

RESEARCH APPROACHES FOR YEAR 13 GEOGRAPHY

Purpose: to gain an understanding of alternative research approaches to the quantitative (scientific) approach

June Logie and Mary Flaws, NZ Geographical Society

Approaches

Quantitative – empirical research with numbers. Enables standardized objective comparisons and measurements to enable overall descriptions of situations or phenomena in a systematic and comparable way

Qualitative – empirical research without numbers. More flexible – therefore used in a wider range of situations and for a wider range of purposes. More easily modified as the study progresses – accommodates the local groundedness of the things studied

2

Approaches (cont'd)

- Prespecified questions – theory verification research
- Tightly structured design
- Prestructured data
- Deductive
- Identification of scientific laws
- Focus on behaviour – artificial settings
- Aim to gain a holistic overview; analysis done mostly with words
- Unfolding research questions – theory generation research
- General guiding questions
- Loosely structured design
- Data not prestructured
- Inductive
- Identification of cultural patterns
- Focus on meanings – natural settings

3

Perspectives

- **Positivism** – discovery of general laws and separates facts from values
- **Rejection of Positivism:**
 - **Feminism** (stresses role of power in research – relationship between researcher and researched – remove biases particularly sexist biases)
 - **Postmodernism:** disbelief and debunking of all 'grand narratives' including those of Western Civilization. Reality is a text subject to multiple interpretations, multiple readings, and multiple uses. And knowledge is not at all disinterested, but is inextricably bound up with power. Is informed by such intellectual movements as structuralism and poststructuralism, psychoanalysis, semiotics and deconstructionism. Changes the way research is viewed

4

PERSPECTIVES - definitions

- **Feminism**
 - Rejection of positivism
 - Influence of gender relations
 - Science as value-laden
 - Liberation methodology, the politics of empowerment, feminist action research
 - Non-hierarchical research relationships
 - Feminist action research
 - Feminist empiricism, feminist standpoint epistemology, feminist postmodernism
- **Postmodernism**
 - Debunking grand narratives
 - Deconstruction
 - Discourse and text Creating world by language
- **Common themes in the diversity of qualitative research**
 - Following what strategy?
 - Within what framework?
 - From the inside
 - Researcher as instrument
 - Data as words

5

More Perspectives

- **Case Studies** (bounded systems, but confined to those aspects relevant to the research problem)
- **Characteristics of case studies:**
 - As a bounded system
 - As a case of something holistic, but requiring points of focus, multiple data sources and multiple data collection methods
- **Intrinsic:** study undertaken to better understand a particular case
- **Instrumental:** a particular case study is examined to give insight into an issue or to refine a theory
- **Collective (multiple):** where instrumental case study is extended to cover several cases to learn more about phenomenon, population or general condition to form generalisations

6

More Perspectives

- Ethnography:
 - Culture as a shared set of meanings
 - Characteristics of ethnographies:
 - Uncovering cultural meaning
 - Insider's perspective
 - Natural settings
 - Evolving and unfolding
 - Multiple sources of data and data collection
 - Prolonged and repetitive data collection
- Grounded theory:
 - Approach to research – specific cases grounded in their context (data gathering) – useful where there is no satisfactory theory on a topic or insufficient understanding to start theorizing
 - Theory generation versus theory verification
 - Theoretical sampling
 - Findings can be supported with literature later

7

More Perspectives

- Action research
 - Research in action, research to solve problems
 - Cyclical and iterative
 - Planning, acting, observing, reflecting, re-planning, acting, observing etc
 - Researcher and researched as collaborative participants

8

Mixed Methods

- Triangulation
 - The findings of one type of study/approach can be checked against the findings deriving from the other type
 - Enhances the validity of findings
 - One approach facilitates the other
 - A general picture is achieved
 - Perspectives combined
 - Facilitates the interpretation of relationships between variables
 - Qualitative approach can be a stage in the research process
- Mixed methods have the following strengths:
 - **Data:** the **quantitative** approach relies on measurement of variables and the relationship between them
 - Prestructured
 - Larger samples
 - Generalisations through sampling important
 - More objective
 - **Cases:** more usual with the **qualitative** approach
 - Sensitive to context and process
 - Small samples
 - Less formalized
 - More flexible
 - Well suited for studying naturally occurring real life situations
 - **Content Analysis:** advantage: no ethical issues
- Clear questions cannot always be answered using only one approach
- Scope, depth and power of research can often be achieved by combining the two approaches

9

QUALITATIVE RESEARCH APPLICATIONS IN YEAR 13 GEOGRAPHY – PEAK OIL

Purpose: Research possibilities after completion of Year 13 student workbook explaining Peak Oil in the world

Qualitative research is particularly useful when students explore how society works and how they themselves can participate and take/recommend action as critical, informed and responsible citizens

10

Qualitative Process

In qualitative research decisions are to be made about

- The data collected
- Following what strategy?
- With what framework?
- From whom?
- How?

11

Case study using documents

- Students will analyse data sourced from the ARC's Transport Policy to find:
 - Evidence of the consideration of peak oil
 - Draw conclusions
 - Make comparisons with other strategies e.g. with the latest Government Transport Strategy
- Examples:
 - Identify key words, phrases and ideas, e.g.
 - Metropolitan urban limits
 - Integrated transport
 - Electrification
 - Walkways
 - Cycleways
 - Business growth around transport hubs
 - Working close to home

12

Strengths and Weakness of the Case Study approach using documents

Strengths:

- Access to and availability of documents
- Ability to select the top five transport projects
- Flexibility – include other methods of data collection e.g. questioning guest speakers and interviews (GIS layers)
- Particularly suited to evaluate the sustainability of alternative social, economic and environmental practices
- No ethical issues in analysing public documents

Weaknesses:

- Literacy level difficulties
- Insufficient time for speakers
- Availability of speakers

Additional considerations:

- Analyse the purpose of the documents
- Analyse the political and social contexts

Another case study source:

Documentaries (see kit) e.g. The End of Suburbia: oil depletion and the collapse of the American Dream (www.endofsuburbia.com)

13

Action Research

Purpose: to develop a proposition for a school travel plan (to be replicated at other schools)

- How important are the ideas of Peak Oil and Climate Change for students and the Board of Trustees in developing a school travel plan?
- How can students change their travel behaviour in a world of depleting oil and climate change?

14

Process

- Participate in decision-making with the School Board, collecting and analysing the viewpoints on transport types and routes to and from school
- Use sampling techniques
- Design and carry out pilot interviews, gaining the skills for carrying out an interview
- Interviews may be structured responses; or unstructured in-depth interviews
- Group interviews could be used to flesh out the issue
- Note-taking and transcription skills may be needed
- Make a recommendation (could be reflected upon by the following year's students)

15

Strengths and Weaknesses

Strengths

- Involves social action in an authentic context
- Study students and Board in a natural setting
- Scalability can be done with a small (e.g. class-size) sample

Weaknesses

- May not be able to be collaborative, active participants
- Insufficient time to carry out pilot interviews and learn the required skills

16

Ethnography

Purpose: to describe how people see their own actions, others' actions and the context

Examples:

- high consumers of goods
- Permaculture practitioners who live locally and sustainably (low consumers)

17

Process

- Researcher is a participant in the natural setting
- Some fieldwork is necessary at the start
- A hypothesis and specific research questions will develop as the study proceeds
- Data collection is in situ
- Field work essential – prolonged and repetitive interviews
- Process complete when nothing new is learnt

18

Strengths and Weaknesses

Strengths

- Gives access to values and perceptions that guide decision-making and actions in the natural setting
- Thick description with intense or prolonged contact with the field or life situation

Weaknesses

- The extended period of time involved
- The difficulty for school students to be participant observers
- The need for data in depth and breadth for thick description