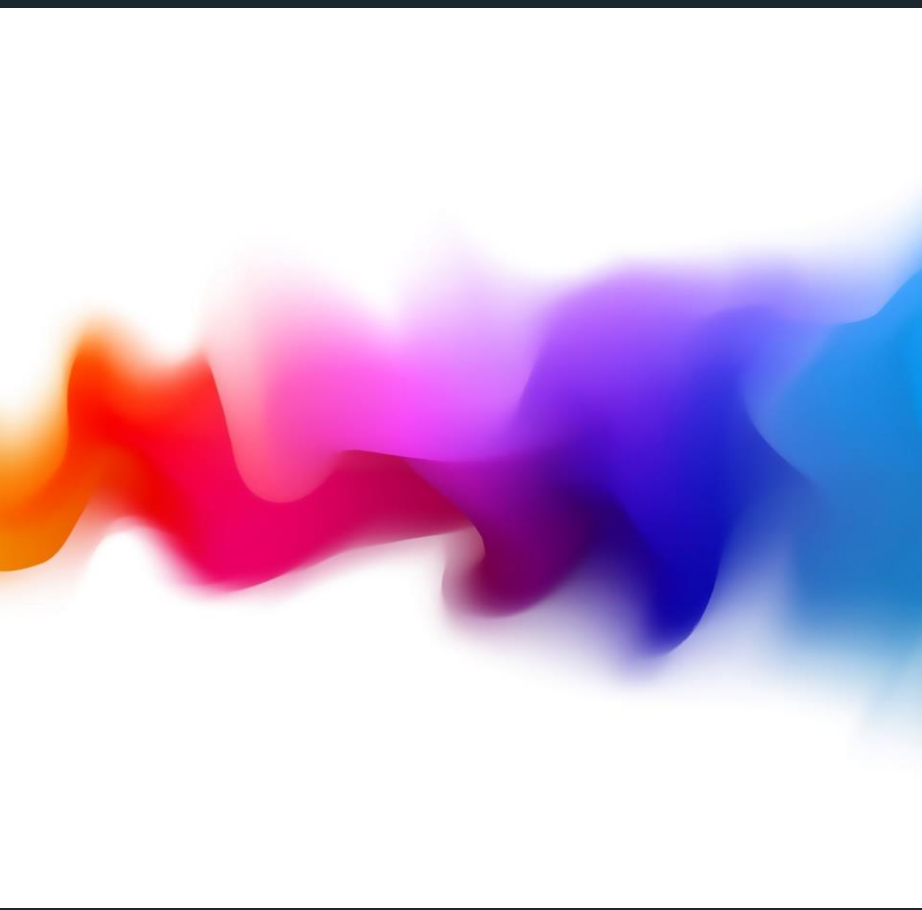




ECDE7002 INTRODUCTION TO RESEARCH METHODS IN EDUCATION

Research questions

Aims of the session

To develop an appreciation of the centrality of research questions to the research process

To begin to formulate appropriate research questions

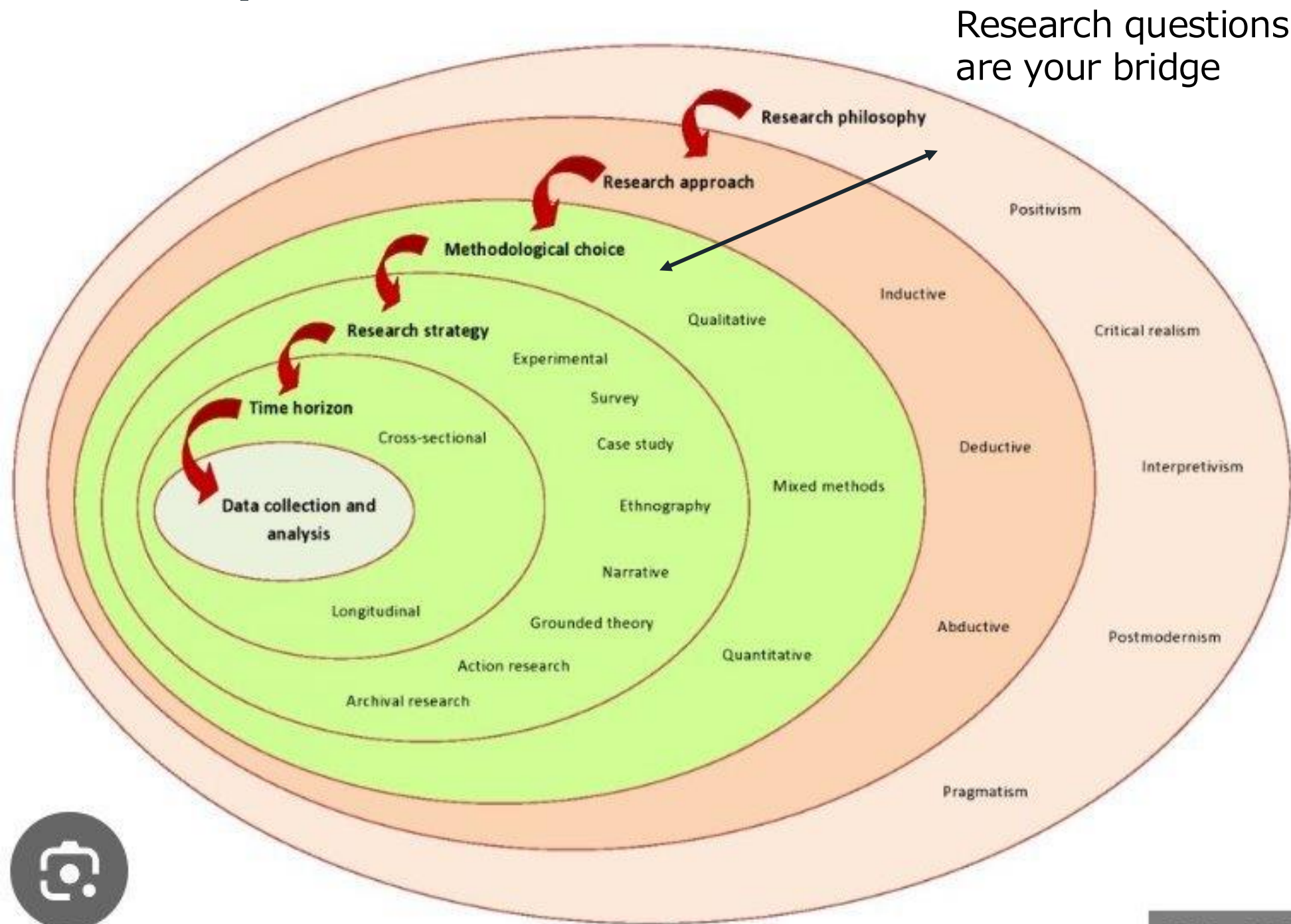
To appreciate how RQs underpin your mixed-methods approach in assignment 1

Assignment 1

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.

REVISITING THE RESEARCH ONION





Before we begin.

Access the Word document located in the files section of the ECDE7002 Teams channel and add in your working title/research problem in the appropriate column

**How does
your
research
philosophy
influence
your
research
questions?**

- Positivism → measurable relationships
- Interpretivism → meanings, experiences
- Pragmatism → practical solutions/what works

**Can you
answer the
following
questions?**



What is the aim of your research project?



Why is it important for you to explore?



What will be the benefits – to you, students/ others, a school/ university/ other?



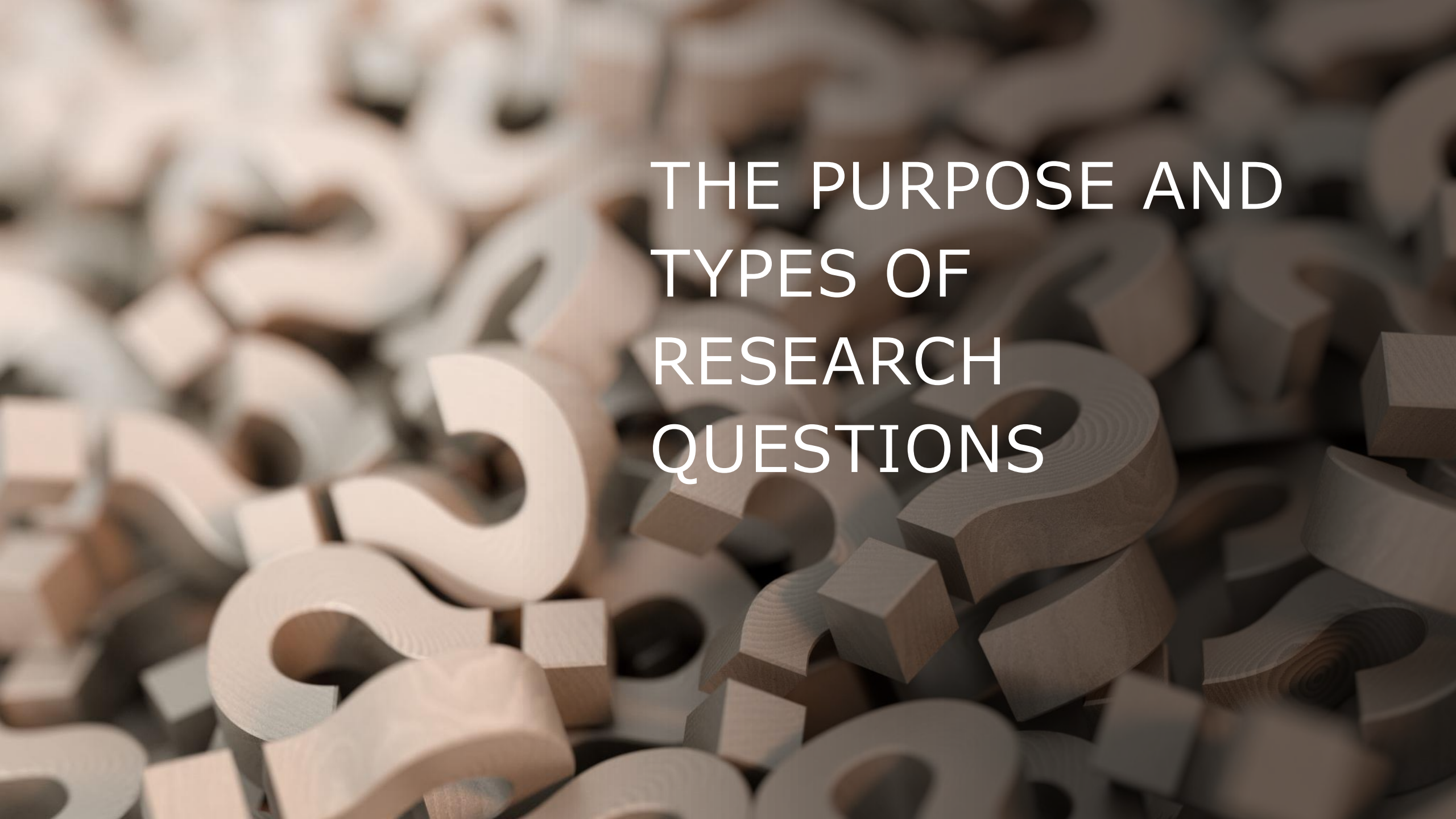
Who does your research involve? participants (number, who are they?)



What is your research question?



What type of research study will it be?



THE PURPOSE AND TYPES OF RESEARCH QUESTIONS

Research questions

What will you attempt to explain / explore / describe / evaluate in your research?



Types of Research Question

Descriptive/Contextual

seek to describe the nature of what already exists.

Explanatory

seek to expound on a phenomenon or examine reasons for and associations between what exists.

Exploratory

investigate little-known areas of a particular topic.

Evaluatory

assess the effectiveness of existing methods or paradigms.

Descriptive/Contextual

- *What patterns of homework completion are evident among Year 8 pupils in a mixed-ability maths class?*
- *What forms of feedback do FE lecturers most commonly provide during vocational practical sessions?*
- *What digital tools are currently being used to support literacy development in Welsh primary schools?*

Explanatory

- *What factors contribute to variation in engagement levels during inquiry-based science lessons at Key Stage 3?*
- *How do teacher expectations influence pupil participation during whole-class discussions?*
- *What explains the differences in reading progress between pupils receiving structured phonics support and those receiving mixed-method literacy instruction?*

Exploratory

- *How do newly qualified teachers make sense of the Curriculum for Wales in their early classroom practice?*
- *How do learners experience the transition from GCSE to Level 3 vocational programmes?*
- *What challenges do ALN coordinators report when implementing new legislative requirements?*

Evaluative

- *To what extent does a wellbeing-focused tutor programme improve attendance among Year 10 pupils?*
- *How effective is blended learning in improving first-year university students' engagement?*
- *What impact has the introduction of Curriculum for Wales had on teachers' planning practices?*

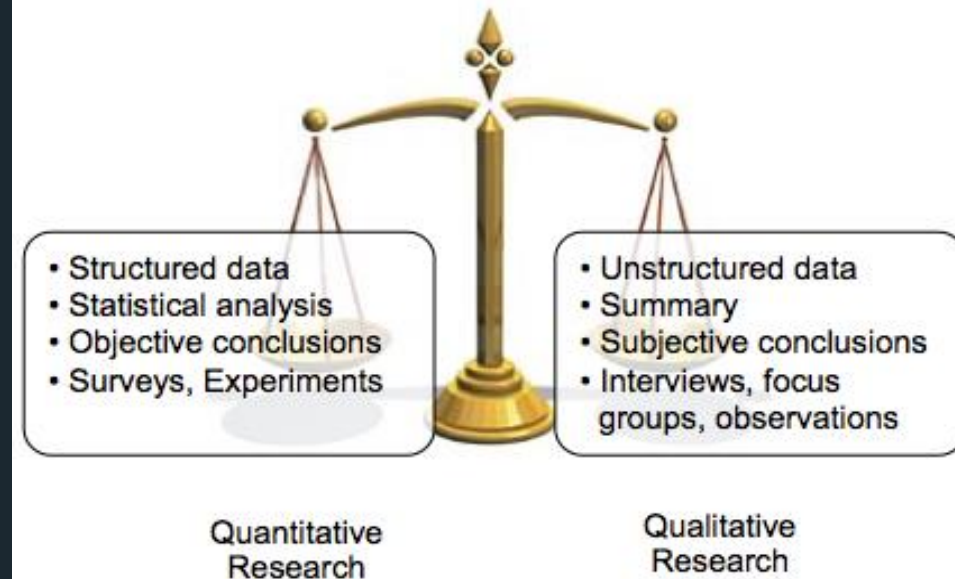
The background of the slide is a repeating pattern of speech bubbles in various colors (yellow, red, pink, grey, and olive green) on a teal gradient. Each speech bubble contains a dark blue question mark. The text is centered on the right side of the slide.

QUANTITATIVE AND QUALITATIVE RESEARCH QUESTIONS

Qualitative and Quantitative Data

Quantitative data refers to numerical information generated through the research process that can be understood, represented and analysed statistically.

Qualitative data is non-numerical (e.g. text, image, audio) and offers the researcher a descriptive account of the phenomenon being studied.





Types of Research Question:

Quantitative

Quantitative research systematically investigates events through measurable data subjected to rigorous mathematical and statistical analysis.

Typically include the population to be studied, dependent and independent variables and the research design to be used

Types of Research Question: Quantitative

not answerable with “yes” or “no” responses;

don't use words such as: is, are, do / does;

can be further categorized into three types: descriptive, comparative and relationship.



Descriptive research questions aim to measure the responses of a study's population to one or more variables or describe variables that the research will measure. These questions typically begin with "what."



Comparative research questions aim to discover the differences between two or more groups for an outcome variable. These questions can be causal as well. For instance, the researcher may compare a group where a certain variable is involved and another group where that variable is not present.

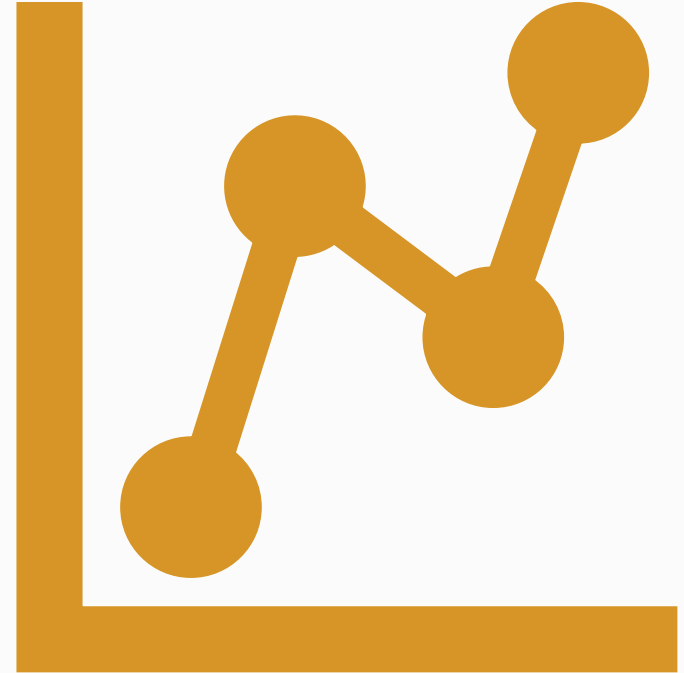


Relationship research questions seek to explore and define trends and interactions between two or more variables. These questions often include both dependent and independent variables and use words such as "association" or "trends."

Quantitative Research Questions

QUALITATIVE RESEARCH QUESTIONS

What are they?



Characteristics of qualitative research questions

Qualitative research questions:

May concern broad areas of research or more specific areas of study.

Usually adaptable, non-directional, and flexible (Creswell, 2013).

Generally aim to discover, explain or explore; can be further categorized into several types (Marshall and Rossman, 2011; Ritchie et al., 2014).

Types of qualitative research questions

(adapted from Marshall & Rossman, 2011; Ritchie et al., 2014)

- **Experience questions**
Explore lived experiences, feelings, perceptions
e.g., How do newly qualified teachers experience planning under Curriculum for Wales?
- **Meaning-making questions**
Explore how participants interpret or assign meaning to events or practices
e.g., How do FE learners understand the concept of “feedback” in practical workshops?
- **Process questions**
Explore how something happens, unfolds, or is negotiated
e.g., How do teaching assistants support learners with ALN during whole-class instruction?

Types of qualitative research questions (continued)

- **Perspective questions**
Explore viewpoints, beliefs, attitudes
e.g., How do parents perceive the role of digital learning platforms in homework?
- **Context questions**
Explore the influence of setting, environment or culture
e.g., How does school ethos shape pupils' sense of belonging in rural Welsh primary schools?

Exemplar qualitative research questions

- *How do secondary teachers make sense of assessment requirements within the Curriculum for Wales?*
- *In what ways do Year 9 pupils describe their experiences of group work in science lessons?*
- *How do ALN coordinators negotiate tensions between policy expectations and classroom realities?*
- *How do university students interpret the term “academic support” across different programmes?*
- *How do teaching assistants understand their role in supporting literacy intervention groups?*

What makes a research question suitable for mixed methods?

- It cannot be fully answered using *only* quantitative or *only* qualitative data
- It addresses both **process/meaning** *and* **patterns/relationships**
- It benefits from **integration** (e.g., qualitative explaining quantitative findings)
- It is complex, multi-layered, or situated in real practice

HOW TO EVALUATE AND REFINE RESEARCH QUESTIONS





Research Questions should be:

(Adapted from Lewin, 1948)





Discuss the strengths and limitations of the following RQs – How might you re-write these?

1. Why do some learners find aspects of school difficult and what could the school do about it?
2. How often does the average parent listen to their child read and what is the impact on progress?
3. How many school days are lost through pupils' unauthorised absence?
4. What are the advantages and disadvantages of mobile phone use in schools?

Breakout room task

Research questions should be...

Focused and researchable

- Focused on a single topic or problem
- Does not ask for a subjective value judgement

Feasible and specific

- Answerable within practical constraints
- Uses specific, well-defined concepts

Relevant and original

- Addresses a problem relevant to your practice/setting
- Contribute to a topical or academic debate

Ask yourself

Does the question deal with a topic or issue that interests me enough to spark my own thoughts and opinions?

Is the question easily and fully researchable?

What type of information do I need to answer the research question?
Is the scope of this information reasonable?

Can I access these sources?

What sources will be able to provide the information I need to answer my research question (journals, books, internet, government documents, people)

Given the type and scope of the information that I need, is my question too broad, too narrow, or ok?

Given my answers to the previous questions, do I have a good-quality research question that I actually will be able to answer by doing research?



A point to note

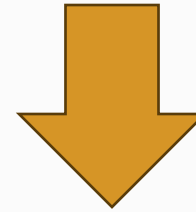
You will revise and sharpen your ideas as your work progresses. For this reason, your early ideas and questions are *prima facie* questions. Thomas (2017, p.18)

These early questions guide your reading and thinking. They are not fixed and will change as your study develops.

Prima facie questions

**These questions start broad
and become sharper after
reading and reflection**

What effect does social media have on
young people?



What effect does daily use of TikTok have
on the attention span of 12-16 year olds?

Prima facie questions

**These questions start broad
and become sharper after
reading and reflection**

Has there been an increase in the
number of children living in poverty in
Wales?



How have economic, political and social
factors affected levels of poverty in the
past 5 years in Wales?

Recap... today you learned

- The purpose of research questions
- Types of RQs
- How qualitative and quantitative RQs differ
- How to evaluate and refine RQs
- Why prima facie questions are part of the process

Next week...

Tutorials

Please contact Caroline or Susan to make a tutorial appointment.

Please ensure you access the Word document in Teams and add your research questions there beforehand. Try to comment on each others' questions as well

ANY
QUESTIONS?



References / further reading

- Berger, R. (2013). Now I see it, now I don't: researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219-234. <https://doi-org.uwtsd.idm.oclc.org/10.1177/1468794112468475> (Original work published 2015)
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