



Knowledge to lead

Guidelines for Creating a Problem-based Learning

Role of the Instructor

- Facilitator-mentor, guide, coach and not a source of solutions
Resource guide;
- Subject matter expert;
- Create strong problems;
- Learn with students- be open to learning;
- Encourage student participation
- Give students immediate and appropriate feedback

Role of the Students

- Take responsibility for their own learning by identifying their learning issues and needs;
- Work in teams;
- Resolve the problem;
- Schedule their own activities, decide how to allocate the time;
- Intuitively take up different roles (e.g. project leader, facilitators, note taker, team member).



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Tips for creating strong problems

1. *The main characteristics of the best problems are:*

- Unorganized;
- Unsynthesized;
- Open-ended;
- Interdisciplinary;
- Task oriented,
- Focus on current events, student lives, actual occurrences;
- The content is relatable to the previous knowledge of the students.

2. *The problems should be created with the following aspects in mind:*

- Introduction (catch the attention, challenge and motivate)
- Availability of resources
- Content (appropriate for the student group)
- Learning objectives (by solving the problems, students should accomplish their learning objectives)
- Expected outcome
- Guiding questions (improvisation is key but be prepared with a set of guiding questions)
- Assessment tasks
- Reasonable time frame



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Phases of the Problem Solving Process (these are reiterative phases)			
	Guiding Question	Actions to take	Expected Outcome(s)
Phase 1	What do we already know?	Explore the problem; Connect it to your own experience; Discuss the situation and the problem; Draft and agree on working definitions of concepts used; Set targets for investigation.	Problem statement (outset for the investigation, open to revision)
Phase 2	What do we need to know? (in order to solve the problem)	List questions and learning targets; Break the problem down into components; Create hypotheses; List possible solutions.	Formulating Learning Goals (an analysis of what information is needed and how it will be obtained)
Phase 3	What should we do?	Organize, discuss, assess ideas and hypotheses; Find and consult resources, people; Assign roles and tasks; Analyze and evaluate the new information.	Action- and study plans (determining who will do what, how?)

