

Self-regulated learning and skills training



Self-regulated learning prepares for the change in the professional world.



Problem-based learning involves skills training.

Careum Education Development is the competence centre for self-regulated and interprofessional learning in healthcare. Over the last 15 years, learning and teaching material for healthcare professionals has been developed in association with an extensive network of technical experts.

Pedagogical concept and method

The pedagogical and didactic concept of problem-based learning (PBL) is aimed at enabling students to acquire specialist and interdisciplinary skills and application-oriented knowledge. The learning process is based on situations relevant to the professional world, which are presented as “problems”. A problem in this sense is defined as a “difficulty” or a “challenge”. The complex authentic problems motivate students to develop various perspectives through discussion. Working in both tutorial groups and independently, they seek explanations, formulate key questions and acquire new knowledge, enabling them to deal with the situation described¹.

Since its initial development in the late 1960s by Howard S. Barrows at the McMaster University, PBL has become a widespread approach at all levels of education and in all specialist disciplines around the world². PBL is used as an overall curriculum, learning unit or method. Problem-based learning, according to the Dutch University of Maastricht's definition

and the seven-jump method developed there, has had a significant effect in Europe since the early 1970s³. In the meantime, this principle has been further developed by educational institutions in a country-specific context.

Practical relevance and responsibility

Students are expected to accept responsibility in their professional lives. They need to work in a way that is reflective, theory-led and situation-appropriate. Problem-based learning prepares them for dealing with change processes. Key elements of successful learning through PBL are drawing upon one's previous knowledge, reflecting critically on one's own behaviour and thinking about what one has learned. Active, self-regulated learning involves a high degree of motivation and commitment.

Problem-based curricula - concept

According to the concept of problem-based learning, curricula relate to the learning areas of school, training, transfer and professional practice. Problems from everyday working life constitute the key starting points for learning. They take account of the increasingly high demands in education and professional life. The closely associated learning methods of problem-based learning and skills training ensure focused, in-depth and interdisciplinary interaction with learning content. Learning sequences accompanied by tutorials and skills training alter-

nate with self-regulated learning sequences. Self-regulated learning, metacognitive reflection and in-depth interaction with content promote lateral thinking. Knowledge can thus be transferred effectively into professional practice¹.

- *Problem-based learning*: Students work on realistic, interdisciplinary problems based on the seven-jump method. They acquire structured knowledge and in-depth understanding of context, which they can call upon at any time and use systematically in similar situations. Tutors support students throughout the learning process¹.
- *Skills training*: In skills training, students practice, simulate and reflect upon the aptitudes and skills required for professional practice. Skills trainers are on hand to provide support.
- *Cognitive Apprenticeship Model*⁴: Based on an adapted form of the model, students gain knowledge and ability in professional practice. The practice education facilitator supports the process through the communication of knowledge and skills and ongoing delegation of responsibility.

Model curricula for health care professions (PET)

The concepts of the problem-based curricula for professional education and training (PET) colleges are based on these principles. They have been accepted and adapted accordingly for educational programmes for five Health Professions. In conjunction with experts from schools, science and practice, and Careum Publishing, Careum has developed learning and teaching material to support the self-regulated development of professional skills.

Cooperation and implementation

In cooperation with educational institutions in the "Problem-based learning curriculum network" and experts, Careum Education Development periodically assesses the quality of the curricula and learning and teaching materials. The results of the subsequent evaluation conducted in 2011 by the University of St. Gallen's Business Education Institute show that graduates have outstanding competences in practice.

The curricula are implemented in the following educational institutions in the curriculum network:

- Careum Training Centre in Zurich (CBZ)
- Health and Social Education Centre in Chur (BGS)
- Vocational and Continuing Education Centre for Healthcare and Social Service Professions in St. Gallen (BZGS)
- Sarganserland Vocational and Continuing Education Centre in Sargans (BZSL)

Problem-based learning programme

Tutors and skillstrainers may attend courses on problem-based learning, which are offered in association with Careum Continuing Education, the Careum Training Centre and Careum Education Development. Institutions may also book in-house courses. This ensures the quality of problem-based learning for the respective teaching practice.

Team

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Problem-based learning

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Sources:

- 1 Careum Stiftung (2013). *Problem basiertes Curriculum Höhere Fachschule: Curriculum-Buch 1*. Zurich: Careum Stiftung.
- 2 Reusser K. (2005). *Problemorientiertes Lernen – Tiefenstruktur, gestaltungsformen, Wirkung. Beiträge zur Lehrerbildung*, 23 (2).
- 3 PBL at the University of Maastricht, last visited on April 7th, 2016 on <http://www.maastrichtuniversity.nl/web/main/Education/ProblemBasedLearning.htm>
- 4 vgl. Collins, A., Brown, J.S & Newman, S.E. (1989). *Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics*. In L.B. Resnick (ed.), *Knowing, learning, and instruction. Essays in the honour of Robert Glaser* (pp. 453-494). Hillsdale: Erdbaum

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