

WHAT IS PROBLEM-BASED LEARNING?¹

Problem-based learning (PBL), at its most fundamental level is an instructional method characterized by the use of “real world” problems as a context for students to learn critical thinking and problem solving skills, and acquire knowledge of the essential concepts of the course. Using PBL, students acquire life long learning skills, which include the ability to find and use appropriate learning resources, to be versatile communicators about complex subjects, and to build teams that can work effectively towards common goals. The process used in PBL is the following:

- Students are presented with a problem (case, research paper, videotape, etc.). Working in groups, they organize their ideas and previous knowledge related to the problem, and attempt to define the broad nature of the problem.
- Throughout the first session’s discussion, students pose questions, called *learning issues*, on aspects of the problem that they don’t understand. They are continually encouraged to define what they know - and more importantly, what they don’t know.
- Students rank, in order of importance, the learning issues generated in the session. They decide which questions the whole group will be follow up on, and which issues can be assigned to individual students, who will later teach the rest of the group.
- The students and instructor also discuss what resources will be needed to research the learning issues, and where they can be found.
- When the students reconvene, they explore the previous learning issues, integrating their new knowledge into the context of the problem. They are also encouraged to summarize their knowledge and connect new concepts to old ones.
- The students continue to define new learning issues as they progress through the problem. Students soon see that learning is an ongoing process, and that there will always be (even for the teacher) learning issues to be explored.

What is the faculty role in PBL? The instructor must guide, probe, and support students’ initiatives, not lecture, direct, or provide easy solutions. The degree to which a PBL course is student-directed versus teacher-directed is a decision that the faculty member must make based on the size of the class, the intellectual maturity level of the students, and the instructional goals of the course. When faculty incorporate PBL in their courses, they empower their students to take a responsible role in their learning - and as a result, faculty must be ready to yield some of their own authority in the classroom to their students.

Resources:

Albanese, M.A., and S. Mitchell (1993) Problem-based learning: A review of literature on its outcomes and implementation issues. *Academic Medicine* 68: 52-81.

Engel, J. (1991) Not just a method but a way of learning. In, *The Challenge of Problem-Based Learning*, Boud, D. & G. Feletti, eds. New York: St. Martin’s Press.

Duch, B.J., Groh, S. E. and D. E. Allen, eds. (2001). *The Power of Problem Based Learning*. Sterling, VA: Stylus Publishing.

Savin-Baden, M., and C. Howell Major. (2004). *Foundations of Problem-based Learning*. Berkshire, England: The Society for Research into Higher Education & Open University Press.

<http://www.udel.edu/pbl> - course syllabi, sample problems, bibliography, **links to other sites**

<https://www.mis4.udel.edu/Pbl/index.jsp> - UD PBL Clearinghouse

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