

Learning to organize digital information

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Adaptive Instruction to foster students' information problem solving skills: learning to organize digital information

Jaap Walhout *, Saskia Brand-Gruwel & Rob Martens

Open University of the Netherlands

Problem

In today's information society people have to manage an overload of information adequately. Being able to search, find, evaluate, select, process, organize and present information in order to acquire new knowledge is an important skill. This skill is defined as information-problem solving (IPS). However, research shows that many students are not able to solve information-based problems successfully, and that they have especially problems with the ability to organize found information.

Organizing information in a proper way is not easy. Because people are used a hierarchical system, it seems natural to categorize information in classes and subclasses. Although hierarchical classification systems are a good way of bringing order in a collection of physical objects, with the use of virtual information objects it becomes possible to organize the information with labels or 'tags'. Consequently, information can be attributed to different classes. However, organizing information in a proper way is not a skill which is learned easily. Guidance and/or instruction is therefore needed.

Theoretical background

The ability to organize information during web searches is influenced by several aspects such as:

- Prior knowledge functions as an ontology for structuring newly found information.
- Meta-textual knowledge enhances text comprehension and thus the ability to organize.
- Task complexity and number of directions determine how difficult it is to solve the task.

Instruction in organizing web-based information should foster the use of a non-hierarchical tagging approach and make use of ontological schemes. Moreover this instruction should be embedded in the schools curricula and should be adaptive.

Future research

- Which approach is better: hierarchical or tagging?
- What is the effect of instruction on the skill of organizing information?
- How can instruction be made adaptive to the learners needs?

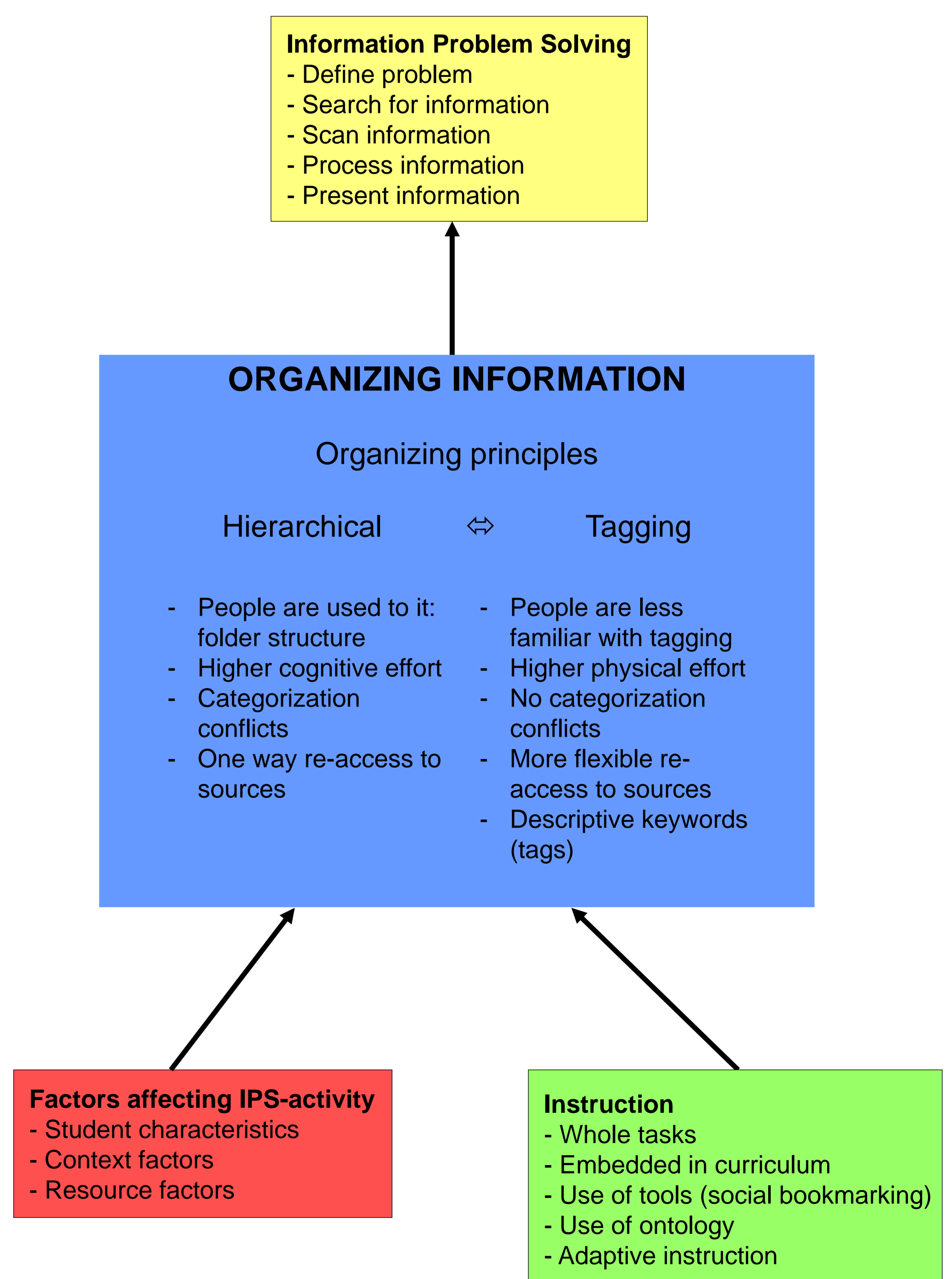
Research questions

Main question:

- How can instruction in organizing information best be designed?

Sub questions:

- How do people organize information?
- What factors influence the skill of organizing (internet) information?
- Which instructional design choices have to be considered when improving instruction?



* Corresponding author:

jaap.walhout@ou.nl

Ruud de Moor Centrum
rdmc.ou.nl

