



Prifysgol Cymru

Y Ddrudfod Newydd

University of Wales

Ynnydd Saint David

Research Design

Qualitative Approaches

Trawsnewid Addysg; Trawsnewid Bywydau

Transforming Education; Transforming Lives





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Aims of Session

- Consolidate learning on Research Paradigms
- To explore approaches to research design focusing on qualitative designs.

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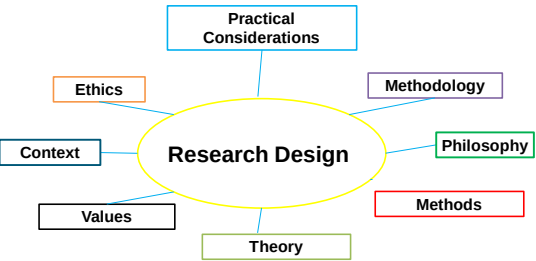
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Research Design

Figure 1



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Research Design

In order to undertake your research you need to identify the design you will be adopting —

design is concerned with how you will turn research questions into projects and is closely linked to the purpose of your research.



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Which Research Approach to Follow?

You need to first consider some questions:

What is the nature of the research problem?

What are your philosophical assumptions / world views?

What will be your procedures of inquiry / research design?

What research methods (data collection, analysis interpretation) will I follow?



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Basic Principles of research Design

Four main features of research design, which are distinct, but closely related

- **Ontology:** How you, the researcher, view the world and the assumptions that you make about the nature of the world and of reality
- **Epistemology:** The assumptions that you make about the best way of investigating the world and about reality
- **Methodology:** The way that you group together your research techniques to make a coherent picture
- **Methods and techniques:** What you actually do in order to collect your data and carry out your investigations
- These principles will inform which methods you choose: you need to understand how they fit with your 'bigger picture' of the world, and how you choose to investigate it, to ensure that your work will be coherent and effective



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Methodology vs. Method

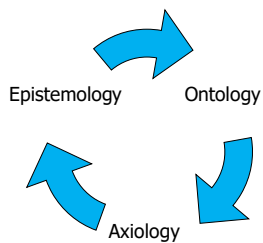
Methodology

The theoretical framework that outlines the rules (axioms) to follow in a study.

Method

The actual tools/steps taken by which you conduct research into a subject or a topic.

Ways of Thinking



Research Design / Approaches

- There are two main design approaches,
 - **fixed (mainly quantitative)** and
 - **flexible (mainly qualitative)**.
- However increasingly a third design:
 - **mixed methodological** approach is often utilised within a “pragmatic approach to research”

Objectivism, subjectivism and Pragmatism

- Three philosophical positions:
 1. Objectivism is the philosophical position which holds that social entities exist in reality external to social actors.
 2. The subjectivist view is that social phenomena are created from the perceptions and consequent actions of social actors.

Objectivism, subjectivism and Pragmatism

- The third is a useful position when discussing a research design for a work-based learning / practical context:
 - 3. Pragmatism holds that the most important determinant of the research philosophy adopted is the research question.

Philosophical World-view / Paradigm

Post-positivist
Constructivist
Transformative / critical
Pragmatic

RESEARCH APPROACHES

Qualitative
Quantitative
Mixed Methods

Research Methods

Questions
Data collection
Data Analysis
Interpretation
Validation

Designs

Quantitative (e.g. experiments)
Qualitative e.g. ethnographies
Mixed methods e.g. explanatory sequential

Creswell (2014), p5.

Methodology

- Research methodology: what do we need to consider?
 - Paradigm / Methodological choices...?
 - Research designs?
- What are the options?



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Research Design / Strategies of Inquiry

Qualitative Examples

- Case Study
- Ethnography
- Phenomenology
- Grounded Theory
- Life History
- Historical Methods
- Clinical Research
- Action and applied research
- Participatory research

Quantitative Examples

- Surveys: requires large sample sizes for statistical analysis
- Experimental designs : requires a control group



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Research Design / Strategies of inquiry

- Mixed Methodology:
 - Convergent parallel designs
 - Explanatory sequential
 - Exploratory sequential
 - Transformative embedded or multi purpose
- i. Merges quantitative and qualitative data
- ii. First conducts quantitative research , fills in the detail with qualitative
- iii. Reverse to explanatory
- iv. Involves utilising a theoretical perspective, both data is used to build on each other.



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Research Design Key Principles

Paradigm

1. Ontology



Consider the questions below from your own perspective:

What counts as evidence ?

2. Epistemology



What is the relationship between the knower and the known?

3. Logic



Are casual links between bits of information possible?

4. Teleology



What is research for?



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Axioms, Quantitative :

Validity: The degree to which research outcomes are valid/ true

- Eg: Is a particular measure a valid reflection of the concept? (measurement validity)
- Eg. Are the outcomes **generalisable**, ie. applicable to a wider population? (external validity)
- Eg. Is the relationship between variables valid? (internal validity)
- Eg. Are the outcomes realistic in terms of normal social settings? (ecological validity)



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Axioms, Quantitative :

- Reliability:
 - The degree to which research outcomes are repeatable, and do not fluctuate.

- Can you replicate the exact experiment and get the same result?
- Can the outcomes be attributable in other contexts?



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Axioms, Quantitative :

Discuss:

If a child's IQ is measured on four consecutive days, and found to have a different values, is this a reliable index of intelligence?

Do you think that IQ is a valid measurement of intelligence anyway?

Axioms, Qualitative:

- Trustworthiness :
 - Audit Trails
 - Authenticity,
 - Personal integrity,
 - Member checking
 - Ethical positions....

Axioms, Qualitative:

- Vicarious generalisations
 - Thick description allows learning to take place between contexts (e.g. sharing best / good practice)

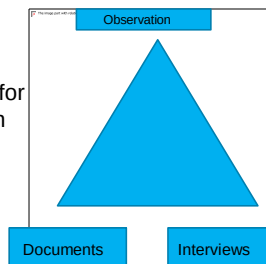
Axioms, Qualitative:

- Reflection

- Embracing bias and one's own subjectivity.

Axioms, Qualitative:

- Triangulation:
 - Multiple tools for data collection
 - Multi Perspectives



Axioms, Qualitative:

- Discuss
 - If you were to justify a rigorous qualitative design as apposed to a quantitative design, how would you justify your case?

Axioms

- What would the implications for your research design be depending on the paradigm choice if you were to apply the different axioms?

Research Methods

- The prime criterion for choosing a particular data gathering method in research is whether it is anticipated that the method will give useful information about the practice under study and fits with research design strategy for inquiry chosen.
- Are you interested in any particular methods?

Qualitative Research Methods

- Interviews
- Participant Observation (Reflections on your own observations).
- Documentary analysis
- Reflective Diaries
- Questionnaires
- Focus Groups

Examples

- What are the key things to consider when designing questions for a qualitative study.

Research Methods and Analysis

- Qualitative flexible designs: open ended questions, that you then look for themes to analyse.
- Quantitative fixed designs : highly structured closed questions that can be given a numerical value and analysed numerically.
 - e.g likert scale choose 1-5
- Mixed methods adopt both open and closed questions

Theory and Practice of Research: Action Planning

1. Planning research is vital to its success,
2. Having realistic expectations in relation to your:
 - a. FOCUS
 - b. RESOURCES
 - c. TIME
 - d. ETHICAL CONSIDERATIONS

In groups consider and design a research study for the following topics

- **Staff and students use of technology for learning**
- **Reasons for students to enter higher education**

Consider:

- Research question
- Paradigm
- Quantitative/qualitative/mixed
- Data collection methods
- Data analysis
- Sample



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Research question

First steps

- area of interest
- subject you want to investigate
- issue from your work
- reading and exploring other research and academic writing



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Defining research questions

- Define the topic- academic achievement, outdoor play, cultural diversity.
- Define nature of research endeavour- discover, explore, describe or explain.
- Define the questions you are interested in- what, where, how, when or why
- Indicate whether you foresee a relationship between concepts you are exploring- impacts, increases, decreases, relationships, correlations or causes



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Hypothesis

Logical conjecture- (gut feeling, educated guess) about the nature of the relationship between two or more variables:

- The occurrence of truant behaviour will be higher in deprived areas
- Financial problems and debt increase the occurrence of divorce

Do you need a hypothesis?

- No prediction or educated guess
- No clear variables — you may want your research to identify variables

What factors can your research identify that lead to truancy or divorce.

- You may want to explore descriptions and feelings
Why do young people in a deprived area truant?
- Action Research- A project to support and improve truancy in a setting, through collaboration between the researcher/educator and young people.

Research questions

There are more male than female university lecturers

This is a hypothesis

- What type of research would help prove or disprove this hypothesis?
- Time scale
- Resources

Research questions, some considerations

Define the topic

Define nature of research

Define the questions you are interested in

Indicate whether you foresee a relationship between concepts you are exploring-



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Triangulation

- Using more than two different methods to answer a research question
- Credibility and reliability of a research project
- Debated



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Literature Review

- Primary Sources
- Secondary Sources
- Meta-analysis takes several quantitative studies and analyses them as a whole in order to find a relationship
- Literature based research -Exploration of other primary research to form a theory or set out the field's key issues and arguments



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References

- Cohen L., Manion, L., & Morrison K. (2000). *Research Methods in Education*. London: Routledge Falmer.
- Costley C., Elliot, C.G., Gibbs P. (2010) *Doing Work Based Research: Approaches to Enquiry for Insider-Researchers*. London: Sage
- Creswell, J. W. (2014). *Research Design: Qualitative and Quantitative, & Mixed Methods Approaches*. LA: Sage
- Denzin, N.K. & Lincoln, Y.S. (eds), (2011) Introduction: The Discipline and Traditions of Qualitative Research, in Denzin, NK & Lincoln, Y.S. (eds) (2011) *Handbook of Qualitative Research* Thousand Oaks: Sage
- *Handbook of Qualitative Research* Thousand Oaks: Sage 1-47
- Macintyre, (2000) *The Art of Action Research*. London: David Fulton Publishers.
- Mercer, J., (2007) *The Challenges of Insider Research in Educational Institutions: Wielding a double-edged sword and resolving delicate dilemmas* *Oxford Review of Education*, 2007, 33 (1), pp. 1-17
- McNiff, J., Lomax, P. & White, J. (2003) *You and Your Action Research Project* 2nd Edition London: Routledge Falmer.
- O'Donoghue, T. (2007) 'Planning Your Qualitative Research Project: An Introduction to Interpretivist Research in Education', Abingdon: Routledge
- Punch K. *Introduction to Social Research Methods: Quantitative and Qualitative Approaches*. London: Sage, 2005.

