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Research Methods

Trawsnewid Addysg; Trawsnewid Bywydau
Transforming Education; Transforming Lives

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Can you name some common primary research methods?

Questionnaires

Interviews

Observation

Experiments

Focus Groups

Content Analysis

Case Studies

Questionnaires

- An instrument for collecting primarily **descriptive** information at a particular point in time.
  - **Qualitative**, **quantitative**, or **mixed**
  - Open-ended or closed questions
  - **Likert scales**
  - Dichotomous questions
  - Multiple choice questions
  - Rank ordering
- Benefits
  - Cheap to administer to large groups of people
  - Potential to collect a wide range of types of data
  - Easily recognisable to most participants
  - Researcher is removed from the participant
- Limitations
  - Researcher is removed from the participant
  - Low response rates
  - No ability to engage more fully, ask probing questions, seek clarification
  - HUGE pressure in designing and writing
  - Numerous ethical considerations

Interview

- A planned (rather than naturally occurring) conversation between two people (interviewer and interviewee) with a specific purpose
  - Structured – a fixed set of questions asked in the same way of all participants
  - Semi-structured – several fixed questions that are used as a ‘jumping-off point’ to starting a conversation
  - Unstructured – no fixed questions as such, but still a specific purpose on the part of the interviewer
- Benefits
  - Potentially flexible, allowing researchers to probe for information
  - Allow for spontaneity, but within a controlled environment
  - Allows researchers to take in verbal and non-verbal communication simultaneously
- Limitations
  - Time consuming
  - Open to bias
  - Potentially inconvenient for respondents
  - Difficult to keep fully anonymous
  - Impossible to control all aspects

Observation

- Looking (often systematically) and noting (systematically) people, events, behaviours, settings, artefacts, routines, etc.
  - Event sampling – every time [X] happens within a period of time
  - Instantaneous sampling – observations at standard intervals (e.g. every minute, every hour) that note exactly what is happening at that time
  - Interval recording – standard intervals (e.g. every hour, every 20 minutes) that notes everything that has happened in the preceding interval
  - Rating scales – the researcher includes some form of judgement about the observations
  - Critical incidents – crucial events that may not conform to an observation's structure but which are too important not to note
- Benefits
  - Allows researchers to gather 'live' data from natural situations
  - Can gather valuable data from 'everyday' situations that might otherwise go unnoticed
  - Can either validate or contradict reported data from interviews, questionnaires, etc.
- Limitations
  - Open to interpretation and subjectivity of the researcher
  - Can be ethically tricky – there is a temptation to be an 'unknown observer'

Focus Group

- A type of group interview that relies heavily not just on the interaction between interviewer and interviewee(s) but also between interviewees themselves.
- Benefits
  - Allows for the presence of ‘devil’s advocates’, differences of opinion, discussion, and influence
  - Can help develop ‘themes’ on a topic based on group discussion
  - Useful for generating **hypotheses**
  - Helpful for collecting information from disempowered groups
- Limitations
  - Can be difficult to control
  - Ensuring comfort and engagement of all participants at all times is crucial
  - Group size can have a massive impact on discussions

Diaries/Logs

- Systematic recording/logging/tracking of events as they occur (or immediately following)
  - Develop a chronology that can inform findings
  - Allow for the comparison of a wide range of perspectives on a single event, situation, etc.
- Benefits
  - Allow for logging in real time and reflecting after the fact
  - Help to keep our accounting of events lodged in the present rather than the past
- Limitations
  - Vulnerable to subject analysis by the individual providing the account/diary/log

Role-playing

- Using dramatic, creative situations to access and explore behaviour and responses to situations through briefing, acting, and debriefing.
- Benefits
  - Allows for the exploration of behaviour in real life settings, at lived pace
  - Explores different viewpoints
  - Shifts as research unfolds
  - Allows exploration of process
  - Actively engages participants as ‘researchers’
- Limitations
  - There are significant ethical considerations involving deception, understanding of risk, adoption of behaviours, etc. (Zimbardo prison experiment)
  - Limitations of the participants’ imaginations
  - Limitations of the participants’ engagement
  - The need to fully engage with situations while maintaining the capacity to analyse can be taxing

Action Research

- Primarily a **research design**, but can also be used as a method within a larger research design. Action research follows a cycle of planning, acting, observing, and reflecting.
  - Learning and teaching
  - Evaluating
  - Modifying attitudes and values
  - Continuing professional development
  - administration
- Benefits
  - Participatory
  - Collaborative
  - Ongoing
  - Bridges the gap between research and practice
  - Operates within 'real world' environments
- Limitations
  - Vulnerable to 'political' or interpersonal issues
  - Difficult to control as a single entity – the fact that it's embedded in practice makes it tempting to widen scope, go 'off book', give up on planning, etc.
  - There is a tendency to lose track of research questions in practice
  - There are many ethical considerations to be continually aware of

Case Study

- Primarily a **research design**, but can also be used as a method within a larger research design. A case study involves looking in great depth and detail at a specific (small) instance, situation, event, location, etc. (often, but not always, with the intention of making wider principles)
  - Provides rich, vivid descriptions and information
  - Gives a chronological description of events
  - Blends description and analysis
  - Have geographical, temporal, and/or characteristic boundaries that help set scope
- Benefits
  - Easily understood by audiences
  - 'Strong in reality' – case studies tend to paint a very realistic picture, but of a very limited situation
  - Capture features that might otherwise be lost in traditional data gathering
  - Allow the researcher to adapt and embrace unanticipated events, uncontrolled variables, etc.
  - The researcher is often quite deeply and directly involved
- Limitations
  - The researcher is often quite deeply and directly involved
  - Difficult to organise and control
  - There is a tendency towards 'journalism' – focusing on the interesting and omitting the boring – which distorts the study
  - There is a strong temptation to make broad statements or claim profound learning from quite specific and limited learning
  - Prone to observer bias
  - Difficult to replicate

Measuring

- Identifying and/or extracting numerical data. Measuring can apply to the straightforward (e.g. height, weight) as well as the complicated (e.g. satisfaction, happiness, well-being)
  - For more complicated measurements, it usually relies on the use of a **Likert scale** or similar tool
- Benefits
  - Allows for the extraction of **quantitative** data from **qualitative** or **quantitative** research
  - Helps set the stage for comparisons
  - Useful for **triangulation** of data
- Limitations
  - Many measurements necessarily rely on self-reporting and/or researcher observation, both of which are vulnerable to bias

Content Analysis

- Extracting numerical data from written content (e.g. how often do newspaper articles use the word ‘millennial’? or how many times do customer service survey responses include words such as ‘angry’ or ‘enraged’?)
  - A useful way of garnering **primary data** from **secondary research** or of garnering **quantitative** data from **qualitative** research
- Benefits
  - Can help to identify areas that merit research, or set **hypotheses** for further investigation
  - Very useful in terms of **triangulating** data
- Limitations
  - Does not ‘say much’ independently – needs to be reported alongside other data and/or information
  - Vulnerable to research design – the right trends must be searched for in the right places

Experiment

- An isolated, structured, and controlled situation designed to test certain variables and their interaction within situations.
  - Search for causality or explanation
  - Rely on the existence of at least one ‘control’ group and at least one ‘experimental’ group in order to test theories
  - Require a significant degree of control, planning, and organisation
- Benefits
  - Allow the researcher to control a situation and test **variables** at will
  - Are easily replicable in different situations and with different participants
  - Can reveal cause/effect relationships and test **hypotheses** effectively
- Limitations
  - Difficult, time consuming, and often expensive to organise
  - Results are heavily dependent on the structure and design of the research
  - A wide range of factors about the situation and the participants must be considered in order to design a successful experiment
  - Can mislead the researcher into thinking they have discovered a cause/effect relationship when they have actually uncovered another cause, a situational effect, etc.
  - Have significant ethical concerns and considerations

Ex Post Facto

- Experimentation that occurs ‘after the fact’ – after an event has taken place – and searches for cause and effect relationships for events based upon study of the preceding events.
  - Allows researchers to ‘experiment’ on the past by carefully selecting situations that meet factor criteria
  - Can help researchers identify causes that can be applied to future action
- Benefits
  - Helps researchers to understand past events that cannot be recreated, whether for practical or ethical reasons
  - Can be incredibly useful in forming **hypotheses** for further testing, especially if the testing will be expensive and merits further justification
- Limitations
  - Incredibly difficult to control and plan
  - There is limited ability to apply lessons learned, and a strong tendency to be misled by findings
  - It is difficult to differentiate between cause, effect, and/or correlation when dealing with historical data (did *A* cause *B, B* cause *A,* or did some unidentified factor cause *A* and *B*?)

Tests

- A questionnaire specifically designed to gauge ability, knowledge, diagnosis, competence, etc.
  - A form of measuring and finding numerical representations (similar to measuring)
- Benefits
  - Useful for research design and formulating **hypotheses** by determining what is already known
  - Helpful in **triangulation** of data
- Limitations
  - It is important that tests are written to test what is actually being sought
  - Different individuals react to tests differently

Activity!

- What research methods should I use?

Review your methods

- Cohen, L., Manion, L. and Morrison, K. (2011) *Research Methods in Education.* Abingdon: Routledge.
  - Part 3 (p. 217-374) and Part 4 (p. 375-534)
- Gill, J and Phil Johnson, (2012) *Research Methods for Managers*. (4th ed) London: Sage.
  - Part 2 (p. 69-184)
- Blaxter, L., Hughes, C. and Tight, M. (2010) *How to Research.* (4th ed) Maidenhead: Open University Press.
  - Chapter 3 (p. 54-98)
- Davies, M.B., (2007) *Doing a Successful Research Project - Using Qualitative and Quantitative Methods*. London: Palgrave.
  - Part 2 (p. 51-134) and Part 3 (p. 135-206)
- Gray, D. E. (2004). *Doing Research in the Real World*. London: Sage.
  - Part B (p. 65-184) and Part C (p. 185-282)
- Saunders, M., Lewis, P. and Thornhill, A. (2009) *Research Methods for Business Students.* (5th ed) London: Pearson Education Ltd.
  - Chapters 9-11 (p. 288-413)
- Walliman, N. (2001) *Your Research Project: A step-by-step guide for the first-time researcher.* London: Sage
  - Chapter 7 (p. 268-333)