

Research – Production – Education
VocEd-M5

The Case Study and Problem Solving

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- Historical roots in the casuistry of the legal and medical teaching
- Casuistry (Latin casus, "case") generally refers to the consideration of individual cases in a particular subject area.

Case study as a method of knowledge-finding by individual case study

Case study as a teaching method through case-based problem solving

Harvard Business School Lecture Schedule 1908:

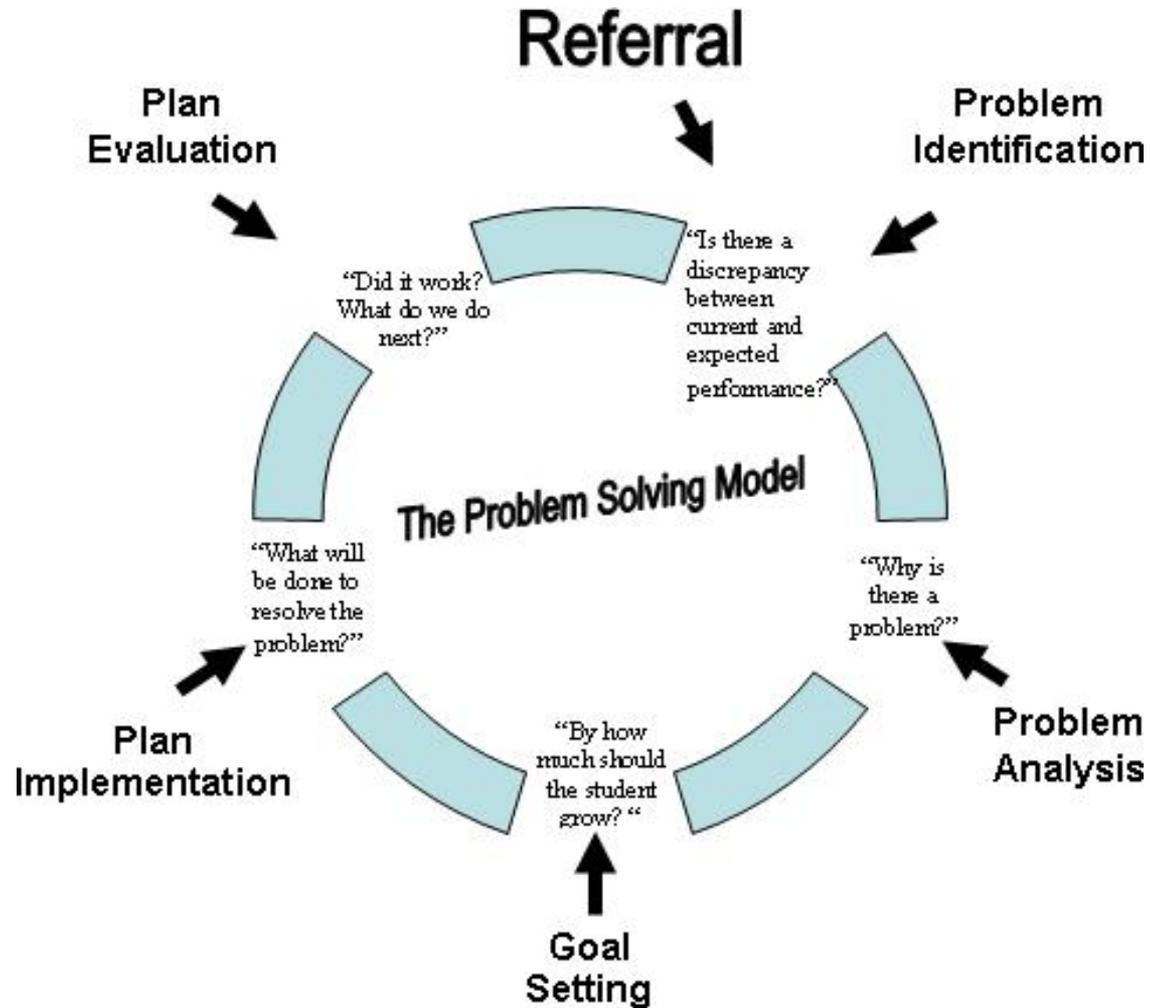
„In the courses on Commercial Law, the case-system will be used“

Source: Kaiser 1976, p.51

- Transfer of the case method in the business area under W.B. Donham(2. Dean)
- Order at the Harvard Bureau of Business Research to collect case materials for all subjects

What is a Case Study?

1. A complex teaching method
2. Problem solving process is in the foreground
3. Problem situation mostly from practice
4. Learners must have the problem situation independently analyze and develop solutions to problems in group work
5. The different solutions should a critical Evaluation are subjected to.



1. Confrontation with the case

- The case will be presented to the learner.
- Information on the case will be collected.
- Problems and decision needs to be clarified.

2. Evaluate information

- Processing of the questions in groups
- Material is provided or must be searched independently.
- Results of the group work are presented in plenary.

3. Exploration and resolution options for action

- Courses of action are to develop and discuss.

4. Defense of the proposals for action

- The different courses of action are to present and justify.
- The action decision is to make.

5. Collation with reality

- The prepared solution of the case is to compare with the solution in the reality.

Variants of the work with case studies

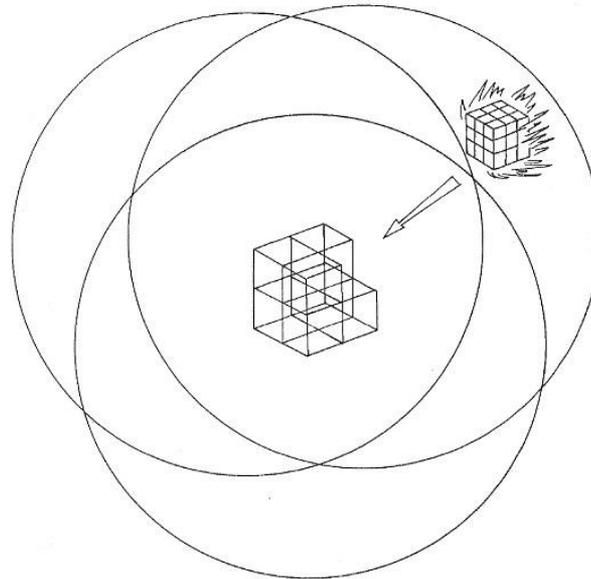
Method	Problem recognition	Acquisition of information	Problem solving	Criticism of solution
Case-Study-Method	Focal point: hidden problems need to be analyzed	Information is given	Possible solutions to the problem are to identify and decisions to made	Comparison of the solution with the decision in the real world
Case-Problem-Method	problems are clearly stated	Information is given	Focal point: Possible solutions to the problem are to identify and decisions to made	Comparison of the solution with the decision in the real world
Case-Incident-Method	the case is incomplete represented	Focal point: Information is to acquire independently	Possible solutions are to identify. The case is solved.	
Stated-Problem-Method	problems are given	Information is given	The final solutions are given. It will look for alternative solutions.	Focal point: Critique of the given solutions

- General problem solving skills
- Skills in self-organization of work processes
- Ability to analyze new situations
- Skills and abilities in dealing with information (systematic information acquisition, information processing, critical evaluation of information, systematization of information)
- Skills in using problem-solving methods and heuristics
- Skills in teamwork (leadership, group dynamics, conflict management)
- Communication skills (presentation of information, presentation of results, reasoning with regard to decisions)
- Decision-making skills (judgment, impact assessment, rational decision-making)
- Case-related knowledge

Principle of the Method:

Brainstorming benefits from:

- retrieval of unconsciously or unappreciated knowledge
- positive thinking and elimination of criticism
- the heterogeneously group



Creative problem solving by combining seemingly unrelated elements

Preparation

Choose a heterogeneous group of people



invite 5 to 10 participants



Location: unusual trouble-free environment
time: 15 - 45 minutes
Information about: problem, rules

Brainstorming-meeting

Rules:
not a criticism,
allows many wild ideas,
continuation of idea approaches

Procedure:
co-ordinator explained topic,
ensure observance of the rules

visualize ideas on a flip chart

Evaluation

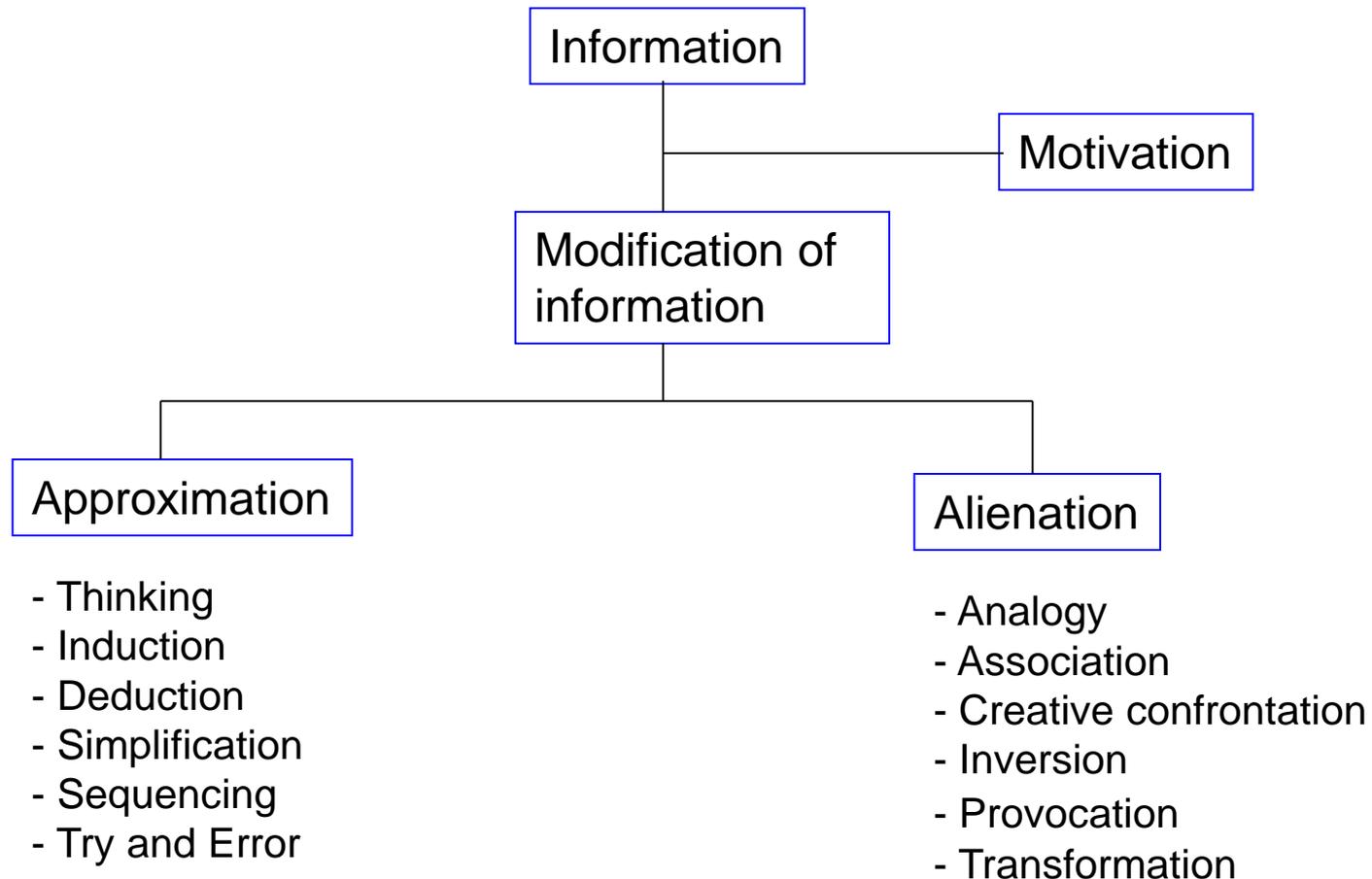
Complement of ideas in consultation



Classification and evaluation of ideas



announcement of the proposed solutions



Basic rules for knowledge discovery after Renè Descartes (1596-1650) (Discourse de la Mèthode)

- * Dissect each problem into as many parts as possible ...
- * Arrange your thoughts. Start with the simplest and then work step by step
- * Compile a comprehensive list of all the facts.
Get an overview, that you're sure to have miss out nothing

to solved

abstract

The basic problem is to decompose

for each parameter, the characteristics are to compile

PARAMETER	AUSPRÄGUNGEN					
	A ₁	A ₂	A ₃	A ₄		A _n
A		•				
B	B ₁		•			
C	C ₁			•		
D		•				
.					•	
.						•
.						•

for each parameter, the seemingly optimal value is to select

the optimal values of all parameters are to combine

Current problem

Basic problem

Problem elements =
Parameter (What?)

known or possible
solutions = characteristics

Optimisation

Combination

Morphological analysis - example

Organisation TYPE	Leadership culture	Buyer structure	Dominate product/ service	Co-operation strategies	Employee profile	Main employee incentive
Official state agency	Bureaucratic hierarchy	Ministry dominated	Process + method support	Outside help when needed	Life-long service	Money
Government owned enterprise	Strong scientific leadership	Military and material dominated	Soft studies	Joint ventures	Career researcher	Managerial career
Academy	Marketing division leadership	Defence Industry	Hard studies	Consultant purchasing	Development engineer	Pleasure in one's work
Trade institute	Umbrella management	Civilian agencies	Basic research	Mediator only	"Consultant"	Educational motivation
Consultant firm	Gatekeeping	Private markets (national)	Testing, construction		Entrepreneur	Titles, specialist career
"Learning organisation"	Skunk-works (ad hoc)	International markets	Second opinion		Elite troops	Organisation gives status

Stage	Explanation
1. Problem as given	Transmission of the problem by an expert
2. Analysis of the problem	Discussion about the problem
3. spontaneous reaction	spontaneous ideas for solutions are to give
4. Problem as understood	the better understood problem is to reformulate
5. First direct analogy	for a technical problem are to find analogies in nature and vice versa
6. Personal analogy	personal feelings concerning an analogy are to describe
7. Symbolical analogy	from the feelings, conflicting words are to form (adjective + conflicting noun)
8. Second direct analogy	from the word pairs are direct analogies to form
9. Examination	detailed description of a chosen analogy
10. Force fit	Drawing conclusions from the description of the analogy
11. Solution as understood	Formulation of the proposed solution

Thank you for your attention!

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