### Topic 1: Research Introduction

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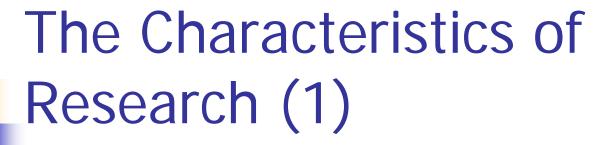


- The Definition of Research
- The Characteristics of Research
- The Classification of Research
- The Process of Research
- The Characteristics of Student Research
- Discussion



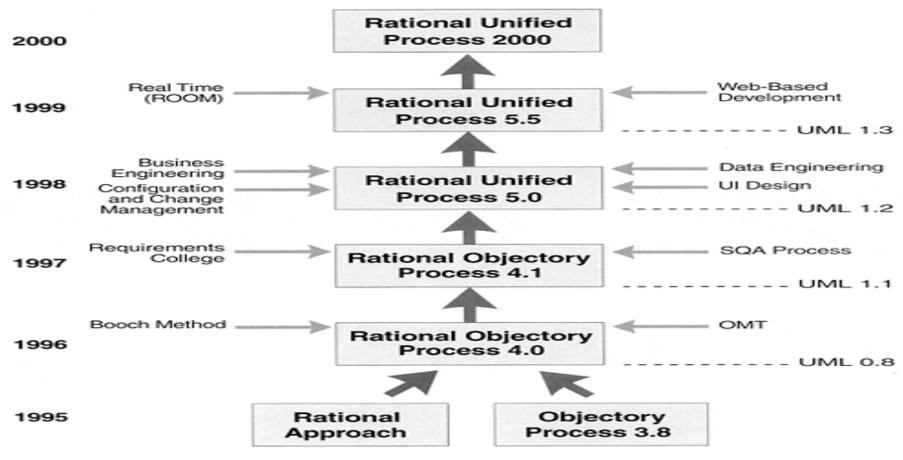
#### The Definition of Research

- Find new solutions to questions
  - Differences with study
  - Connections to study



- Advancing knowledge and understanding
- Based on general theory (concept and its relationship)
- May not lead to discovery or breakthrough
- Proceed in small steps, rather than great leaps

# The Characteristics of Research (2)



## The Classification of Research (1)

#### By field

- Natural science
  - Study of organic or inorganic substances and their phenomena in nature
  - Subdivided into physics, chemistry, astronomy, biology, and Earth Sciences etc.
- Social science
  - Study of social phenomena
  - Subdivided into politics, economics, management, military, law and Pedagogy etc.

### The Classification of Research

#### Differences between two sciences

	Natural science (Spring elasticity)	Social science (Course examination)
Belief	Causality	Cannot be simply attributed to causality
Accuracy	Quantity	Many aspects cannot be quantified
Logic	Induction	Induction is difficult.
Universality	Rule or Law	It is difficult to explain or predict human behavior.
Fact	"Observable Fact" can be measured and analyzed.	It is difficult to accept "Social Fact".

## The Classification of Research (3)

- By purpose
  - Description research
    - Describe some situation or problem
  - Review research
    - Review existing knowledge
  - Application research
    - Construct something novel
  - Explanation research
    - Find out explanation of problem



## The Classification of Research (4)

- By nature
  - The magnitude of originality contribution to knowledge
    - Pure or Basic
      - Focus on theory rather than practice
    - Applied
      - Specific problem solution
    - Strategic
      - Review or evaluation of Basic
      - Point out the potential of Basic to be applied to practice

## The Classification of Research (5)

- By method
  - Surveys
  - Experiments
  - Design and Creation
  - Case Studies
  - Action Research
  - Ethnography



### The Process of Research (1)

Identify a broad area of research

Select the research title

Decide the method(s) and technologies

Formulate the plan

Effectuation phase

Collect the data or information

Analysis & interpret data

Present the findings



- Frequent returns from the effectuation phase to the planning phase mean inadequate planning
- In strict accordance with the process, the possibility of success can be greatly raised
- Otherwise, it is not until the end to recognize that the previous work is in vain
  - The result has been already worked out
  - The method and conclusions are not acknowledged by others

### The Process of Research (3)

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Topic 2: Identify a Research Title	*	*					
Topic 3 : Research Paradigms			*				
Topic 4: Research Methods and Technologies			*		*	*	
Topic 5: Literature Review				*			
Topic 6 : Quotation, Citation and References				*			
Topic 7: Plan a Research Project				*			

### The Process of Research (4)

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Topic 8: Write a Research Proposal							*
Topic 9: Write a Dissertation							*
Topic 10: Oral Presentation							*
Topic 11: Write a Research Report							*
Topic 12: Management and Execution	*	*	*	*	*	*	*
Topic 13: After Research							*



- Title may be imposed
- Must be completed within a given period
- Funds may be limited or non-exist
- Results must be presented in a specified manner
- Possibly have to relate to a supervisor who may not be interested or be an expert in the field



#### Discussion

- Read the abstract of the case and describe your cognition of the definition of research
- By field, purpose and nature respectively, what's the category of the case?