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KTH Information and
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Qualitative method II

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Qualitative research (repeat)

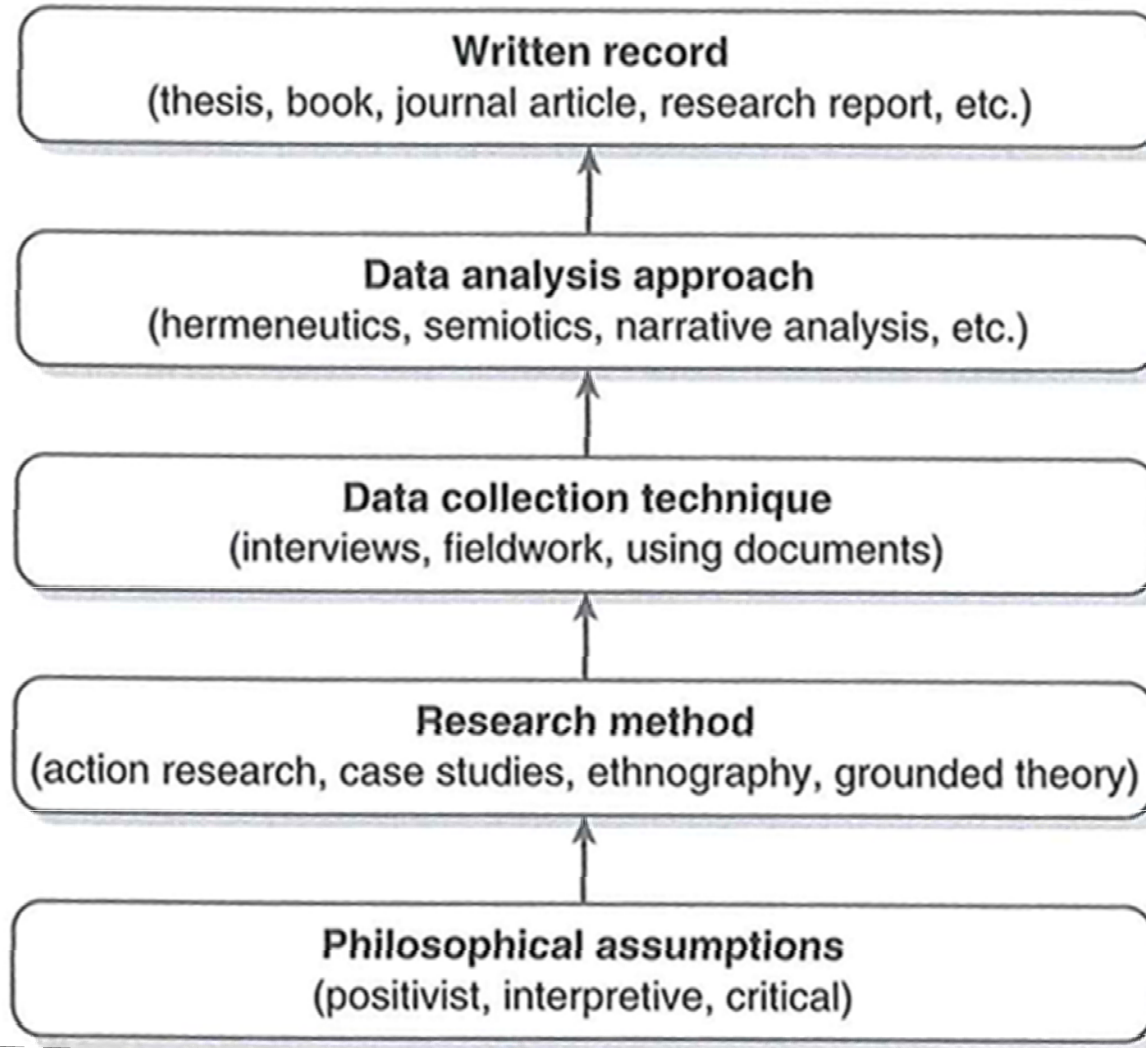
- Qualitative research is concerned with the *opinions, experiences, and feelings* of individuals
- Data are used to *develop concepts and theories* to help us to understand the social world.
- Understanding of a situation is gained through an *holistic perspective*.
- Describes *social phenomena* as they occur naturally.

Source: http://faculty.uccb.ns.ca/pmacintyre/course_pages/MBA603/MBA603_files/IntroQualitativeResearch.pdf

Qualitative research design

- *A plan of actions* for **executing** a research project
- Turning the *research question* into a **testing** project
- **Find answers** to questions which often begin with:
why? how? in what way?
- Choice of the “best design” depends on the research questions:
 - What questions to study?
 - What data is relevant?
 - What data to collect?
 - How to analyze the results?

Research design



Influence / Guides
research

Philosophical assumptions

Coming to a conclusion based on having background and knowledge of a particular subject or discipline

Assumptions about:

Knowledge and how it can be obtained (Epistemology)

Philosophical perspectives:

- Positivist
- Interpretive
- Critical

Source: <http://www.qual.auckland.ac.nz/#Introduction>

Philosophical assumptions:

Positivist

- Assumes reality is *objectively* given, i.e., independent of the observer (researcher) and his/her instruments
- Attempts to *test theory* to increase the predictive understanding of phenomena

Research in computer systems – if –

- formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from the sample to a stated population.

Philosophical assumptions: Interpretive

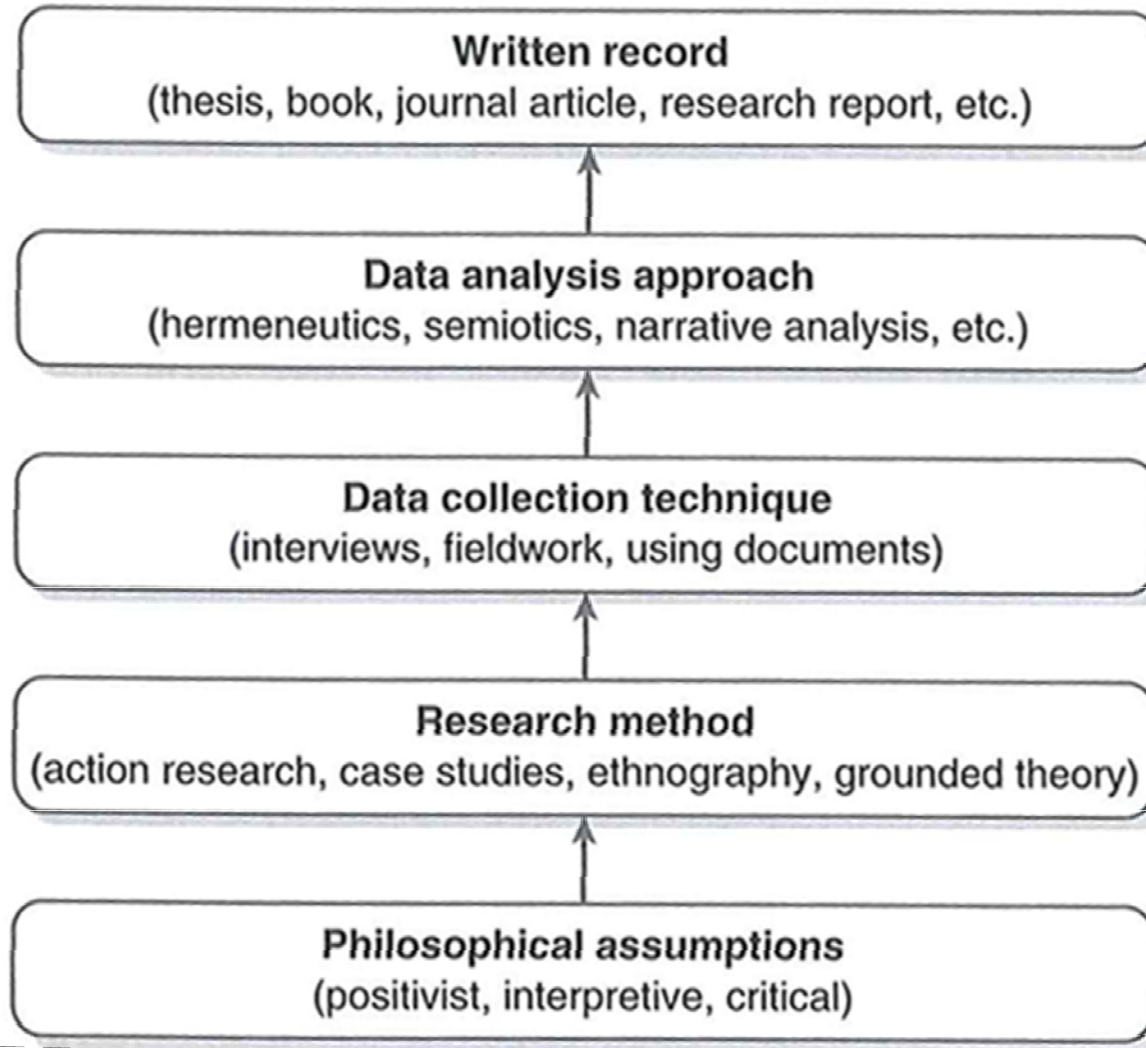
- Assumes access to reality is *only* through social constructions, i.e., language, consciousness, and shared meanings
- Attempt to understand *phenomena* through the *meanings* that people assign to them

Research in computer systems aims at, e.g., “producing an understanding of the **context** of the information system”

Philosophical assumptions: Critical

- Assume that social reality is *historically* constituted
- Reality is produced and reproduced by people
- Focuses on the *oppositions, conflicts, and contradictions* in society
- Seeks to *eliminate* the *causes* of alienation and domination.

Research design



Strategies /planning

Influence /Guides
research

Data research methods

“*Strategy of inquiry*” - moves from the underlying philosophical assumptions to research design and data collection

Specific research methods imply different skills, assumptions and research practices:

- **Action Research** (experimental research)
- **Grounded theory** (systematic methodology)
- **Ethnography** (*participating* case study)
- **Case study** (empirical study)
- **Survey** (non-experimental, descriptive research)

Source: <http://www.qual.auckland.ac.nz/#Introduction>

Action research

Performed by action - a systematic cyclical method of planning, taking action, observing, evaluating, and critical reflection

“contribute to the practical concerns of people in an immediate problematic situation” (Rapoport, p. 499).

“improve strategies, practices, and knowledge of the environments”

⇒ Improve the way people address issues and solve problems

⇒ Used for investigating computer systems

Grounded theory

From the collected data - seeks to develop theory that is “grounded” in data

– systematically gathered and analyzed

“An inductive, theory discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic”

⇒ Extremely useful in developing context-based, process-oriented descriptions and explanations of the phenomenon

Ethnography

- From anthropology - “portrait of a people” or “methodology of the people”
 - Descriptive studies of cultures and peoples
the people under investigation have something in common
 - Used in the study of:
 - information systems in organizations
 - development of information systems
 - aspects of information technology management
 - Seek to *place the phenomena* studied in their *social and cultural context*
- ⇒ Method whereby multiple perspectives can be incorporated in systems design

Case study

In depth analysis of a single or small number of units:

- Person(s), Organisation(s) or Institution(s)

Describe a unit (units) of analysis

“An empirical inquiry that investigates a phenomenon within its real-life context – where boundaries between phenomenon and context are not clearly evident”

⇒ The most common method used in investigation of computer systems

Survey

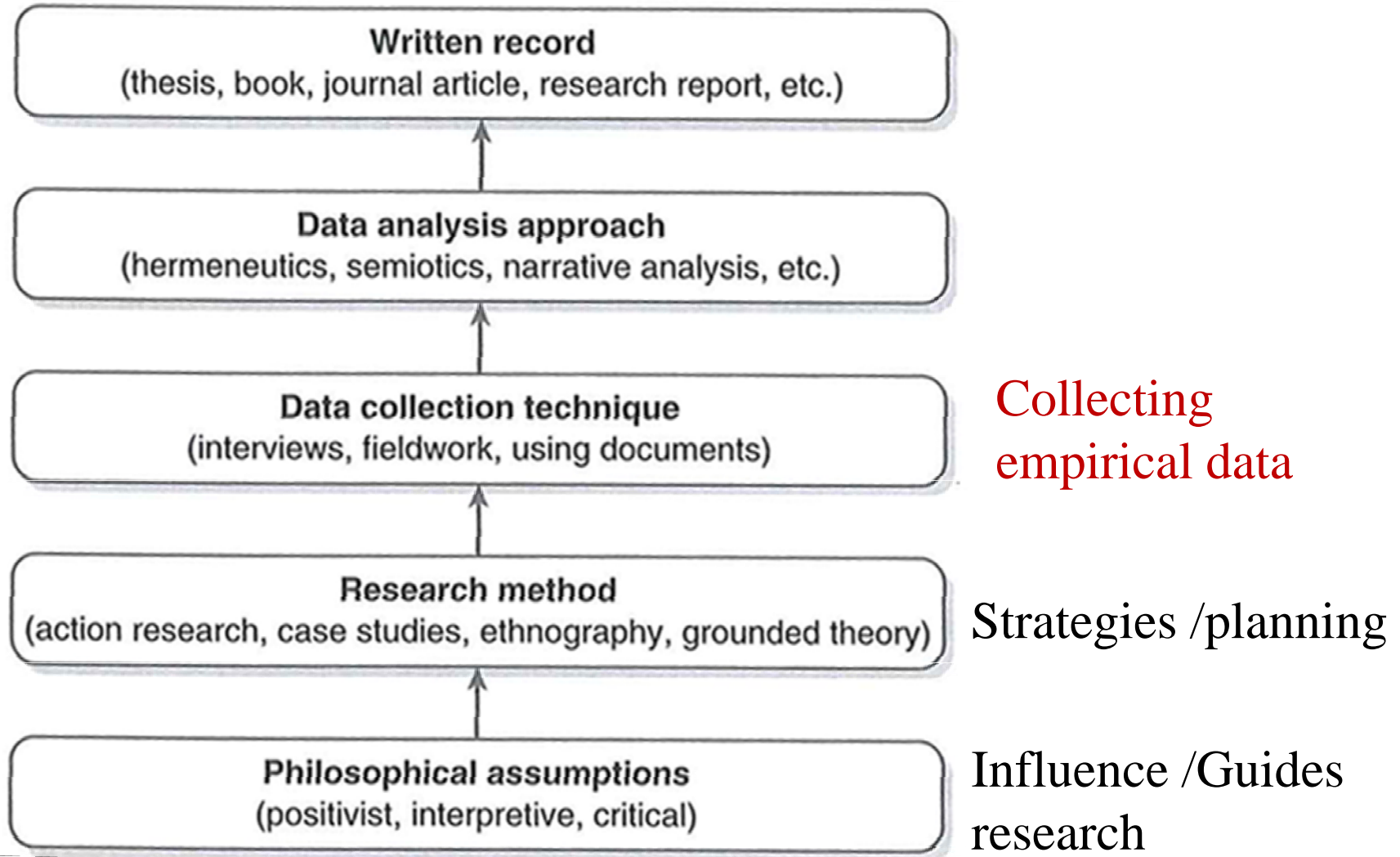
- Collect data on phenomena that cannot be directly observed /Describe phenomena
- Assess attitudes and characteristics of a wide range of subjects

Types of surveys:

- **Cross-sectional** surveys are used to gather information on a population at a single point in time
- **Longitudinal** surveys gather data over a period of time.

⇒ Used for, e.g., quality of user-system interfaces

Research design



Data collection methods

- Interviews
 - Individual / Focus groups
- Field work
 - Ethnography and Participation Observation
- Language based methods
 - Discourse
 - Conversation
- Text and documents
 - Interpret the meaning

Interviews

- Getting “point of view”
How the participants perceive their world and their lives

➔ Requires Flexibility
Must *not* interfere or prevent alternative way of looking at things
- Capture what the participants are thinking
(-> why visit night clubs?)

Interviews

Structured - prepared questions

Unstructured - memo with topics

Semi-structured - follow-up questions

Interviews

Sampling:

- Convenience sampling
- Snowball sampling
- Probability with stratification
 - Probable representatives for the investigation
 - Use stratification criteria (e.g., at a particular hierarchic level in an organisation)
- Theoretical sampling
(using independent pieces of information until theory is determined - triangulation)

Interviews

- **Questions:**
Use logical order, Understandable language, Not leading questions, Consider background information
- **Be acquainted with environment**
Record for detailed analysis, Capture answers according to the person interviewed, Calm and undisturbed environment
- **Be prepared!**

Individual interviews

Reasons for individual interviews:

1. Gather diverse points of view
2. Get the real opinion of the interviewed – which may not happen in group
3. Focus on one person at the time – one person's opinion(s) / point of view
4. Can use structured interview

Individual interviews

Study:

- To reveal mental representations
- Confirm or invalidate hypotheses
- Enrich and/or validate the findings from other studies

Rather easy to make notes

Focus group

Reasons for focus groups:

1. Work with one theme - Deepen into one subject area
2. Get many viewpoints on same theme - get more overall picture
3. Interested in - **How** the participants discuss a certain question (i.e., team work)

Focus group

Focus group = focused interviews with experts, using unstructured interviews

- Interviewing a group of knowledgeable people - discussing a particular subject (e.g. why heart disease)
- Good for questioning opinions
- The group collectively create meanings in an social occurrence

Focus group

Study:

- how a meaning is formed, collectively
- *what* is said and *how* it is said

- Difficult to make notes
- Who said what?
- May have to ask for a break to make notes
- Know how many are of same opinion

Focus group

Groups:

Several groups - until theoretic fulfillment

About 4-5 persons per group

Difficulties:

- Let the discussion be free
- Interfere to emphasize important themes and areas

Focus group

- Sampling:

Everyone that think the theme is relevant

- Limitations:

- Background data (e.g., gender, age, education, work)

- Known or unknown participants - some relationships (e.g., colleagues, friends, class mates)

Ethnography and Participation Observation

- Both are observation methods:
 - Observe behaviour
 - Listen to dialogues
- Differences:
 - Ethnography focuses on the culture and not only the situation
 - Ethnography includes the written product (thesis)
 - Uses knowledgeable informants who know the activities of the community

Ethnography and Participation Observation

- Sampling:
- Convenience sampling - “happens to be available”
- Snowball sampling (or chain sampling)
- Theoretical sampling
Collect data through observations, interviews and written sources until a theory can be determined.

Observer's role

- Participation

- *Complete participation*: participate but the observers identity is covered
- *Participant as observer*: participate but the observers identity is known

- Observation

- *Observer as participant*: Observe but ask questions
- *Complete observer*: Only observe and no interference

Recording and Notes

- *Make notes* about impressions, seen and heard
- *Record* the observations with a recorder
- Use video camera
- Write more complete notes, daily
- Make clear and reflecting notes
- Write detailed and complete notes

Additional methods

- Language based
 - find conversation structures in an interaction (patterns)
 - find how different versions of the world, society, events are produced in discourses
- Text based
 - find information from letters, documents, film manuscripts
 - interpret peoples lives, living, etc. (e.g., reasons for suicide)

Questions?