



Master of Information Technology Program
Faculty of Computer Science - University of Indonesia

POLICY RESEARCH, ACTION RESEARCH, AND INTERPRETIVE RESEARCH IN INFORMATION SYSTEMS AREAS

RESEARCH METHODOLOGY CLASS

Lecturer : **RIRI SATRIA**

Date : October 06, 2009

WHAT IS RESEARCH ?

Orderly investigate process for the purpose of creating new knowledge.



To explain something

To design something



TYPES OF RESEARCH

- Exploratory research
 - To develop hypothesis and propositions for further inquiry
 - "what are the ways of making IS effective?"
- Descriptive research
 - To describe the incidence or prevalence of a phenomenon
 - Es. CIO / IT manager attitudes
- Explanatory research
 - To trace operational links over time
 - Impacts of IS/IT to business operations.
- Design research
 - To design a system / actions in a organization.
 - Es : strategic IS/IT plan, change management plan.



RESEARCH PARADIGM

- **Positivism**

- Research conducted based on sensory experience and logical rationalism.
- Reality is objectively given and can be described by measurable properties, which are independent of the observer and the instruments.
- Formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inference from sample to stated populations.

- **Constructivism / Interpretivism**

- Believes that reality only exists in the context of a mental framework (construct) for thinking about it, such as language, consciousness, and shared meanings. This research focus on context of something.



POSITIVIST PARADIGM

| | |
|--|---|
| ONTOLOGY (WHAT) | <u>Reality exists out there and is governed by unchangeable natural laws.</u> The job of research is to discover the 'true' nature of reality and how it 'truly' works. The ultimate aim is to predict and control natural phenomena. |
| EPISTEMOLOGY (PARADIGM OF KNOWLEDGE) | Since there is a real world out there operating according to natural laws, the researcher must objectively and without influencing study the world and objects within the world. |
| METHODOLOGY (HOW) | The researcher states an hypothesis or question as a proposition and then tests the proposition to see if it is true. Anything that might influence the test must be controlled to prevent bias. |



CONSTRUCTIVISM / INTERPRETIVISM PARADIGM

| | |
|--|--|
| ONTOLOGY (WHAT) | Realities are multiple and 'they exist in peoples minds'. Constructs (understandings) are not more or less 'true' but 'simply more or less informed and/or sophisticated' . |
| EPISTEMOLOGY (PARADIGM OF KNOWLEDGE) | Knowledge is created when the researcher and the researched undertake the inquiry. Findings are literally the creation of the process of interaction between the two. What is true is 'what makes sense to those being studied and if it allows others to understand or enter the reality of those being studied. |
| METHODOLOGY (HOW) | Aim is to build a consensus understanding that is more sophisticated than previous understandings. 'Interpretive researchers study meaningful social action' in natural settings. |





INTERPRETIVE RESEARCH

(Orlikowski and Baroudi 1991)

- Interpretive studies assume that **people create and associate their own subjective and inter-subjective meanings as they interact with the world around them.**
- Interpretive researchers thus attempt to understand phenomena through accessing the meanings participants assign to them





INTERPRETIVE RESEARCH

(Walsham 1993)

- Interpretive methods of research start from the position that **our knowledge of reality, including the domain of human action, is a social construction by human actors and that this applies equally to researchers.**
- Thus there is no objective reality which can be discovered by researchers and replicated by others, **in contrast to the assumptions of positivist science.**





Interpretive View of Data

(Geertz 1973)

- What we call our data are really our own constructions of other people's constructions of what they and their compatriots are up to.



POLICY RESEARCH

*Research that aimed **to create alternatives for decision making.***

*Output : **Set of alternatives for improvements (organization or public)***

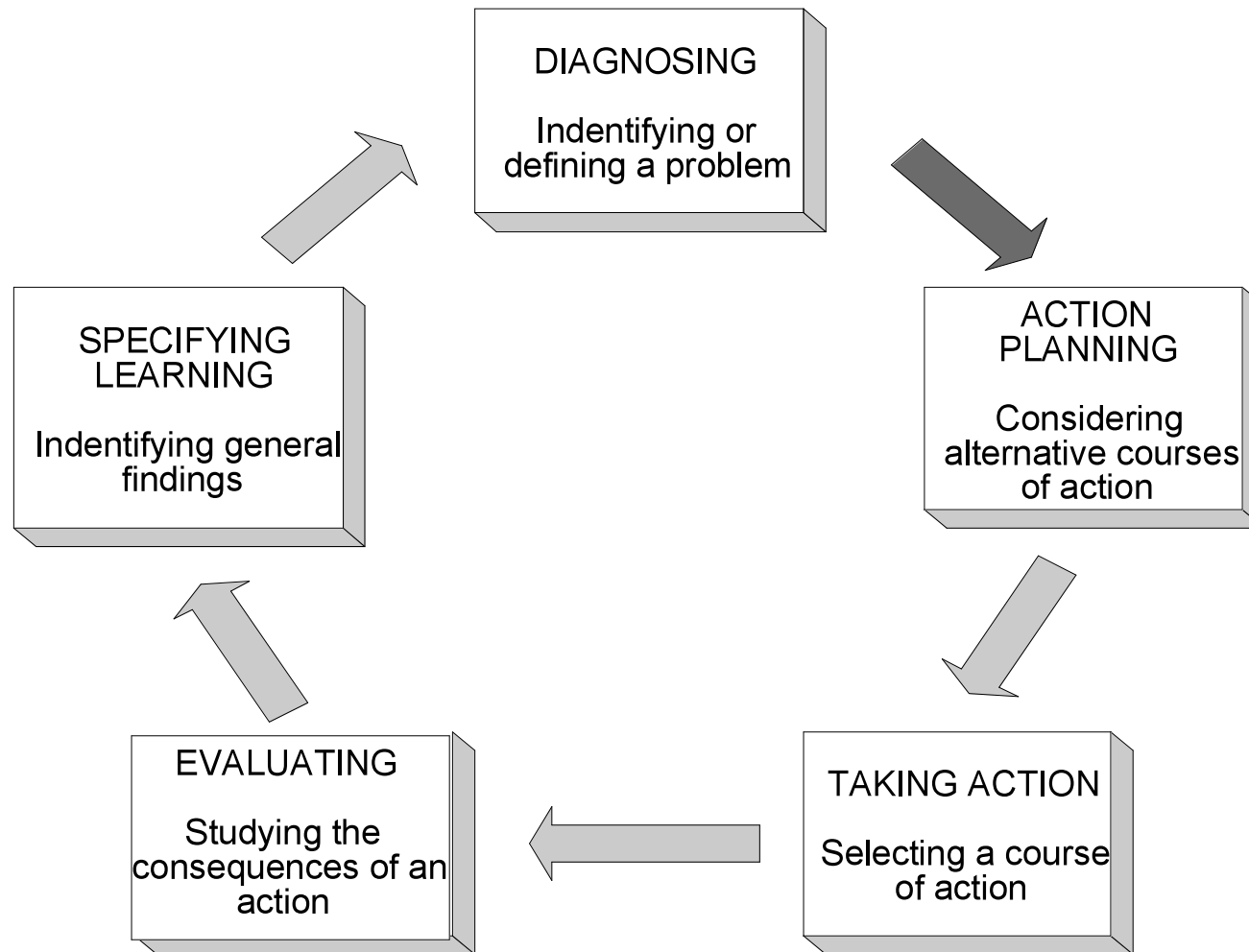


ACTION RESEARCH

- Action research is a reflective process of progressive problem solving led by individuals (researchers) working with others in teams or as part of a "community of practice" to improve the way they address issues and solve problems.
- Action research is part of an important shift in paradigm from the traditional, positivist, science paradigm which arose to bring certainty and verifiability to research questions, to postpositivism / interpretivism which recognizes and tries to address complex human and social problems.



ACTION / POLICY RESEARCH



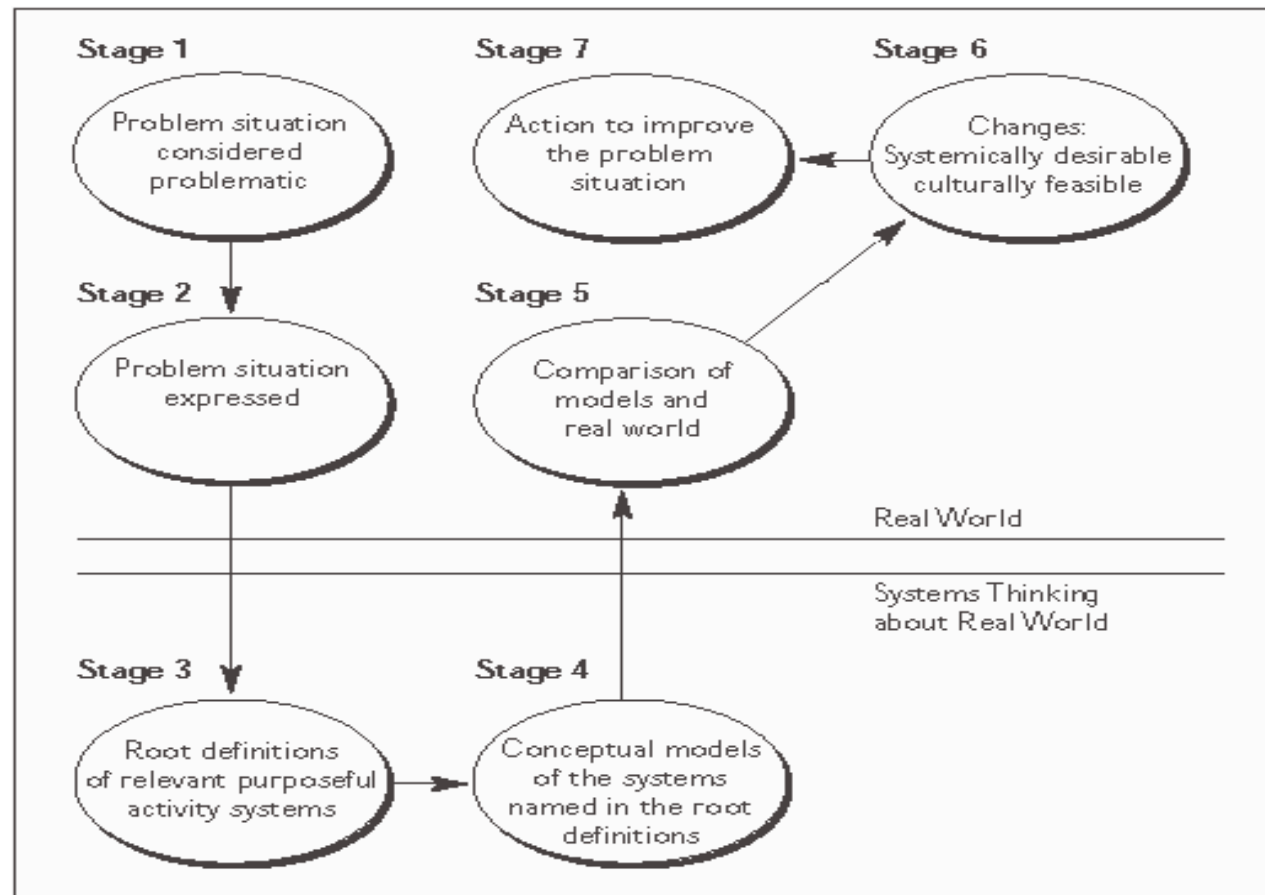


ACTION RESEARCH TOOLS : SOFT SYSTEM METHODOLOGY

- Soft Systems Methodology (SSM) is an approach to organisational process modelling and it can be used both for general problem solving and in the management of change. It was developed in England by academics at the University of Lancaster Systems Department through a ten year Action Research programme.
- **STAGES** :
 - Appreciating the unstructured problematical situation
 - Understanding the worldviews of the key stakeholders
 - Creating root definitions of relevant systems
 - Making and testing conceptual models based upon worldviews
 - Comparing conceptual models with reality
 - Identifying feasible and desirable changes
 - Acting to improve the problem situation



ACTION / POLICY RESEARCH TOOLS : SOFT SYSTEM METHODOLOGY

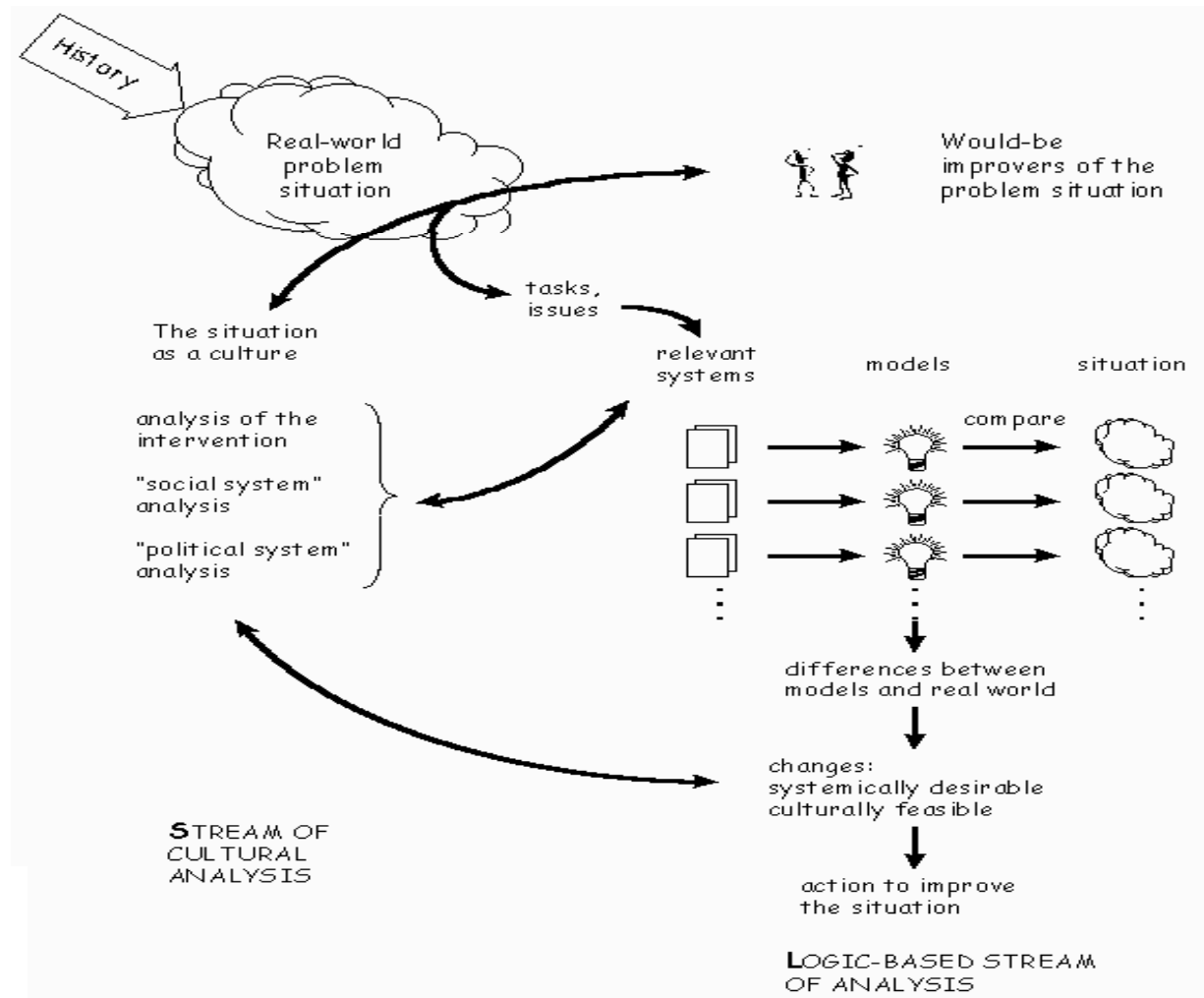


(Checkland and Scholes 1999: 27)

Figure 1: The Conventional Seven-stage Model of SSM



ACTION / POLICY RESEARCH TOOLS : SOFT SYSTEM METHODOLOGY





Master of Information Technology Program
Faculty of Computer Science - University of Indonesia

THANK YOU
for your attention