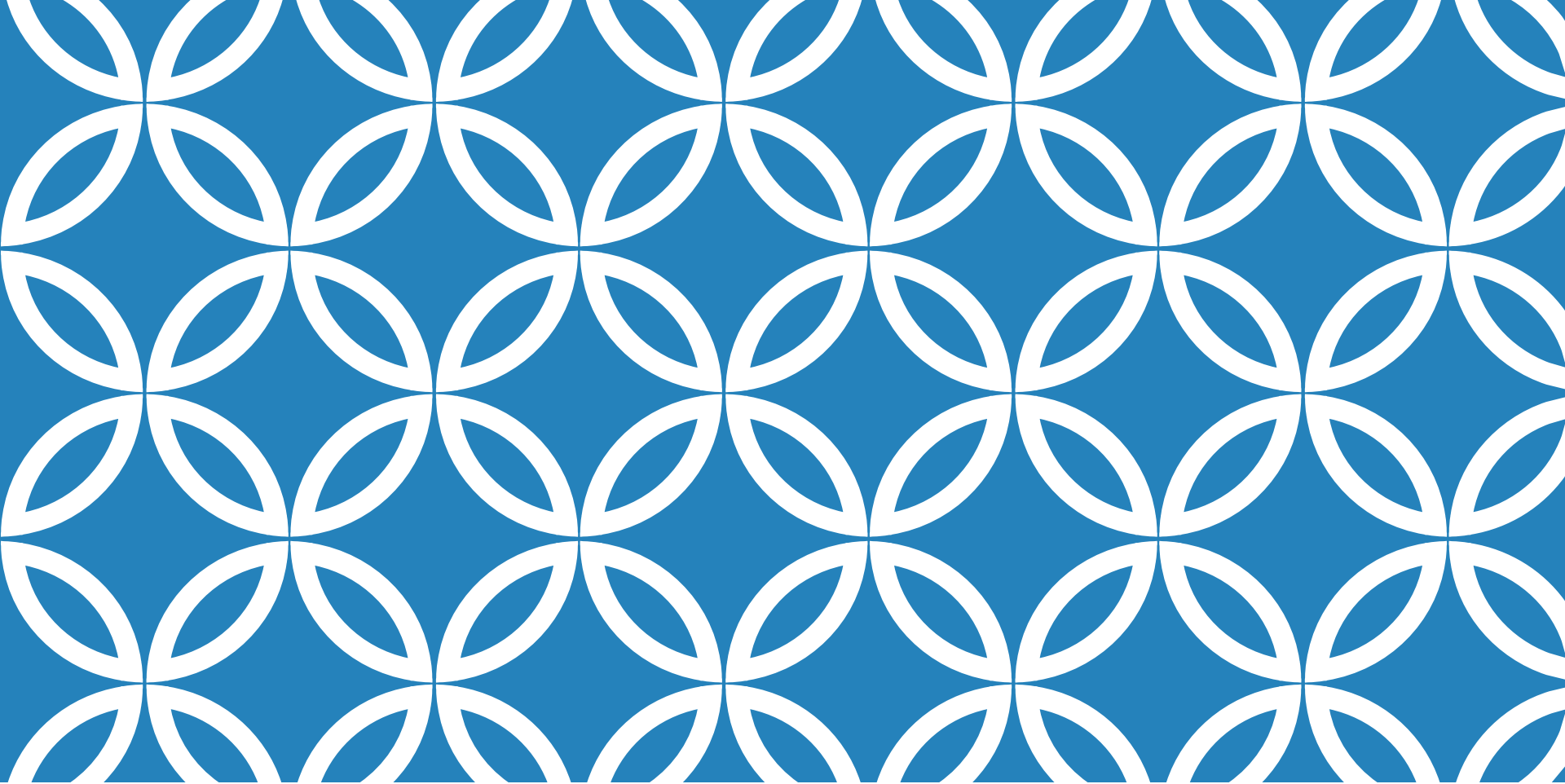
Observation produces a strong emotional response

Learning is invisible

Accepted 'good practice' may be more fashionable than effective

We assume that if you can do it you can spot it

We don't believe observation can miss so much



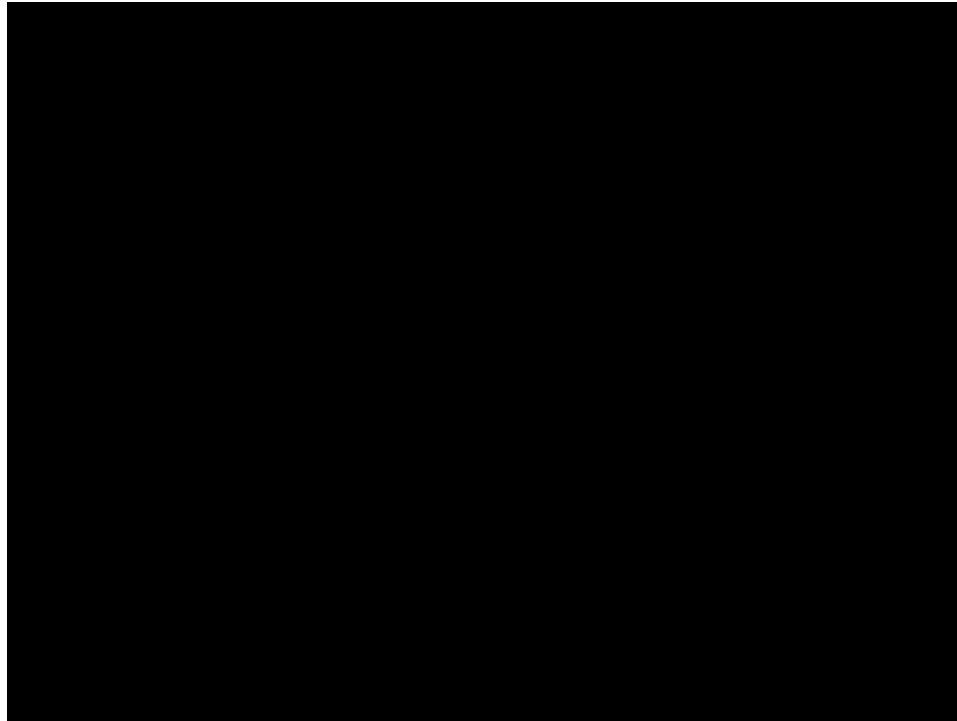
***WHAT CAN BE OBSERVED ...**



The average time teachers give between asking a question and taking an answer is

Check out the clip below.

<https://www.youtube.com/watch?v=uhiCFdWeQfA>



0.9 of a second!!!

WHAT CAN BE OBSERVED

Human behaviour and physical actions

Verbal behaviour

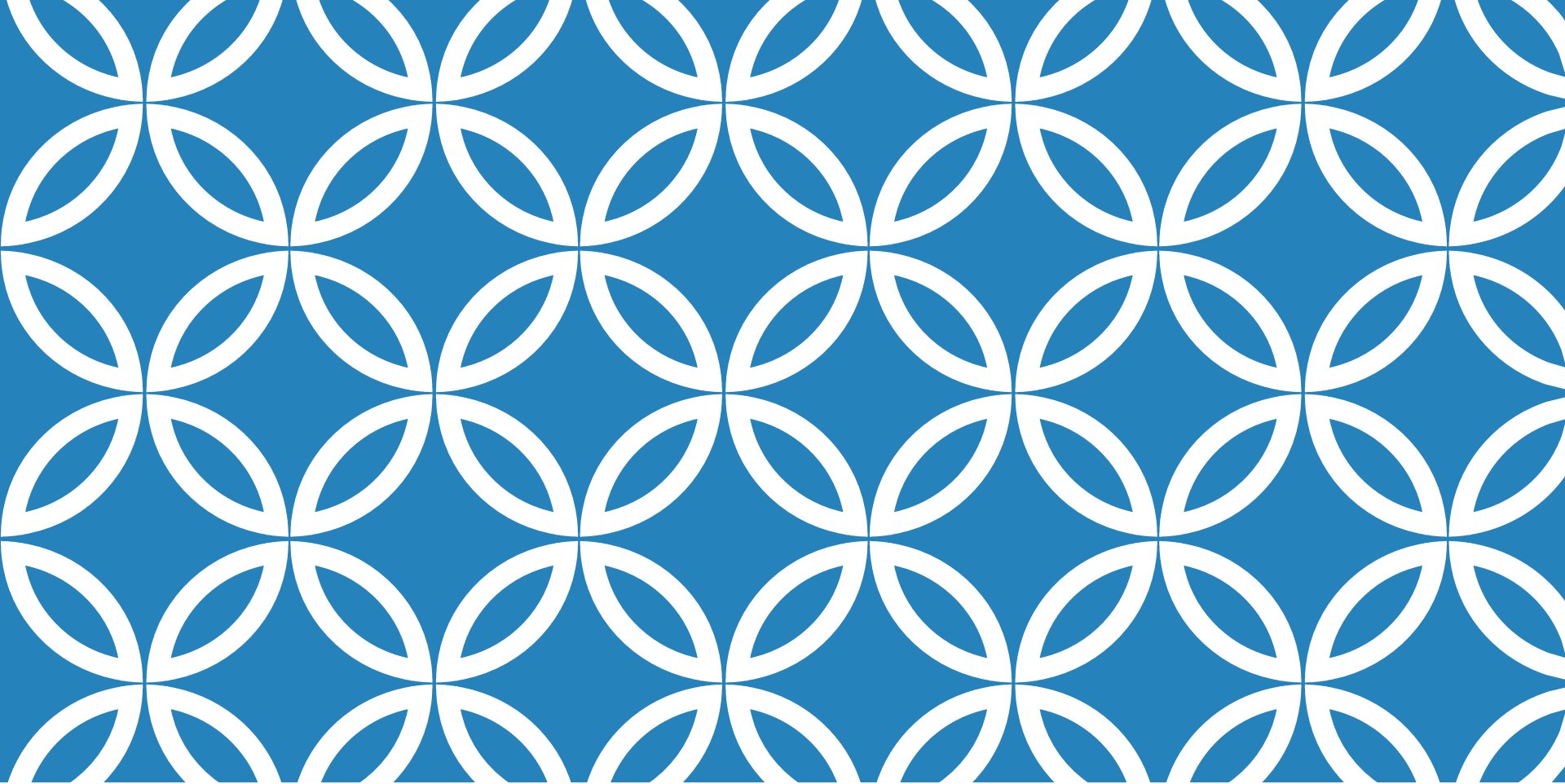
Expressive behaviour

Spatial relations and locations

Temporal patterns

Physical objects

Verbal or pictorial records



***HOW CAN WE OBSERVE?**



Observational Situations – How we can observe

Situation

Example

People watching people	Observers stationed in supermarkets watch consumers select frozen Mexican dinners. The purpose is to see how much comparison shopping people do at the point of purchase.
------------------------	--

People watching phenomena	Observer stationed at an intersection counts traffic moving in various directions.
---------------------------	--

Machines watching people	Move or videotape cameras record behavior as in people-watching-people example.
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Machines watching flow.	Traffic-counting machines monitor traffic phenomena
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* TYPES OF OBSERVATION

Looking for
Structured



Looking at
Unstructured

Sometimes we have something specific we want to observe – leadership skills; level of participation; etc. We use a structured, preset guide of what to observe or a checklist.

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.

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.

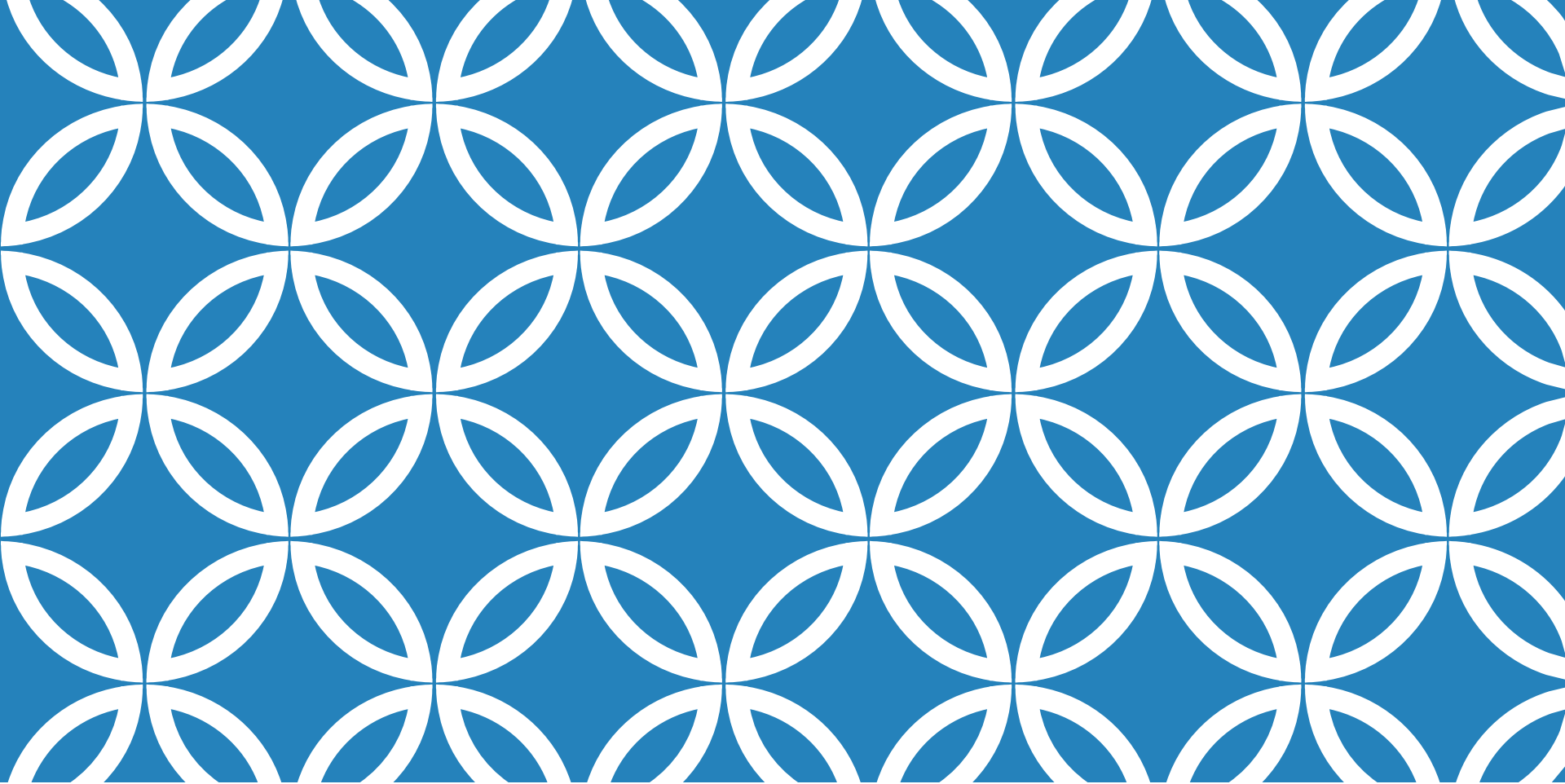
Participant observer. Researcher takes part in community, organization, or activity. Researcher attempts to learn what it is like to be part of the community, organization, or participate in the activity.

Overt / covert?

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

Variations in Approaches to Observation

Role of the Observer			
Full-participant observation	Partial participation	Onlooker; observer is an outsider	
How the Observer Is Portrayed to Others			
Participants know that observations are being made and they know who is making them.	Some but not all of the participants know the observer.	Participants do not know that observations are being made or that there is someone observing them.	
How the Purpose of the Observation Is Portrayed to Others			
The purpose of the observation is fully explained to all involved.	The purpose of the observation is explained to some of the participants.	No explanation is given to any of the participants.	False explanations are given; participants are deceived about the purpose of the observation.
Duration of the Observations			
A single observation of limited duration (e.g., 30 minutes).		Multiple observations; long-term duration (e.g., months, even years).	
Focus of the Observations			
Narrow focus: Only a single element or characteristic is observed.		Broad focus: Holistic view of the activity or characteristic being observed and all of its elements is sought.	



***THINKING CRITICALLY**



Advantages of Observation Research

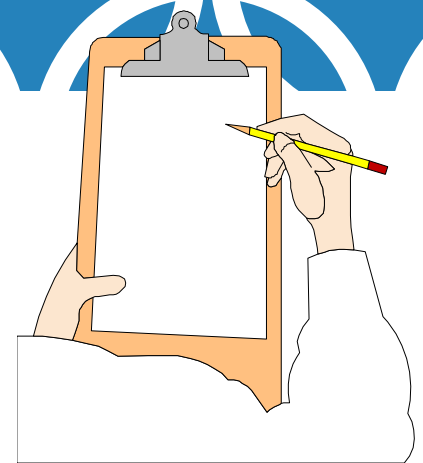
■ Advantages

- Observation research provides the researcher the opportunity to watch what people actually do rather than relying on reports of what they say they do.
- This approach can avoid much of the biasing factors caused by the interviewer and question structure associated with the survey approach.

Disadvantages

- Only behavior and physical personal characteristics can usually be examined. The researcher does not learn about motives, attitudes, intentions, or feelings.
- Observation research can be time consuming and costly if the observed behavior occurs rather infrequently.
- Interpretation of data may be a problem
- Possible invasion of privacy

*** LIMITATIONS — THE
OBSERVER...**



* OBSERVER EFFECT

The presence of an observer can have a considerable effect on the behavior of those being observed.

Explaining to a child what you are doing may affect their behaviour (Hawthorne effect, Roethlisberger and Dickson, 1939 – the mere presence of an observer increased productivity at the Hawthorne electrical works, Chicago).

Behaviour or 'act'?

Ethical dilemmas

* OBSERVER BIAS

Certain attitudes may bias what you “see”

Observer expectations

Observer emotions

Dissonance theory – strive towards consistency in what believe and what see – selective

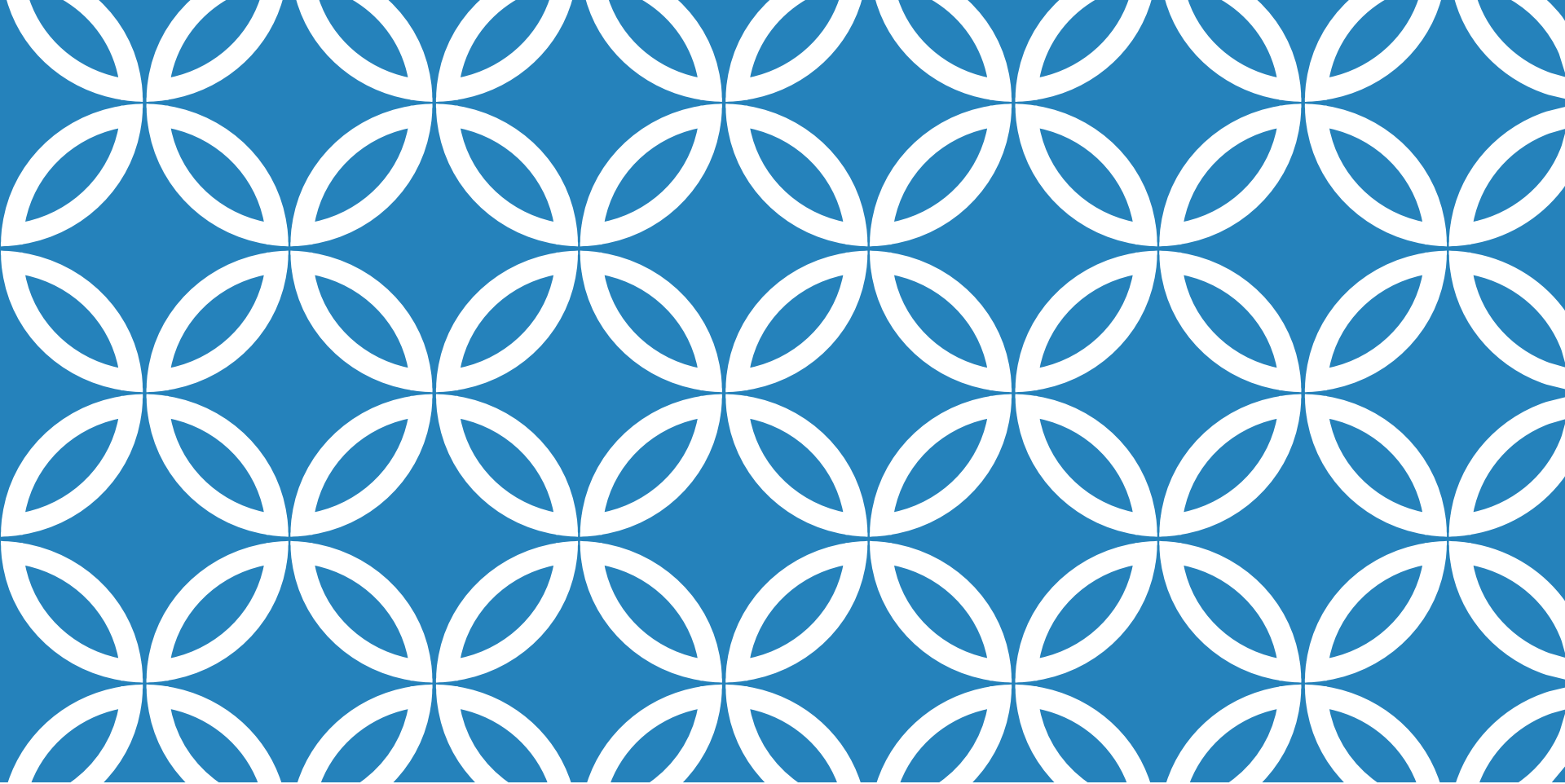
Congruity theory – if you perceive someone as good you attend to characteristics that confirm your initial perception

Impression formation theory – some information is more important, and the order information is received in is important

* HOW WELL DO YOU OBSERVE?

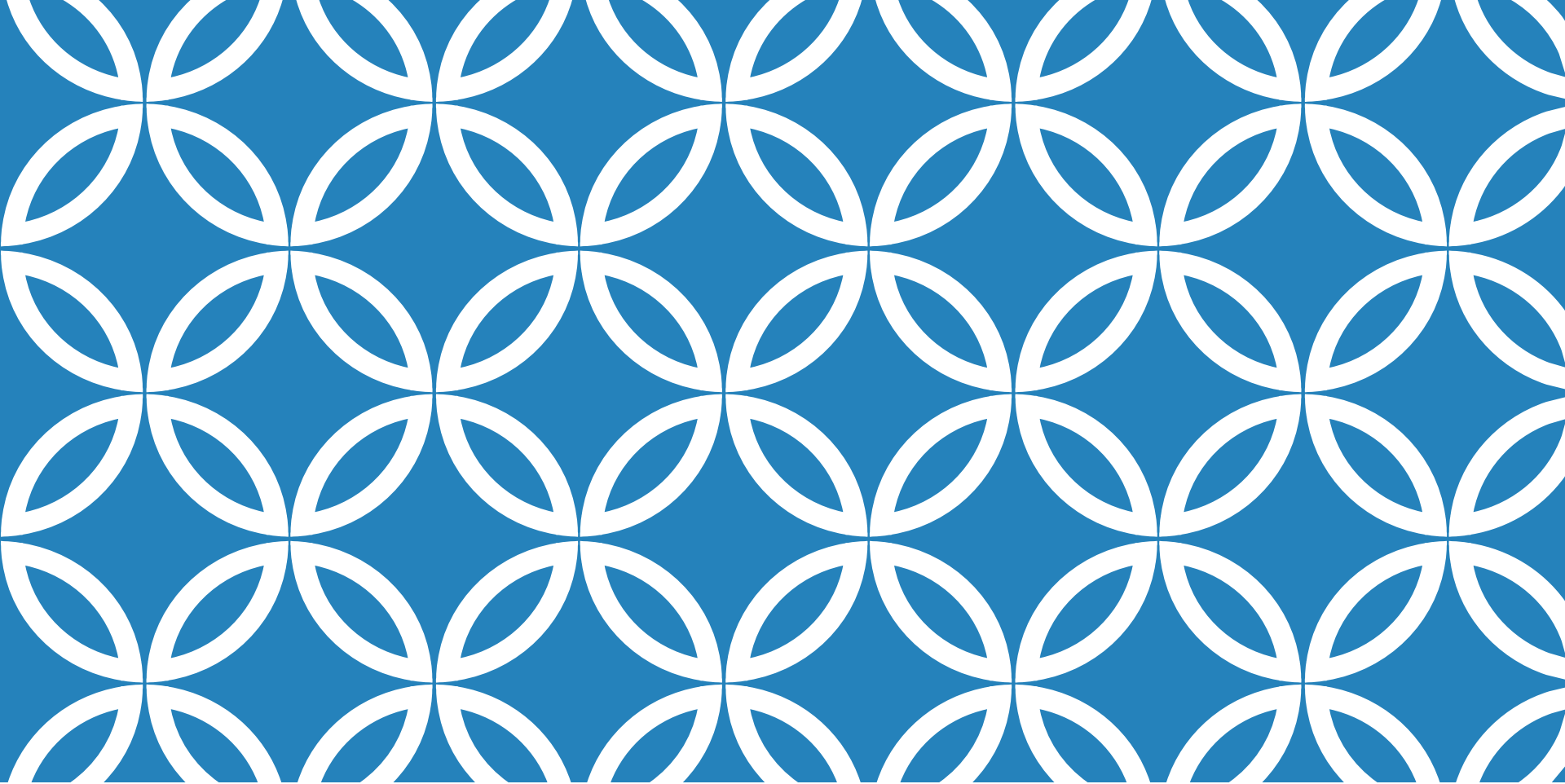
15 seconds...





* HOW WELL DO YOU OBSERVE?





***WHAT NEXT?**



* STEPS IN PLANNING FOR OBSERVATION

WHO Determine 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 guide

HOW Pilot test the observation guide

HOW Train the observers and have them practice.

DO Conduct the observations

SO? Analyse and interpret the collected information.

SHARE Write up and use your findings.

* CHECKING IN...

What do you think?

Answer **YES** or **NO** to each of the following

1. Observation involves “seeing” and “listening”
2. People may behave differently when they know they are being observed so it is better not to tell them
3. Structured observations provide more accurate and useful information
4. As long as you see it, it doesn't matter if you record what you saw
5. You, as someone who “knows” the program and the participants, are best suited to conduct the observations
6. The same principles of sampling apply to observation as to other forms of data collection



- 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.

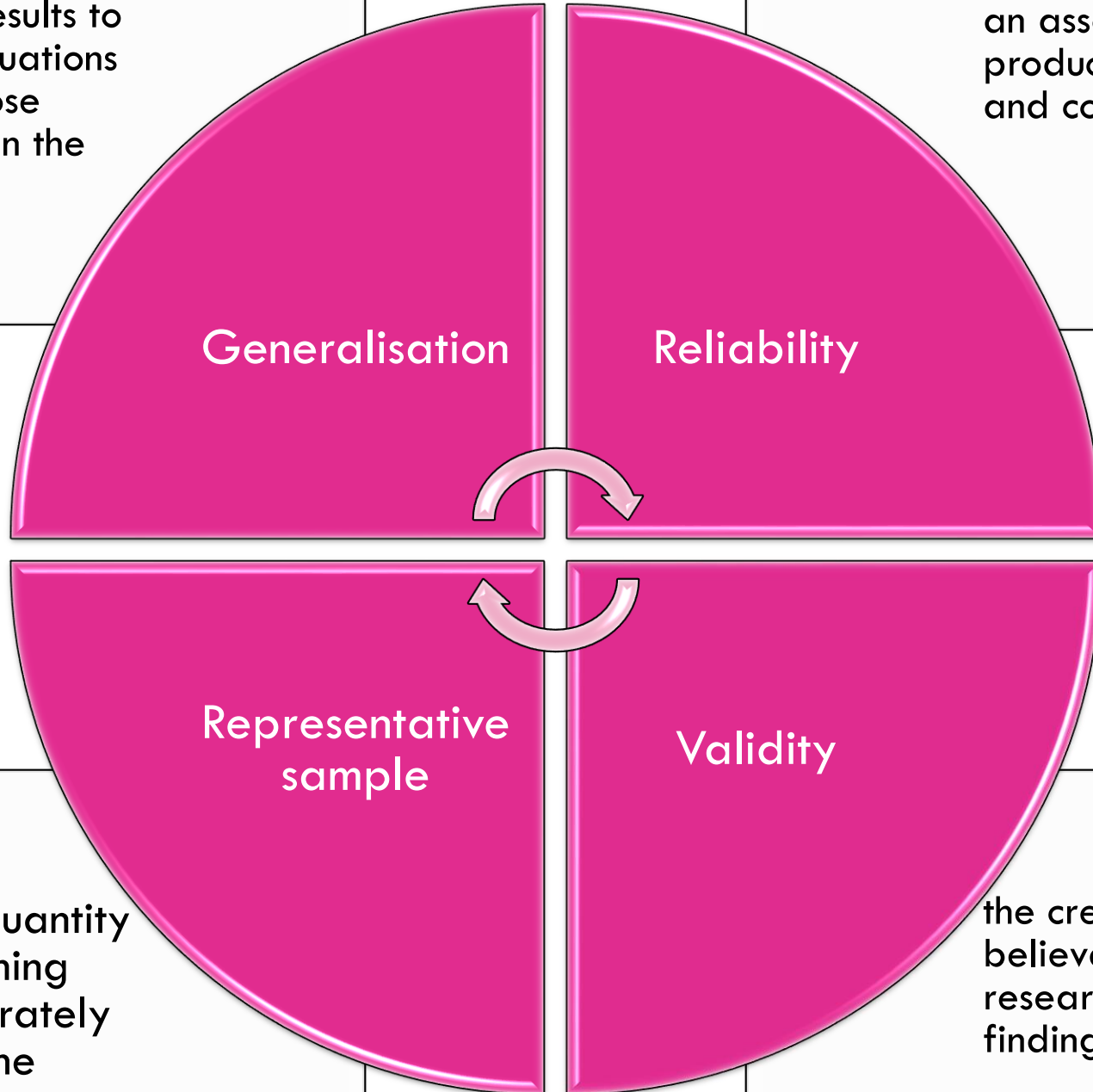
Reliability

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

Positives and negatives???

LEUVEN SCALE



The Leuven Scale for Involvement (in learning)

It's time for an honest observation of your students
Based on: <https://www.leuven.ac.uk/leuven-scale-for-involvement>

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



<https://www.youtube.com/watch?v=WwUCufOeOdE>

QUANTITATIVE DATA - SOURCES

The most common sources of quantitative data include:

Surveys, whether conducted online, by phone or in person. These rely on the same questions being asked in the same way to a large number of people;

Observations, which may either involve counting the number of times that a particular phenomenon occurs, such as how often a particular word is used in interviews, or coding observational data to translate it into numbers; and

Secondary data, such as company accounts.

ANALYSING QUANTITATIVE DATA

There are a wide range of statistical techniques available to analyse quantitative data:

simple graphs to show the data e.g. correlations between two or more items;

cluster analysis (useful for identifying relationships between groups of subjects)

hypothesis testing (to identify whether there are genuine differences between groups)

QUANTITATIVE DATA

Estyn and school leaders use:

All Wales Core Data Sets

Schools Categorisation

Stats Wales <https://statswales.gov.wales/Catalogue/Education-and-Skills>

My Local School

<http://mylocalschool.wales.gov.uk>

QUESTIONNAIRES

Questionnaires can be classified as both **quantitative** and **qualitative** methods depending on the nature of questions.

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

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

QUESTIONNAIRES

Positive points?

Negative points?

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

Lacks validity

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?

- 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.

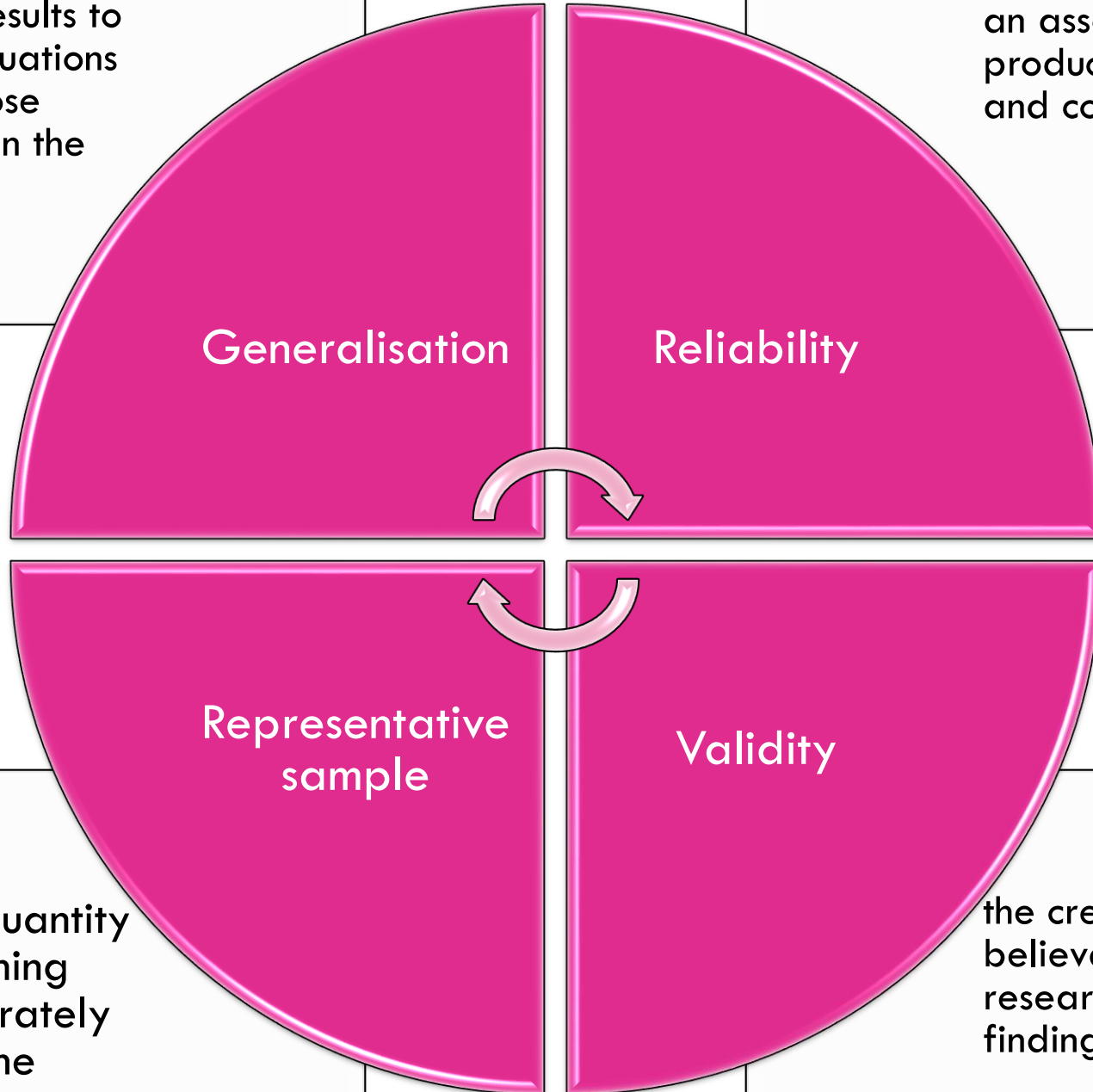
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OPEN QUESTIONS

Open questions differ from other types of questions used in questionnaires in a way that open questions may produce unexpected results, which can make the research more original and valuable.

However, it is difficult to analyze the results of the findings when the data is obtained through the questionnaire with 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

A Likert scale is a commonly used set of responses for closed-ended questions

DICHOTOMOUS QUESTIONS

This type of questions gives two options to respondents – yes or no, to choose from. It is the easiest form of questionnaire for the respondent in terms of responding it.

MULTIPLE CHOICE QUESTIONS

Respondents are offered a set of answers they have to choose from. The downside of questionnaire with multiple choice questions is that, if there are too many answers to choose from, it makes the questionnaire, confusing and boring, and discourages the respondent to answer the questionnaire.

SCALING QUESTIONS

Also referred to as 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).

Question types

Closed

Easy to code.

Participants are forced into an answer,
may not be able to explain what they
mean:

Yes / No

Open

Lots of information can be
collected.

More difficult to quantify -
coding

Fixed choice

Question is accompanied by a range of
answers from which the respondent
chooses, e.g. A, B, C

Likert scale (1932)

strongly agree, agree...
Usually 5- or 7-point scale

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

POINTS TO CONSIDER

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

Anonymity – can reduce social desirability bias

WRITING QUESTIONS

[HTTPS://WWW.SURVEYMONKEY.COM/MP/5-COMMON-SURVEY-MISTAKES-RUIN-YOUR-DATA/](https://www.surveymonkey.com/mp/5-common-survey-mistakes-ruin-your-data/)

Don't write leading questions

Bad Question: How short was Napoleon?

Good Question: How would you describe Napoleon's height?

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

WRITING QUESTIONS

Avoid loaded questions

Bad Question: Where do you enjoy drinking beer?

Many people dislike beer and therefore can't answer the question.

WRITING QUESTIONS

Stay away from double-barreled questions

Bad Question: How useful will this textbook be for students and young professionals in the field?

Good Questions: How useful will this textbook be for students?

How useful will this textbook be for young professionals in the field?

WRITING QUESTIONS

Do not use absolutes in questions

Bad Question: Do you always eat breakfast? (Yes/No)

Good Question: How many days a week do you usually eat breakfast? (Every day/ 5-6 days/ 3-4 days/ 1-2 days/ I usually don't eat breakfast)

WRITING QUESTIONS

Be clear by speaking your respondent's language.

Use clear, concise, and uncomplicated language while trying to avoid acronyms, technical terms or jargon that may confuse your respondents.

QUESTION TESTING – EXAMPLE 1

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

(Tick one box)

Yes

☐

No

☐

QUESTION TESTING – EXAMPLE 1 REVISED

Do you or your family have a computer at home?

(Tick one box)

Yes

☐

No

☐

QUESTION TESTING – EXAMPLE 2

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

Never

Rarely

Sometimes

Often



Four empty pink squares arranged vertically, serving as a rating scale for the frequency of punishment.

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



COMPUTER QUESTIONNAIRE

Respondents are asked to answer the questionnaire which is sent by e-mail. The advantages of the computer questionnaires include their inexpensive price, time-efficiency, and respondents do not feel pressured, therefore can answer when they have time, giving more accurate answers. However, the main shortcoming of the e-mail questionnaires is that sometimes respondents do not bother answering them and they can just ignore the questionnaire.

TELEPHONE QUESTIONNAIRE

Researcher may choose to call potential respondents with the aim of getting them to answer the questionnaire. The advantage of the telephone questionnaire is that, it can be completed during the short amount of time. The main disadvantage of the phone questionnaire is that it is expensive most of the time. Moreover, most people do not feel comfortable to answer many questions asked through the phone and it is difficult to get sample group to answer questionnaire over the phone.

IN-HOUSE SURVEY

This type of questionnaire involves the researcher visiting respondents in their houses or workplaces. The advantage of in-house survey is that more focus towards the questions can be gained from respondents.

However, in-house surveys also have a range of disadvantages which include being time consuming, more expensive and respondents may not wish to have the researcher in their houses or workplaces for various reasons.

MAIL QUESTIONNAIRE

This sort of questionnaires involve the researcher to send the questionnaire list to respondents through post, often attaching pre-paid envelope.

Mail questionnaires have an advantage of providing more accurate answer, because respondents can answer the questionnaire in their spare time.

The disadvantages associated with mail questionnaires include them being expensive, time consuming and sometimes they end up being put in the bin by respondents.

INFORMATION SHEET – YOU WILL PROBABLY NEED ONE!

what the research is trying to find out;

the purpose of the research;

who is carrying it out;

exactly what will be asked of participants;

how the information they provide will be recorded;

what will then happen to the data;

what degree of confidentiality and anonymity is afforded;

how the information will be analysed;

how the findings will be reported;

who will see the results of the study.

OTHER ASPECTS OF RESEARCH DESIGN

Validity & Reliability – as shown on pie chart

Trustworthiness*

- **Dependability**: showing that the findings are consistent and could be repeated
- **Confirmability**: a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest
- **Credibility**: confidence in the 'truth' of the findings
- **Transferability**: showing that the findings have applicability in other contexts

* See Lincoln, Y.S. & Guba, E.G. (1985) *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.

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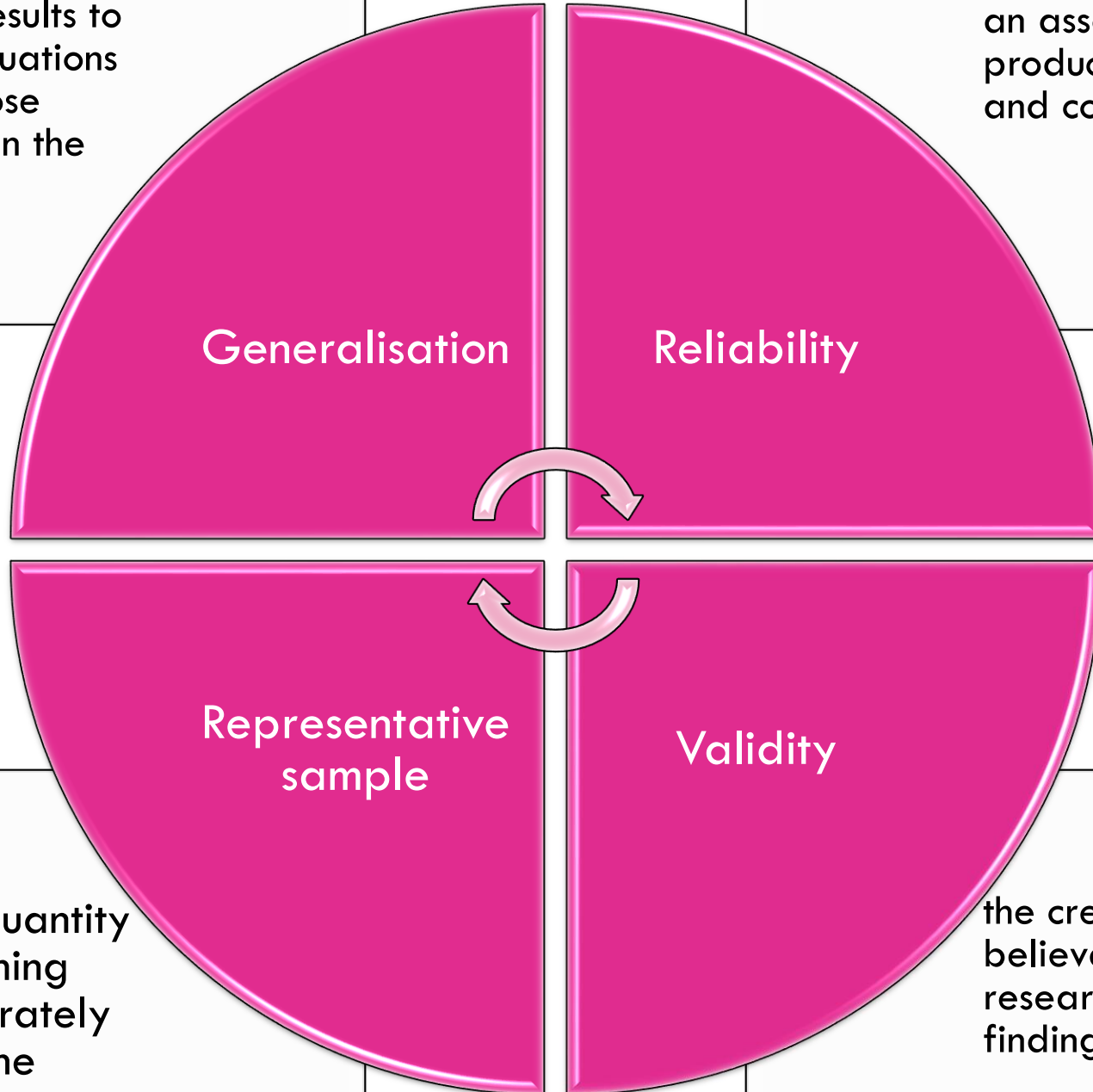
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