



Prifysgol Cymru
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University of Wales
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LCMB7003

Research Methods Workshop

Week 1 (Part 2 of 2)

The Research Process

Trawsnewid Addysg; Trawsnewid Bywydau
Transforming Education; Transforming Lives



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By the end of this week.....

- Understand where research design and data collection fit in the research process.
- Recognise the key relationships between the research question, research hypotheses and data variables.
- Complete an exercise on framing hypotheses and identifying variables for a research question.

The research process

- Identifying a question to be answered / hypothesis to be tested / problem to be solved.
- Determining what kind of information is needed to answer that question (*ontology*).
- Determining what methods are best for generating that information (*epistemology*).
- Getting the information using the chosen methods (*data gathering*).
- Converting raw data into usable information (evidence) (*analysis & interpretation*).
- Drawing and presenting conclusions from the information (*presentation*).
- Validating the evidence provided.

Ontology : literally, the study of *what there is*.

- 1) Which states of another person can you observe as a researcher?
- 2) How much of another person's states can they describe themselves? Can you verify these?
- 3) Are my data sources 'representative'? How can I select a suitable sample to ensure my research data is 'typical' of a population?

Ontology

5) Who you are / how do you position yourself in relation to the data sources you need?

6) Who are your data subjects? (*Sample*) What are the data items you need from them?

7) What is the relationship between you and the subjects of your research?

8) Which data units will you gather and analyse? (e.g. preferences, attitudes, decisions, experiences, processes, behaviors, values, prices, quantities, frequencies, variations . . . – in individuals or in groups)

Epistemology

- Epistemology is the study of knowledge – what do we know and how do we know it?
(*"episteme"* = (Classical Greek) *"acquiring knowledge"*)
- In practical research, epistemology concerns the methods we select for gathering, analysing and presenting evidence (our '*methodological framework*').
- It also concerns the tests we carry out to establish the validity and soundness of the evidence we present.

Questions, Hypotheses and Variables

- Every good research project starts - not from a topic - but from a precise and relevant **question**. What is the question your research is intended to answer?
- Given a precise question, the next step is to formulate hypotheses (predictions) about what answers may be possible.
- Hypotheses (including the null hypothesis) normally assert a correlation between two or more variables - independent (IV) and dependent variables (DV).

Knowledge translation

- Research **not** a set of competing alternatives – more akin to a series of 'translational flows'
- Different stages offer different contributions
- Different individuals enjoy/prefer, and are good at different parts of the process dependant on – career choice, stage of career, expertise, etc.

Types of research

- Basic research, focusing on:
 - Development
 - Refinement
 - Testing
 - About testing principles and theories – essentially knowledge creation

Types of research

- Applied research
 - Explores the value of basic research and
 - Delivers outcomes to policy-makers and practitioners
 - Utilises basic research
- Evaluation research
 - Evaluates specific activities/programmes or policies
 - Helps practitioners measure and understand outcomes

Levels of research related to levels of degree

- Undergraduate research – tends to be specific and bounded
- Postgraduate research tends to have greater scope and make contributions to knowledge and/or practice
- Funded research – usually conducted by more experienced researchers. Similar criteria apply to consultants
- Whichever of the above, all need to be seen as scholarly

Nature of scholarship

- Academic work – recognised by other scholars
- Original – in approach, methodology or explanation
- Situated – in the context of past debates or other literatures
- Critically reflexive – offers critical evaluation of other literatures, theories and its own limitations
- Logically consistent – is coherent

Nature of scholarship

- Methodologically coherent – design and methods support objectives and the approach taken justified
 - Synthesis – theory and data combined into cohesive argument
 - Audience – primarily academic but also practitioner
- (Adapted from Mauch and Birch, 2003)

Aims of a research project

- Contribution to knowledge
 - Pattern recognition
 - Generalisability
 - Appropriateness of context/problem
 - Replicability
- Training and innovation in research methodology
 - Developing an appropriate research design
 - Being 'scientific' comes not from what you study but with the methodology

Aims of a research project

- The impact and engagement agenda: influencing policy and/or practice
 - Dissemination, but also a recognition of pathways for impact
 - Bringing about a change or benefit to one or more constituencies
 - The translation of knowledge to third parties (e.g. policymakers)
 - Speculating on what the findings will have on business and organisations and addressing how problems could be elevated and changes made

Writing a research proposal: the elements

- Draw together ideas
- Build on previous work: see what the literature already says
- See how elements of the research process come together and how this links to a design for the research including methods and analysis
- Demonstrate the coherence of what is being proposed
- Ensure the coherence of what is being proposed

Clear questions and research objectives

- There can be several purposes behind a particular research project and these need to be clearly articulated:
 - Recognition of patterns in data or information
 - Development or refinement of a particular methodological approach
 - Ability to generalize to a wider population
 - Ability to describe a problem in a sufficiently detailed way to show the realism of a particular context

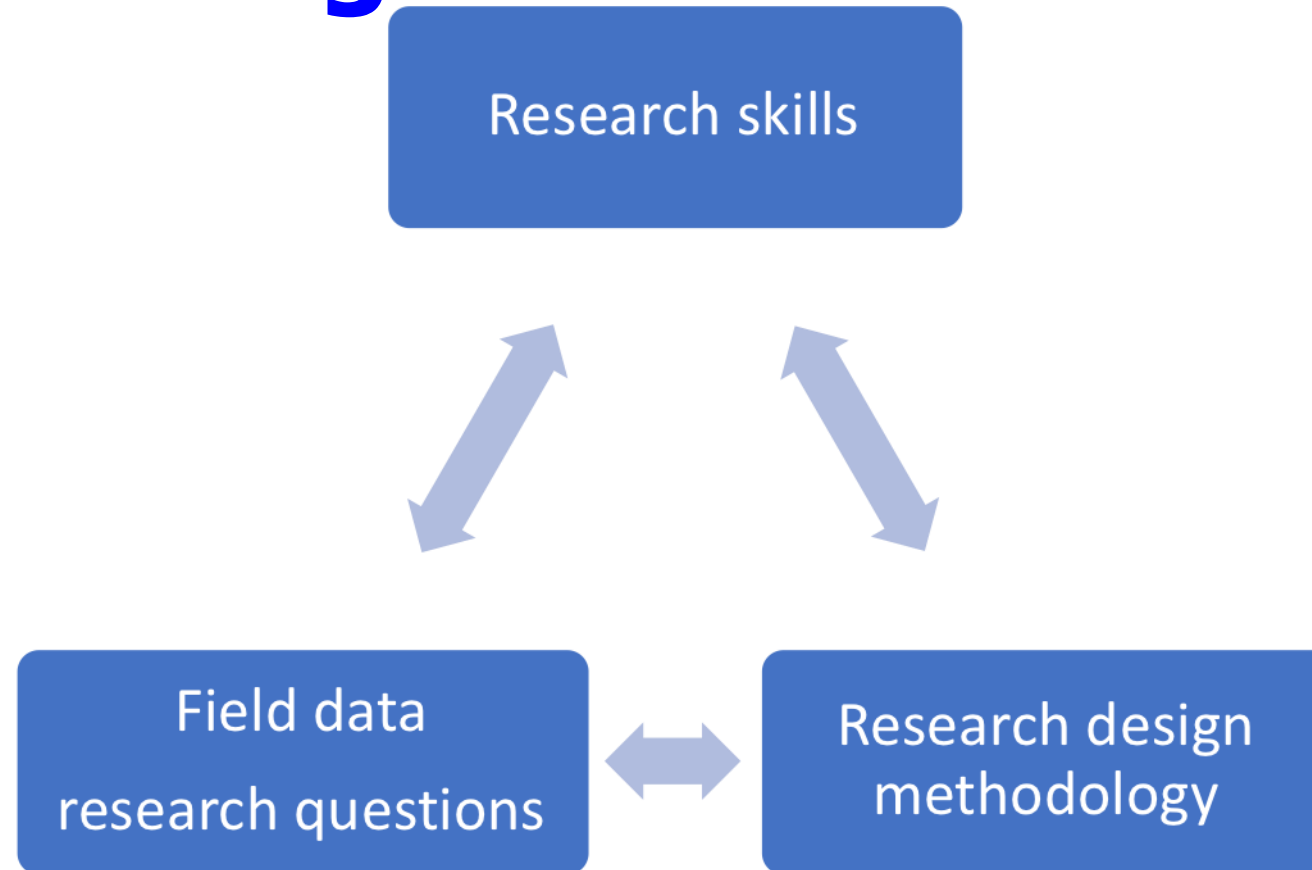
Being reflective & reflexive in research

- Being aware of any bias brought into the process by the researcher
- Reflectivity requires researchers to think carefully about cultural and political contexts as well as researcher interaction with respondents and any bias
- Reflexivity's primary concern relates to interpretation – an acceptance that all data (of whatever type) could be problematic – researchers need to search themselves, their community and their language

The impact and engagement agenda

- The need to be aware of conflicting demands – theory/practice/relevance/engagement
- The need to relate the above pressures to types of research
 - Mode 1 and mode 2
 - Action research
- Understand the above in relation to bodies assessing impact and research relevance, e.g. REF/AACSB/EQUIS

Concise description of the research design and methods



Further reading

- Alvesson, M. and Willmott, H. (eds) (2003) *Studying Management Critically*. London: Sage.
- Bartunek, J.M., Rynes, S.L. and Draft, R.L. (2001) 'Across the Great Divide: knowledge creation and transfer between practitioners and academics', *Academy of Management Journal*, 44, 340-355.
- Grey, C. (2005) *A Very Short, Fairly Interesting and Reasonably Cheap Book about Studying Organizations*. London: Sage.
- Marshall, S. and Green, N. (2007) *Your PhD Companion: A Handy Mix of Practical Tips, Sound Advice and Helpful Commentary to See You Through Your PhD*, 2nd edn. Oxford: Cromwell Press.
- Thomas, A. (2004) *Research Skills for Management Studies*. New York: Routledge.