

# Problem-Based Learning

## General

Problem-based learning is an instructional strategy which suggests learning will be more effective if **learners are faced with a real-life practical problem** they need to solve. One of the first and most commonly cited examples of problem-based learning was introduced in 1960s medical education in Canada.

## What is problem-based learning?

In the 1960s at the McMaster University in Canada it was noted that medical education students were mostly bored during their classes, until they reached a stage where they were supposed to work with patients and try to help them solve their problems. It was then decided that biomedical problems, analyzed in small groups would be introduced into whole educational process, what remained a practice until today<sup>1)</sup> and has also spread to other medical schools<sup>2)</sup> as well as other fields.

Problem-based learning is **learner-orientated** and **role of the teacher** here is not to provide knowledge, but to **guide and facilitate the learning process** and encourage students apply their knowledge and take responsibility in new situations.

A possible **flow of a problem-based learning course** includes the following tasks from the students:

- be **presented with a problem**
- **discuss**, clarify the problem and develop a plan for further working on the problem
- **work on the problem independently**
- **share and discuss** their individual approaches and work together
- **present their solutions**
- **review** what they have learned

Problem-based learning can be a helpful method in the educational process, but it can also be viewed as a **total education strategy**, as described by Barrett et al in "Handbook of Enquiry and Problem-Based Learning".

Different experimental results have been obtained using problem-based learning, but generally showing not much difference in declarative knowledge in students learning through problem-based design and those not using it. Still, there is evidence that problem-based learning **supports development of reasoning skills, problem-solving skills and self-directed learning skills**<sup>3)</sup>.

## What is the practical meaning problem-based learning?

## Criticisms

## Keywords and most important names

## Bibliography

Barrett, Terry, Iain Mac Labhrainn, and Helen Fallon. Handbook of Enquiry and Problem-Based Learning: Irish Case Studies and International Perspectives. Unknown UK Publisher, 2006.

## Read more

1)  
Jubien, P. Problem-Based Learning in Canadian Undergraduate and Continuing Medical Education. Canadian Journal of University Continuing Education 34, no. 2: 111-125. 2008.

2)  
3)  
For details see: Hmelo-Silver, C. E, R. G Duncan, and C. A Chinn. "Scaffolding and achievement in problem-based and inquiry learning: A response to Kirschner, Sweller, and Clark. 2006

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