

Faculty guide for Problem-based learning (PBL)

Introduction:

Problem-based learning (PBL) is a teaching- learning method which is centered around a problem. It is based on principles of adult learning and a way of active learning.

Steps

1. Identify the learning objectives
2. Write a the draft of the cases scenario preferably real life situation which works out effectively .Creativity can be added by using videos clips
3. Well constructed case will have divisions of case scenario which gives opportunity for discussions to develop list of hypotheses, points for clinical reasoning process.
4. What students know and what they do not know
5. Share faculty determined learning objectives and references/study material.

Process:

- 1. BEGINNING**
2. Introductions : Context setting
3. Explain : Tutor's role/students' role
4. STARTING A NEW PROBLEM Establish objectives
5. Encountering the problem Reasoning through the discussion /inquiry Analysis
6. Formulate learning objectives (list on the board)
7. Summary - probable outcome
8. Learning objectives shaping – CONCEPT MAP
9. Resource identification
- 10. SELF-DIRECTED STUDY**
11. **PROBLEM FOLLOW-UP** (second, third sessions)
12. Summarize problem – can share information relevant to problem Critique resources
13. Reassess the problem, Modify if required and learning objectives
14. Resolve the problem
- 15. EVALUATION:**
16. Group evaluation
17. Self- and peer evaluation

Faculty Guide
Problem Based Learning/ Case Based Learning

Faculty: -----

Time: -----

Time	Activity	Person	Logistics
11.15-11.25 a.m.	Introduction and brief review of PBL process		Powerpoint slides
11.25-11.35 a.m.	Roles people play Maastricht seven step process Concept maps		Powerpoint slides
11.35-12.05 a.m.	Participation in PBL process <ul style="list-style-type: none"> • Divide participants into group members and observers • Can uses fishbowl/role play method • Inner circle discusses case, outer circle observes • Case scanario • Divide into roles: group leader, time keeper, scribe • After case is discussed and learning objectives outlined upto step 5, participants fill up self/ peer and faculty assessment sheets • Outer circle: Observes (a) Process (b) Role of participants and facilitator (c) Case format 		Groups in fishbowl 1 Flip chart and markers Assessment sheets (for peer/ facilitator/ self assessment)
12.05-12.20	Debriefing on PBL process 1. Observers: What did you notice about the process and group dynamics Participants – what was your experience? What worked well? What didn't work so well? 2. Observers: Discuss roles of participants/ facilitators 3. Observers and participants: What did you notice about case format 4. Assessment		facilitator to write on flip chart in the sequence; Process, Role of participants Role of facilitator Case format Assessment
12.20-12.30	Difference between PBL and CBL Summary		

HANDOUTS:

1. Wood DF. ABC of learning and teaching in Medicine: Problem Based Learning.

BMJ 2003;326;328-330

2. Azer SA. Challenges facing PBL tutors: 12 tips for successful group facilitation *Medical Teacher*, Vol. 27, No. 8, 2005, pp. 676–681

3. <http://hsc.unm.edu/som/ted/> University of New Mexico PBL Handbook.

HANDOUT FOR PROBLEM BASED LEARNING

STEPS IN PBL PROCESS

Session 1

Step 1. **Identify and clarify unfamiliar terms presented in the scenario;** scribe lists those that remain unexplained after discussion

Step 2. **Define the problems to be discussed;** students may have different views on the issues, but all should be considered; scribe records a list of agreed problems.

Step 3. **“Brainstorming”** session to discuss the problem (s) suggesting possible explanations on basis of prior knowledge; students draw on each others knowledge and identify areas of incomplete knowledge; scribe records all discussion

Step 4. **Review 2 & 3. Arrange explanations into tentative solutions;** scribe organizes the explanations and restructures if necessary

Step 5. **Formulate learning objectives;** group reaches consensus on the learning objectives; tutor ensures learning objectives are focused, achievable, comprehensive, and appropriate

Intersession

Step 6. **Private study** (all students gather information related to each learning

objectives)

Session 2

Step 7. **Group shares results of private study.** Students identify their learning resources and share their results.

Second part of the case is handed over and the group starts again from step 1

Adapted from Diana F Wood. ABC of learning and teaching in medicine-Problem Based Learning BMJ 2003; 326; 328-330

Student evaluation of the PBL course

Students to respond using a 5-point scale.

Scale - from 1- strongly agree to 5 strongly disagree

1 - Strongly agree, 2 - agree 3 - neutral 4 – disagree 5- strongly disagree

1. The course helped me to learn to obtain information from a variety of sources.
2. I feel that I can apply the general principles I learned to other generic problems.
3. I am comfortable with working in groups.
4. I do not feel reluctant to confess my ignorance on specific issues.
5. I am confident that I can analyze a generic problem.
6. I am confident that I can set appropriate learning objectives.
7. I feel comfortable sharing information with others.
8. I can assess my own performance adequately.
9. The written problem summary helped me relate the concepts covered in that problem.
10. Compared to other classes in my course,
1 - learned much more than usual, to 5 - much less than usual.
11. On the whole, the amount of effort required in the course was :
1 - greater than usual, to 5 - less than usual.
12. Overall I would rate this course:
1 - excellent to 5 - poor.