M01-2: Principles for PBL

Four Principles for Creating Problem-based Learning Environments

Since learning is understood as an active, self-regulated, constructive, situated and social process there are four principles to consider carefully in order to create problem-based and situational learning environments. The following principles are based on the work from Reinmann-Rothmeier & Mandl (2001, here cited from Kopp & Mandl, 2002).

- **Principle # 1: Authenticity and reference to application:** Abstract knowledge should be presented using practical examples, problems or cases to show its relevance for the professional field. Simultaneously, this way of providing content shows the applicability of knowledge and raises the learner's motivation and interest in the specific topic.
- **Principle # 2: Multiple contexts and perspectives:** To avoid knowledge fixed on one certain context the topics should be presented in different situations and from different perspectives. This way of showing multiple contexts and perspectives evoke a more flexible knowledge about a subject. At the same time, this method stimulates the ability to analyse things in a differentiated way and to apply the knowledge in other circumstances.
- **Principle # 3: Social learning arrangements:** Although learning is an individual process, social aspects get more and more important in the process of acquiring knowledge, because the ability to cooperate and communicate is essential in all professions. Furthermore, working on tasks in groups is an adequate way to support and to deepen the learner's understanding of contents and connections.
- **Principle # 4: Instructions and information and construction supply:** Instructions are helpful for the learner as support while working on tasks of the learning environment. Therefore, it is important that the learning environment does not demand too much from the learners to avoid a cognitive overload. However this should not decrease the commitment of the learners. On the contrary: With the help of certain instructions the learner should be encouraged to search details of the information they need for the task on their own.

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