

Problem-Based Learning

Definition

“Problem Based Learning (PBL) is an instructional approach where students learn by solving challenging, open ended problems. The problems are authentic tasks and are solved in socially and contextually based teams of students”

-Northern Illinois University, Faculty Development and Instructional Design Center

Research

- The technique helps prepare lifelong learners through its use of self directed learning (Hmelo-Silver, 2004).
- Acquire critical thinking, problem solving, and teamwork skills and the ability to apply them in different types of circumstances (Massa, 2008).
- Encourages collaboration which helps students create knowledge through group explanations (Hmelo-Silver, 2004).
- Enhances student motivation. Important since motivation is a contributing factor to learning issues (Hmelo-Silver, 2004).
- To be effective educators we must:
 1. Interact with student's preconceived ideas of the world and how it operates.
 2. Help students build competence from foundational knowledge based on facts.
 3. Cultivate student metacognitive skills
(as cited in Massa, 2008, p. 19)
- Process:
 1. Present the problem.
 2. Facilitator guides participants through the process.
 3. Students come up with solutions.
(Massa, 2008)

Examples

Example video: <http://bit.ly/ReimaginePBLVideo>

Example problem: <http://www1.udel.edu/pbl/hotheads.html>

Implementation Ideas

What's in the News?

1. Select an article that reflects a specific problem related to the field or the course.
2. Share the article with the students.
3. Brainstorm solutions and rank them.
4. Have the students research additional information on the problem and select the solution that works best in addressing the problem.
5. Have the students submit a reflection that identifies the solution they selected to solve the problem, and the data that supports the solution chosen.

References

Hmelo-Silver, C. E. (2004). Problem-Based Learning: What and How Do Students Learn? *Educational Psychology Review*, 16(3), 235–266.

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Massa, N. M. (2008). Problem-Based Learning (PBL). *New England Journal of Higher Education*, 22(4), 19–20. Retrieved from

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