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# Getting Started in... Choosing Methodologies

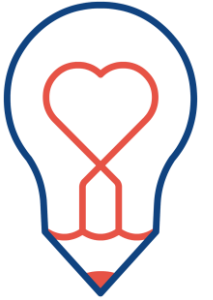
**Speaker:**            **Dr Amy Wong, Associate Professor in Medical Education**  
Norwich Medical School, University of East Anglia

**Chair:**                **Dr Aileen Barrett (PhD)**  
Academic Lead Research  
Assistant Scheme Director South East Training Scheme

*Acknowledgement: Thank you to Dr Megan Brown, Newcastle University, for their slides adapted for this presentation.*

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# Session overview

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Explore the differences between methodology and methods

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Discuss the reasons for choosing the appropriate methodology

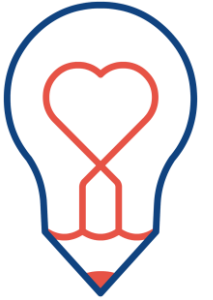
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Introduce the 6-step approach to guide the choice of an appropriate methodology

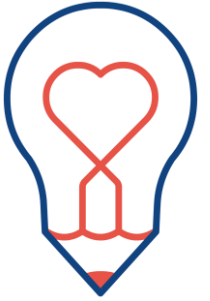
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Breakout room discussion: Applying the 6-step approach for your clinical education research study

# Methodology versus methods



# What are methodologies?



## What is a Methodology?

**Definition:** Theoretical analysis of the methods, encompassing principles and theories underlying a research approach.

**Example:** Adopting a qualitative approach to understand subjective experiences.

**Focus:** Theoretical framework guiding research; the "why" behind choosing certain methods.



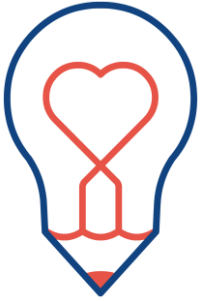
## What is a Method?

**Definition:** Specific techniques or procedures used in data collection and analysis.

**Example:** Using a questionnaire to gather data.

**Focus:** Practical application in research; the "how" of collecting and analysing data.

# Reasons for choosing the appropriate methodology



**Enhances credibility**



**Informs data collection**



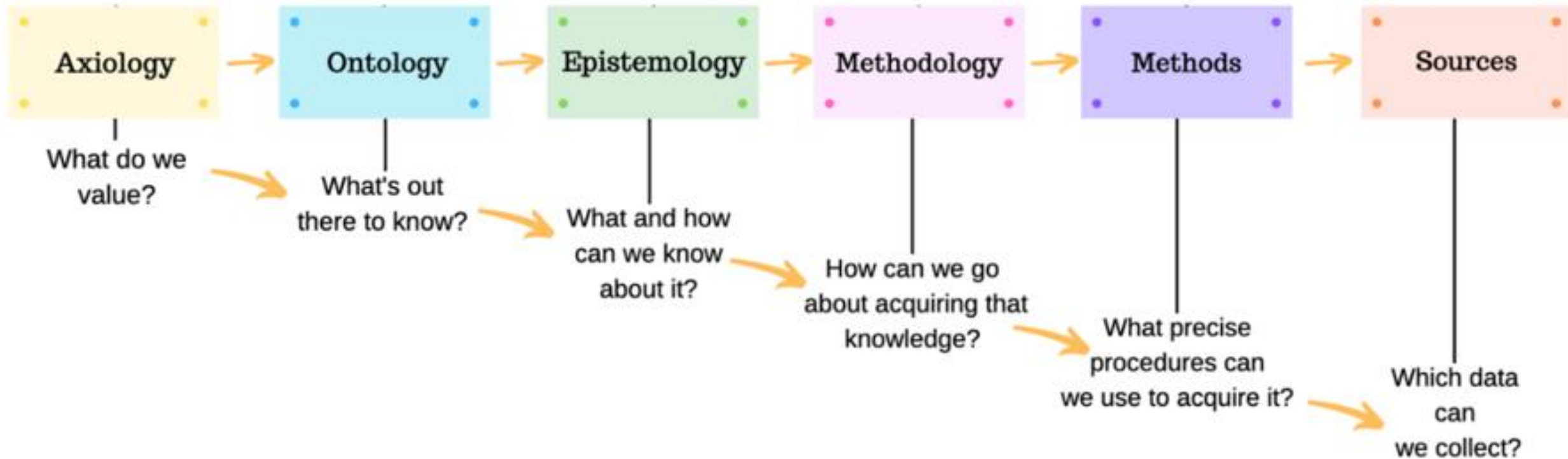
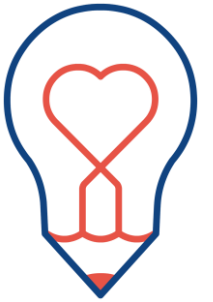
**Guides you to interpret  
your data**

***The chosen methodology must align with your research question.***

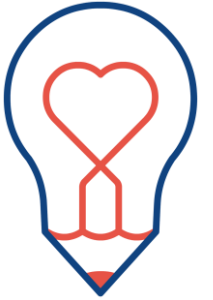
# The 6-step approach to guide the choice of an appropriate methodology



# Step 1: What is your research paradigm?



# Step 2: What is the appropriate approach?



**Deductive:** Starts with a **hypothesis** derived from theory and tests it through **empirical observation**, suitable for research aiming to **measure or test predefined concepts**.

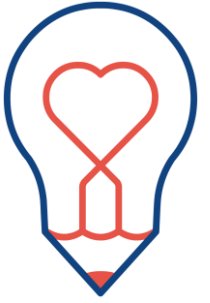


**Inductive:** Begins with **observations to develop patterns**, ending in the formation of new theories, ideal for **exploratory research** where theories may not yet be established.



**Abductive:** Involves **both observation and theory** to form a plausible explanation, perfect for research that seeks to **explain complex phenomena** where neither deduction nor induction alone is sufficient.

# Step 3: How many methods will be used?

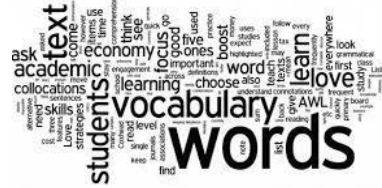
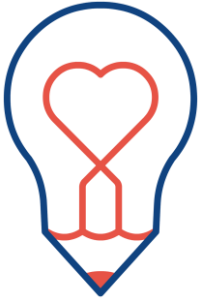


**Mono:** Single, focused.

**Multi:** Multiple, different elements of a phenomenon.

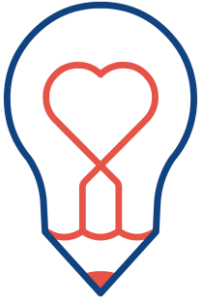
**Mixed:** Integrates, comprehensive understanding.

# Step 4: What sort of data will be collected?



	Qualitative	Quantitative
<b>Purpose</b>	To explore, understand and interpret	To measure and quantify variables
<b>Research questions</b>	‘How’ and ‘why’ something happens	‘To what extent, does X impact Y?’ ‘What is the relationship between A and B?’
<b>Data collection</b>	Interviews, focus groups	Surveys, tests, structured observations
<b>Data analysis</b>	Identify patterns and themes Inductive – build theories based on data	Conduct statistical analyses Deductive – test hypotheses against data to either confirm or reject them

# Step 5: Methodological strategies



## Quantitative Research

A systematic attempt to define, measure, and report on the relationships between various elements.

## Qualitative Research



Phenomenology: Aims to interpret participants' lived experiences



Case studies (single/multiple): descriptive, exploratory and explanatory



Grounded theory: Aims to create a new theoretical model based on direct participants' experiences and their perspectives



Ethnography: Aim to develop an in-depth understanding of a complex social and cultural phenomenon in specific settings through direct immersion and interactions between the researcher and participants



General qualitative inquiry: Adopts a flexible data collection strategy to explore and develop an initial understanding of participants' experience, perceptions and interpretations

# Step 6: How often will you collect data?



## Cross-sectional study

Data collected at one point in time



TIME



## Longitudinal study

Data collected repeatedly over time



TIME



# The 6-step approach to guide the choice of an appropriate methodology



# Discussion: Applying the 6-step approach for a clinical education research study

**How, and to what extent, does interprofessional education impact collaboration skills among health professions students?**

**Step 1 - Research Paradigm:** Discuss and decide on the research paradigm (e.g., positivism, interpretivism) that aligns with the research question.

**Step 2 - Approach:** Choose the appropriate research approach (deductive, inductive, abductive) for the project.

**Step 3 - Number of Methods:** Determine if a mono, multi, or mixed-methods approach is most suitable for the research question.

**Step 4 - Type of Data:** Decide on the type of data to be collected (quantitative, qualitative, or both) that best suits the research needs.

**Step 5 - Methodological Strategy:** Discuss the specific methodological strategy likely to be most effective (e.g., case study, general qualitative inquiry etc.)

**Step 6 - Data Collection Frequency:** Decide on the frequency of data collection.

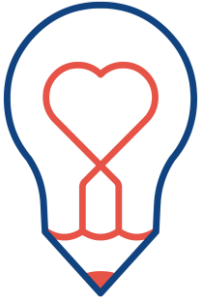
# Resources

## Articles:

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- Turner, T.L., Balmer, D.F. and Coverdale, J.H., 2013. Methodologies and study designs relevant to medical education research. *International Review of Psychiatry*, 25(3), pp.301-310.

## Textbooks:

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- Blair, L., 2016. Choosing a methodology. In *Writing a graduate thesis or dissertation* (pp. 49-72). Brill.
- Denzin and Lincoln's *The Sage Handbook of Qualitative Research*
- *Philosophy of Science: A Very Short Introduction*



# Thank you



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