



Doing Research in Language Education: CLILL Related Aspects

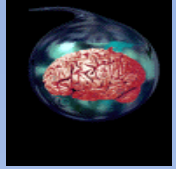
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March 17, 2010

Question we need to ask at the outset:



- Why (on earth?) do research on CLILL?
- Are there other valid options?; more informal development work; informal classroom research, pilot action research)
- What to focus on?
- What methodological options are there?
- How to carry out the research?

Advantages of doing research



- Knowledge (new? new to us?) is produced, which is accepted as reliable and valid.
- This increases our knowledge base – we make a contribution to the field.
- We can participate in the activity of the whole R & D community by making our own contribution – we become partners in the endeavour.
- We can get feedback, which helps us to revise/plan further work.
- We can learn a lot: arguably the best way of learning.

What is special about research?

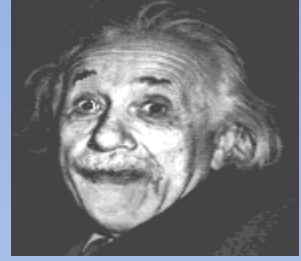


Research is a way of acquiring knowledge and forming beliefs.

Other common forms of fixing belief:

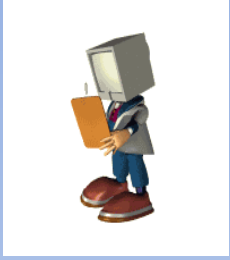
- Adopting what experts/authorities say.
- Trusting what the majority believe (common understanding).
- Trusting our own observations and experiences.
- How then does research differ and why should it be a better than the above, even the very best way of fixing belief?

What characterises research?



- Research can be seen as asking a question (or a set of questions) and then setting up a systematic process for obtaining valid answers to the question(s). Meltzoff (1997)
- Research is driven by questions.
- Thus, we need to know how to ask good questions.
- There can be several types of questions.

Existence questions:



- Is there a distinctive approach to teaching that deserves a specific term : CLILL?
- How can we go about answering this challenging questions? What kind of answer will be satisfactory?

Questions related to description and classification



If the answer to the existence question is "yes" (as we like to assume), this gives rise to several other possible questions:

- How common is CLILL?
- Is it a stable or variable phenomenon? Is CLILL a unitary phenomenon or are there different variants of it?
- Is it a unique phenomenon or does it belong to some class of related phenomena? What are its "relatives"?
- Can a foreign language be used (sufficiently) effectively to teach content in schools/higher education?
- (In what ways) is CLILL similar to/different from all other forms of instruction?

Answers to questions like this provide/result in:

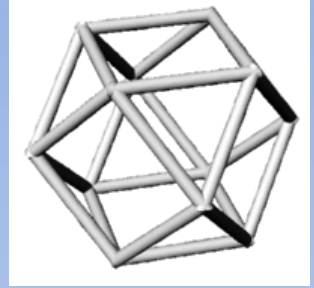
- -> A rationale for CLILL
- -> Descriptive/argumentative description and analysis

Questions about Composition



- What does CLILL consist of?
- What are the most important components of CLILL?
 - Content?
 - Language?
 - Equally important?
- If equally important we need to specify targets for both of them.

Questions about relationships




- Is there a relationship between X and Y ?
- See Eeva Rauto's and Lotta Saarikoski's presentation
- Correlations (non-parametric, parametric; multiple regression analysis)

Questions related to description and comparison

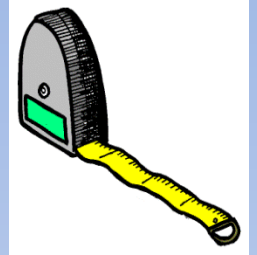


- **Does group A differ from group B?**
- How has CLILL been implemented in different contexts (educational systems, regions, countries, different languages)?
- Are women better at CLILL than men?
- How do content teachers' class activity differ in CLILL classes from classes where L1 is used?

Questions related to causal relationships

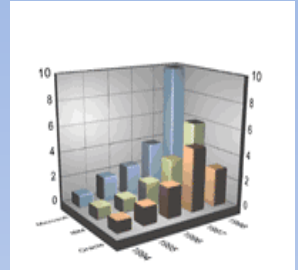
- **Does X cause/lead to/prevent Y?**
 - What follows from X?
 - What causes X?
- 
- Does CLILL promote self-confidence in communication?
 - Often an experimental or quasi-experimental design
 - Cf Rauto and Saarikoski

Questions related to causal comparisons



- Does X cause a bigger effect on Y than does Z?
- Is CLILL a more effective method in learning a language than "traditional" language teaching?

Questions about interaction in clausal comparisons



- **Does X cause a bigger change in Y in certain conditions as compared to other conditions?**
- **Is CLILL more effective with more proficient learners than with weaker learners? Or vice versa? Or no difference?**



Main research question: Are there changes in the interlanguage grammar of polytechnic student participating in a FL medium programme?

- 1. What kind of morphological, syntactic and orthographic error types occur at the beginning and the middle of FL-medium course?**
- 2. How are potential changes in error rates distributed in top, middle and low proficiency groups?**
 - 2.1. Are there differences between the three proficiency groups in terms of the rate of change?**
 - 2.2. Are there differences between the three proficiency groups in terms of potential changes in different areas of grammar?**
- 3. Is there a relationship between the error sources and the rate of change?**
 - 3.1. To what extent are potential changes related to the students' prior formal language study?**
 - 3.2. To what extent is L1 transfer related to the occurrence and change of errors?**
 - 3.3. What linguistic variables account for the fact that some error types decrease and others do not?**

Some research questions related language use in CLIL classrooms: the role of questions

- Do questions play an as important/more important role in the CLIL classroom (as compared to other classrooms)?
- How do questions condition the discourse patterns which are possible in CLIL classroom interaction?
- How do questions influence the quality and quantity of students' contribution to classroom talk?

How to select the method(s)



- The method needs to be selected after the research question(s) has/have been defined.
- Gilbert & Sullivan in "The Mikado" have an apt motto. The Emperor of Japan punishes all "crimes", however petty – including flirting – with a death penalty. The emperor has a goal: "My objective in life, I will achieve in time, to make the punishment fit the crime, the punishment fit the crime"
- Researchers are well advised to have a similar goal: **to make the methodology fit the research question(s)**. Question(s) lead(s) – method(s) follow(s) – not the other way round.
- As there are many kinds of questions, there are many kind of methods.

How to check overall design coherence?

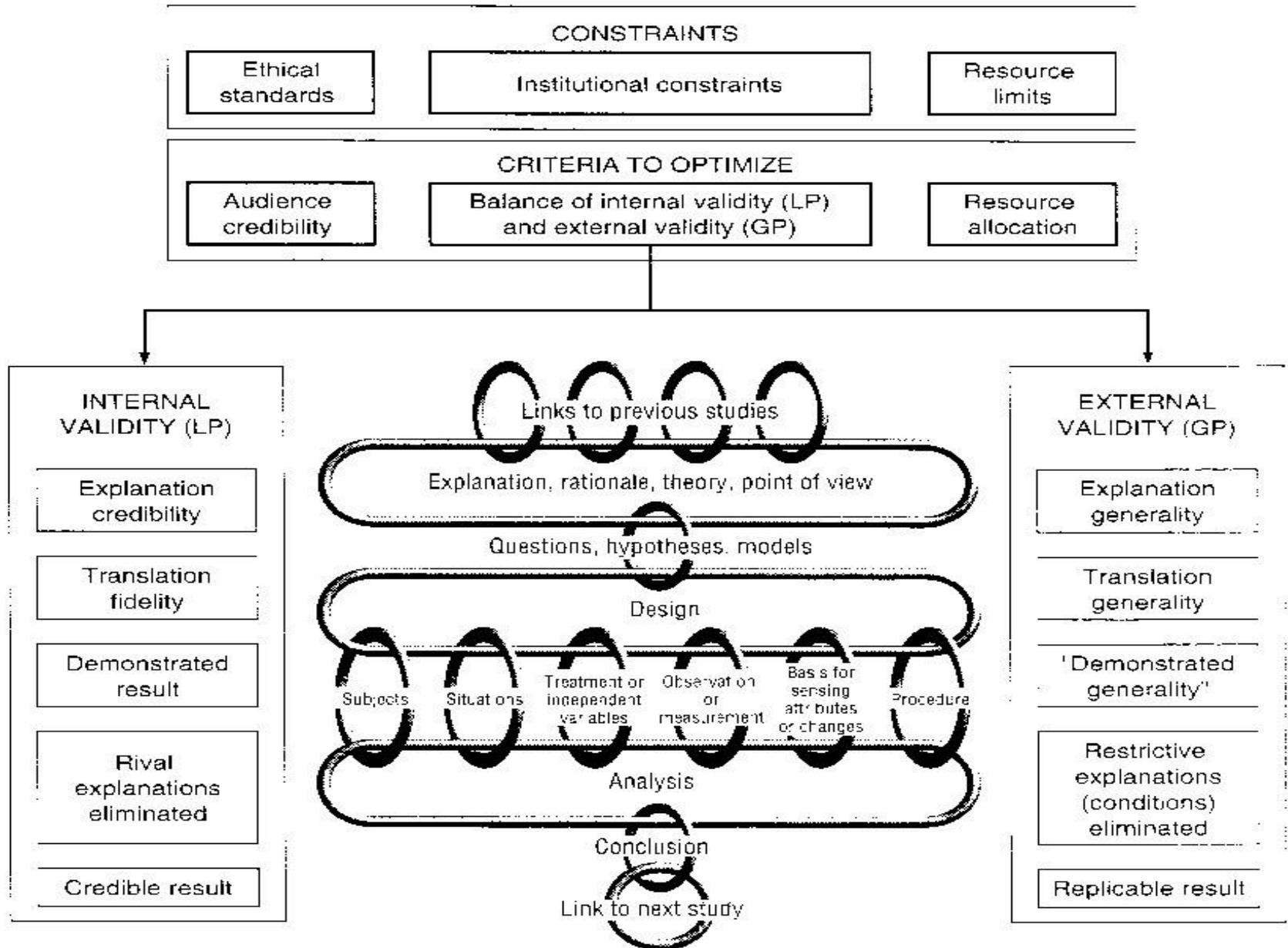


- My suggestion: make a table which shows the links between the elements of the design.

Research questions	Subjects/Participants	Data collection methods/instruments (items)	Methods of data analysis	Results
1. xxx	Group A: xxx Group B: xxx	Questionnaire: items 1-4	Frequencies, means, SD, t- test, χ^2 , r. rho	xxxx
2. xxx	xxx	Interview	Discourse analysis	xxxx
3. xxx	xxx	Essay	Content analysis	xxxx

- The table format makes it easier to indicate and check how research questions, data collection methods and data analysis methods are linked to each other. This may show that some points are not explicit enough and need to be spelled out.
- It would be useful to indicate in detail which points (items, questions...) in the data collection instruments address which research questions.
- In the discussion section, the "Results" column can be added to provide a succinct summary of the whole study.
- In addition to the table format I would recommend that the design is also displayed in a figure. This makes the logic of the research easy to see at a glance.

THE COMPLETE FRAMEWORK



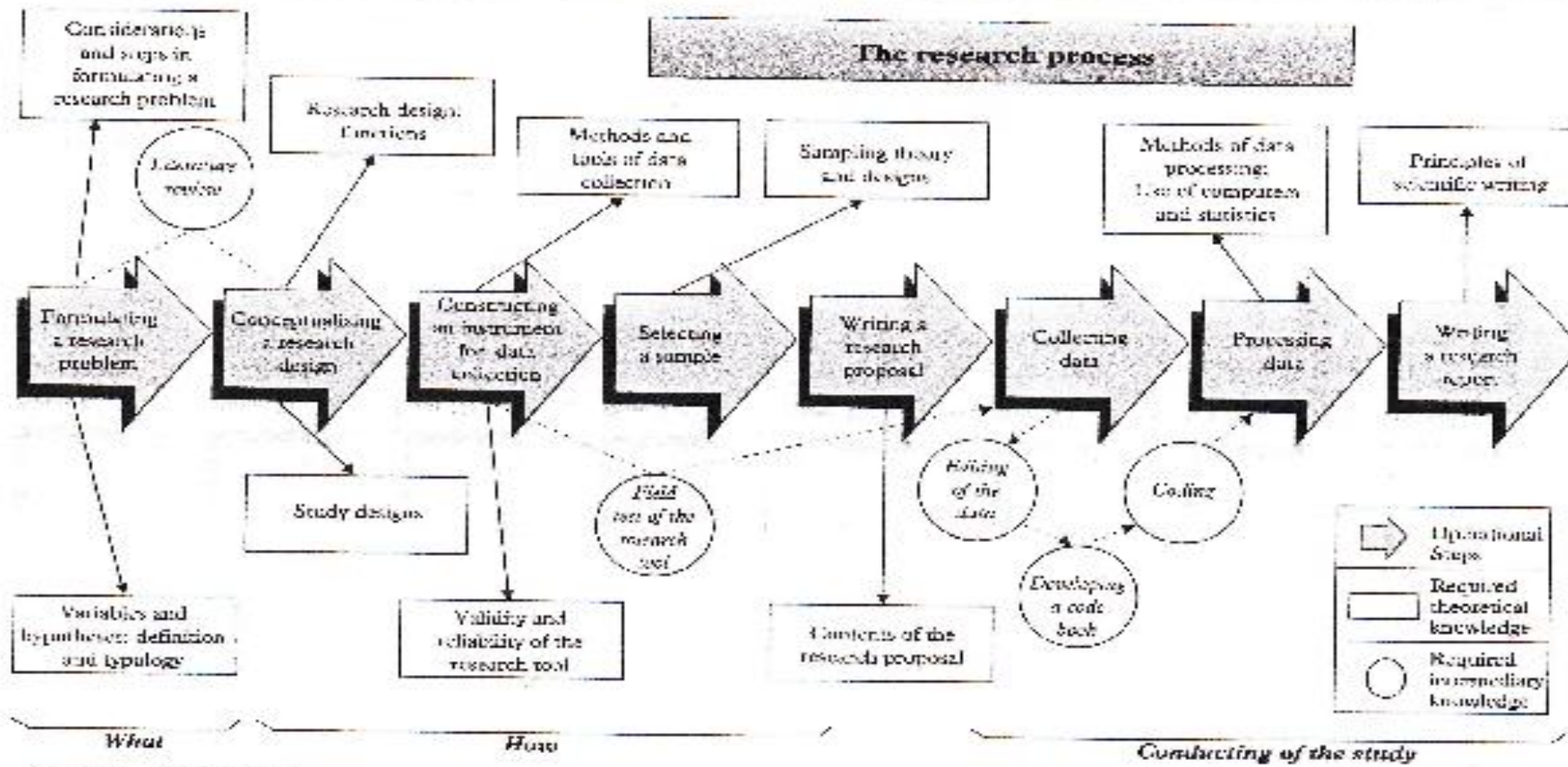


Figure 2.1 The research process

Source: Kumar, 1996, p. 17

Elements of Inquiry

Alternative Knowledge Claims

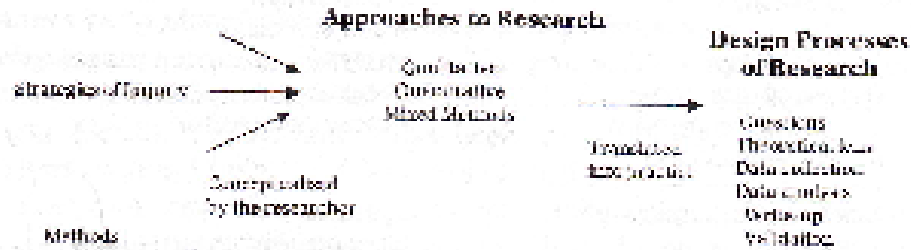


Figure 1.1 Knowledge Claims, Strategies of Inquiry, and Methods Leading to Approaches and the Design Process

Source: Creswell, 2003, p. 5

Table 1.4 Qualitative, Quantitative, and Mixed Method Approaches

Tend to or Typically	Qualitative Approaches	Quantitative Approaches	Mixed Methods Approaches
Use these philosophical assumptions Employ these strategies of inquiry	Constructivist/Advocacy/ Participatory knowledge claims Phenomenology, grounded theory, ethnography, case study, and narrative	Postpositivist knowledge claims Surveys and experiments	Pragmatic knowledge claims Sequential, concurrent, and transformative
Employ these methods	Open-ended questions emerging approaches, text or image data	Closed-ended questions, predetermined approaches, numeric data	Both open- and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
Use these practices of research, as the researcher	Positions himself or herself Collects participant meanings Focuses on a single concept or phenomenon Brings personal values into the study Studies the context or setting of participants Validates the accuracy of findings Makes interpretations of the data Creates an agenda for change or reform Collaborates with the participants	Tests or verifies theories or explanations Identifies variables to study Relates variables in questions or hypotheses Uses standards of validity and reliability Observes and measures information numerically Uses closed approaches Employs statistical procedures	Collects both quantitative and qualitative data Develops a rationale for mixing integrates the skills of different stages of inquiry Presents visual pictures of the procedures in the study Employs the practices of both qualitative and quantitative research

Source: Creswell, 2003, p. 19

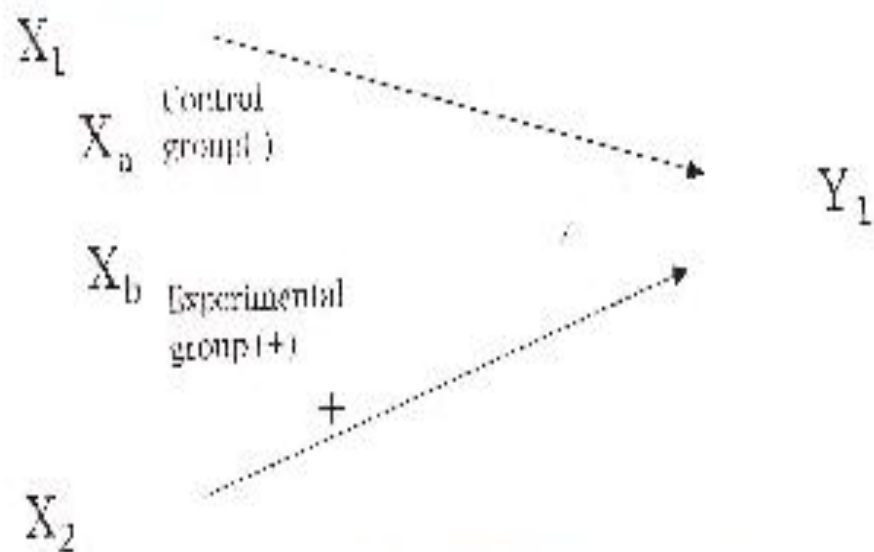


Figure 7.2 Two Groups Given Different Treatments on X, Are Compared in Terms of Y. Controlling for X_2 .

source: Cicchetti
2003, p. 123

Levin
2003
p.122

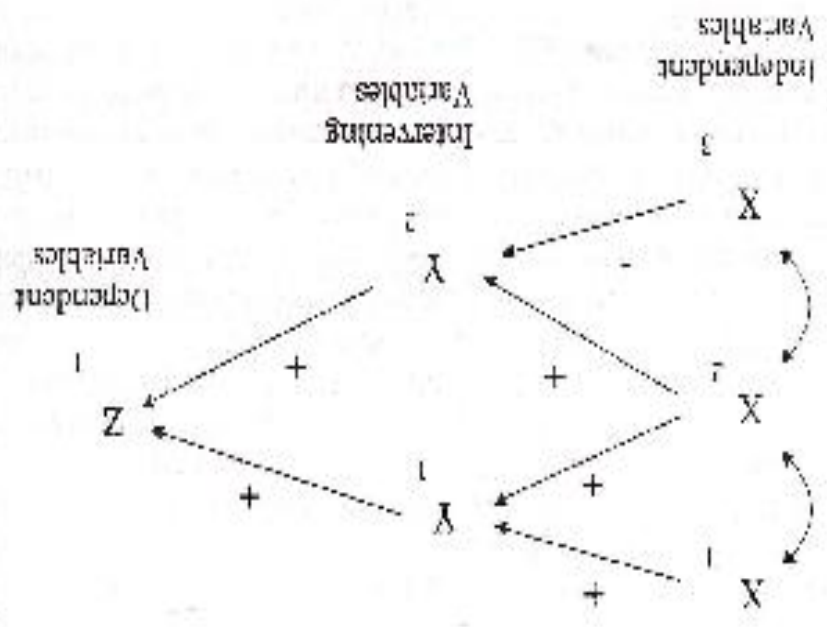


Figure 7.1 Three Independent Variables Influencing a Single Dependent Variable Mediated by Two Intervening Variables

Triangulation, mixed methods

Triangulation is the combination of different methods, methodological perspectives or theoretical viewpoints. (navigation/surveying metaphor).

Most common: some combination of quantitative and qualitative approaches.

Main advantages of research methods	
Qualitative	Quantitative
Holistic, detailed view Reactivity Naturalism	Representativeness Possibility of impartial disproof Control (rigour)
Main disadvantages of	Research Methods
Non-representativeness Lack of bias control (interviewer effect)	Limited scope of data Artificiality (instrument effect)

Methodological triang.; Investigator triang., Theoretical triang . (Source: A_Z....)

As a final check of your research questions, try to label them explicitly, eg.

Q 1: Descriptive research question

Q 2: Comparative research question

Q 3: Correlational research question

Q 4: Evaluative research question

etc

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