

## UNIT - 01

### Problem Method of Teaching

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#### **3.0 Objectives:**

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#### **3.1. Introduction:**

Actually all these days the teaching in the classroom is teacher centric. The teacher is centred of attraction, students look upon the professor or the lecturer as the ‘most talented’ or ‘well read’ person. His words are final and the student has to simply keep on listening to his preaching. i.e. Socratic Method was followed for centuries. Thanks to the innovative teachings the change accepted by the intellectuals that only preaching or Socratic Method cannot be the only mode of instruction. Students were permitted to ask questions and the teachers were

expected to give explanations and this helped in percolating the knowledge. Problem method in itself is very innovative and the student is not given a lecture but is given a problem to study where he has very less or no knowledge and he has to find a solution to it. Just like the student are in a tunnel with a matchstick and the student have to find the way out of it. Based on the student's little knowledge and other experience the student try to work out and find the way out of it. While doing so the students get to know the harsh reality, make mistakes, and go on learning on the is own. But the student is sure that the person who has thrown the student in the tunnel is with him. In Problem method of learning the teacher acts as a facilitator and is always there to support the student.

### **3.2. Topic Explanation:**

#### **3.2.1. Concept of Problem Method:**

Problem-based learning or Problem Method of teaching is a teaching or training method regarded as teaching by the use of “real world” problems. It is as a situation prepared for individuals to learn ‘critical thinking’ and develop ‘problem solving skills’ and ‘acquire knowledge’. It involves both knowing and doing. Problem Method can be applied to an individual or to a group of individuals. It can be applied to a classroom setting or any type of training program. It can even be used for employee development and even prepare someone for a new assignment or a promotion, even in MBA classes. It should be emphasized that the teacher does not change the length of the training; they have simply changed how they train. It is accepted that the results have been astonishing and satisfactory. A training model rooted in problem-based learning has the potential to change the face of law enforcement with this approach that teaches decision-making, critical thinking and problem-solving. The problem with a ‘content driven approach’ is such that it enhances the quality of thinking and pumps in confidence in the student. It is same as the LL.B graduate participates in moot court. It is a better approach to give them a solid foundation that is anchored in problem-solving, decision-making, and self-directed learning. That is what Problem Method does; it provides the anchor to the foundation of the profession. Thus with the help of Problem Method, learners apply knowledge, not just acquire it. Thus a Problem Method is “A teaching and learning method which puts a problem first, and in which further learning is conducted in the context of that problem.” A broad definition of Problem Based Learning or as we are studying Problem Method, used by Dr.

Woods is, “PBL is any learning environment in which the problem drives the learning. ”  
Problem based learning.

### **3.2.2. Definition of Problem Method:**

Barrows defines it as:

“The learning that results from the process of working towards the understanding of a resolution of a problem. The problem is encountered first in the learning process”<sup>1</sup>

PBL is both a curriculum and a process. The curriculum consists of carefully selected and designed problems that demand from the learner acquisition of critical knowledge, problem-solving proficiency, self-directed learning strategies and team participation skills. The process replicates the common used systemic approach to resolving problems or meeting challenges that are encountered in life and career (Maricopa Community Colleges, Centre for Learning and Instruction: <http://www.mcli.dist.maricopa.edu/pbl/info/>)

The definition given below is of Terry Berrett”

- 1) **Normal** students are presented with a problem
- 2) Students discuss the problem in a small group (PBL tutorial). They clarify the facts of the case. They define what the problem is. They brainstorm ideas based on the prior knowledge.  
  
They identify what they need to learn to work on the problem, what they do not know (learning issues). They reason through the problem. They specify an action plan for working on the problem
- 3) Students engage in independent study on their learning issues outside the tutorial. This can include: library, databases, the web, resource people and observations
- 4) They come back to the PBL tutorial(s) sharing information, peer teaching and working together on the problem
- 5) They present their solution to the problem
- 6) They review what they have learned from working on the problem. All who participated in the process engage in self, peer and tutor review of the PBL process and reflections on each person’s contribution to that process

### **3.2.3 Usefulness of Problem Method:**

Problem Method as we understand is a teaching and learning method. In which the problem is placed before the student. The student is not much aware about it. He has no or very less knowledge of the subject he is going to study through the problem. The teacher puts a problem first, and then facilitates situation in which further learning is conducted in the context of that “*problem*.” if a teacher wants to explain a term or section of any law generally he/she will explain and give some day-to-day examples. This will not only help the student understand the words, phrases, and construction of the section. But how will the student get to know about the utility of that law or say that section? For example the teacher is explaining the concept of Fundamental rights, and goes on telling them how important they are and how this concept has been evolved. He may take them to French Revolution, American Revolution talk about Bill of Rights, Universal Declaration of Human Rights etc. the student will feel like taken on historical tour. But if the teacher puts before them a hypothetical problem of a person illegally detained, or a mother whose young son is beaten in prison, or the small children in orphanage are not given food. Ask them to take help of the Constitution of India and some pre-decided case of the Supreme Court of India. The students will not only come out with beautiful arguments as good as the lawyers of higher courts but they are able to understand ‘the Law’ in much better way than the historical tour. Here three things are happening:

1. The teacher gives a problem. Acts as facilitator
2. Student try to find a solution- does a research
3. Student learns on his own with the help of the problem.

Although the student is learning on his own that doesn't mean that the teacher has no role to play. On the contrary the teacher is teaching with the help of the problem. The teacher play the role of guide, facilitator, mentor etc. the teacher is always there with the student, but it is the student who have to work.

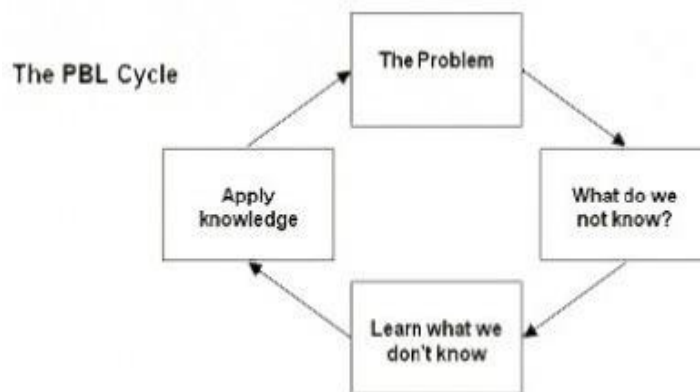
### **3.2.4. Techniques of Problem Method :**

1. It is one such a mode of teaching in which responses to, and investigation of, a problem scenario drive students' learning
2. Lecturers become facilitators of students' learning rather than omniscient providers of knowledge.

3. Students recognize themselves less as unreceptive.
4. Students become active learners pursuing knowledge through research endeavour

### **3.2.5. Basic procedure to be followed in Problem method:**

- students are presented with a problem/situation;
- they identify what they think they ‘do’ and ‘do not know’;
- they gather further information and communicate this to one another; they apply this new knowledge to the problem /situation;
- they identify what they *think* they still ‘do not know’, and the process begins again.



Source: [www.ukcle.ac.uk/resources/teaching-and-learning-practice/appendix3/](http://www.ukcle.ac.uk/resources/teaching-and-learning-practice/appendix3/)

The Problem based learning is not a new concept and has been followed by many universities. It is understood that in modern era. It originated from Maastricht University, Netherlands and McMaster University, Hamilton, Ontario, Canada. PBL sessions are usually organized according to the Maastricht seven step procedures but may be modified. Generally, those steps are as follows:

#### ***Step 1. Identify and clarify unfamiliar terms presented in the “Problem”.***

- a) At the beginning of the session, the problem(s) should be presented to students.
- b) If an artificial case is used one of the students reads it aloud to get the group talking from the beginning.

- c) The first activity of the group should be the clarification of problems, terms and concepts not understood at first moment. They can use the knowledge possessed by the group members or retrieved from a dictionary or even seek help of group tutor.
- d) The purpose of the first step is to agree on the meaning of the various words and terms and on the situation described in the problem.

**Step 2. Define the problem or problems to be discussed.**

- a) Definition of the problem is the main goal during this phase.
- b) The group should discuss and reach an agreement on the tricky events, which need explanation. Occasionally, a problem has been intentionally described on the way to test students' ability to recognize certain symptoms.
- c) Though they have some prior knowledge to recognize a problem, the prior knowledge doesn't allow them to resolve the problem straight away.

**Step 3. Brainstorming**

- a) Aspects on the basis of prior knowledge are collected.
- b) This should result in ideas to structure the problem.
- c) Each individual may express his or her ideas free and without immediate discussion: it is important not to discuss and not to comment the ideas of others during this step, but to collect many ideas (prior knowledge).
- d) Together, students will collect ideas of the underlying circumstances of the problem (explanatory approach) and/or of implications arising from the problem (procedural approach).

**Step 4. Structuring and hypothesis**

- a) Review steps 2 and 3 and arrange explanations into tentative solutions.
- b) During the fourth step, which forms the core of the analysis, the problem is explained on different ways.
- c) Ideas, which seem to be related, are worked out in relation to each other.
- d) Each group member is allowed to fully present ideas about the matter.
- e) Group members can draw on all the prior knowledge they possess. This prior knowledge may be based on information acquired in earlier education, facts and insights obtained by reading different articles or on another way.

- f) The other members of the group and the tutor are allowed to probe the students' knowledge to the full, to introduce other explanations and question certain opinions.
- g) The process of brainstorming discussion is a collaborative approach. It leads to more creativity and output than each member of the group could generate on his own.

### **Step 5. Learning objectives**

Formulating learning objectives;

- a) Group reaches consensus on the learning objectives;
- b) Tutor ensures learning objectives are focused, achievable, comprehensive, and appropriate.
- c) The systematic approach and discussion may result in several outlines written down on the blackboard.
- d) These outlines are like possible explanations for particular problem.(However, since student prior knowledge is limited, questions will come up and dilemmas will arise. In this phase of the discussion, conflict between members of the tutorial group should arise.)
- e) The students will find out that certain aspects are not yet explained and resolved in the process of their discussion. Problem Method encourages students to learning on their own. This state of cognitive dissonance between what I know and what I have to know to understand the outside world is an essential condition for Problem method of learning.
- f) Questions and dilemmas, which appeared during session, can be used as learning goals for individual self-directed learning. So, the main aim of this step is to formulate learning objectives on which group will concentrate their activities during phase six.
- g) In this stage it is possible to use conceptual map as a tool for research summary, making associations, integrating information and proceeding information and transferring it to long-term knowledge, but also a tool for challenging new learning objectives.

### **Step 6. Searching for Information**

- a) Self-independent learning; during this phase students are going home and study.
- b) This phase is supposed to provide answers to the questions evoked in the problem-analysis phase and offer students possibility to acquire a more profound knowledge of theories at the root of the problem.
- c) The group members collect information individually with respect of defined learning objectives.
- d) Information is collected not only from the literature but also from other sources (library, journals, internet etc.).

- e) Problem Method of Learning is also important because it gives possibility to students to find their own resources.
- f) Students can learn individually but also in pairs or in groups.
- g) It is important to already decide in advance, how the results of the self-study period will be presented: by an individual, a small group or as discussion of all the groups.
- h) Students explore relevant sources of knowledge and then put the new information together, possibly resolving all the issues that were left open.

***Step 7. Synthesis***

- a) Group shares results of private study.
- b) The tutor checks learning and may assess the group.
- c) the final step is synthesizing and testing the newly acquired information.
- d) Members of the group are sharing information gathered at home among each other. They also discussed whether they now acquired more proficient, accurate, detailed explanation and understanding about what is going on behind the problem.
- e) If some of the students haven't understood the issues well, task of other students is to try to explain them methodology of their work.
- f) In this step it would be necessary for the certain types of the problems to check for students' decision-making process and the algorithm behind their decisions.

***Step 8: "Feedback"***

- a) it is very helpful step.
- b) It includes feedback of all students on the case, the process and the tutor, to improve the learning process.
- c) Also it is very important as the students validate the course and give their comments on the quality of the problem as well as on the quality of the group process and the tutor's performance.

***Step 9: Analysis:***

- a) The last step is analysis of the over-all performance of the students discussion.
- b) The tutor or any student can analyses the session and make a report.



- c) This will be helpful to find solution to problem arising during study as well as further designing of the study.

(This formation is based on the module of McMaster University available on [www.chemeg.mcmaster.ca/pbl/pbl.htm](http://www.chemeg.mcmaster.ca/pbl/pbl.htm))

### **Care to be taken while using Problem Method for teaching:**

1. The faculty must take care to use carefully crafted cases that are perfect of content objectives
2. Use trained faculty or student facilitators to effectively manage group dynamics
3. Help the group address conflict in constructive ways
4. Ensure seating arrangement that facilitates discussion
5. Create safe environment for learners to participate, ask questions, and make mistakes without sanctions for groups meeting regularly over a period of time as and when required.
6. The facility like library, computer, CDs, DVDs, internet connectivity, etc are the requirements for the students to conduct research smoothly.

### **3.2.6. Merits of Problem Method:**

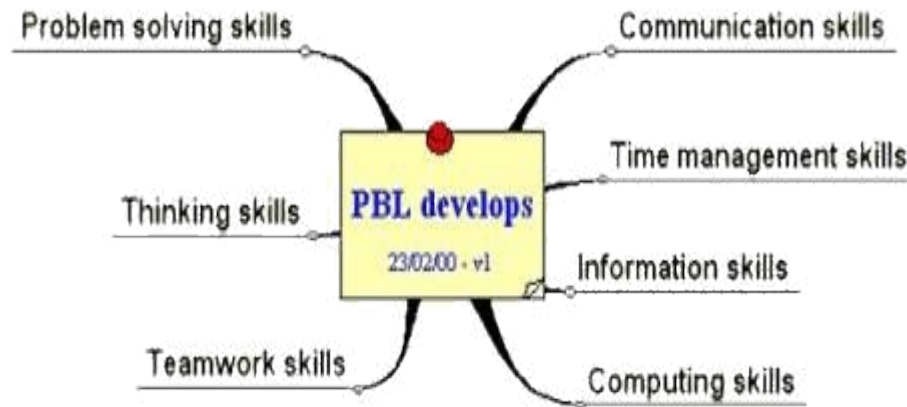
#### **Benefits for faculty:**

- Satisfying ‘research-led’ teaching.
- Opportunity to enhance rationality between ‘research interests’ and ‘teaching’.
- Move away from instructive approaches allows development of ‘better’ relationships with students; respect for students maintained and strengthened.
- A mark of distinction for the approved law school ( the Maastricht experience)
- Recognition by employers, prospective students, and other schools as a groundbreaking, innovative establishment – a virtuous circle
- Resource inference enhances.

#### **Benefits for students:**

- During the PBL session the students come together in a group. While learning they come to know each-other – their strong points their weaknesses etc.

- Greater emphasis on students' development of graduate skills central to potential careers as lawyers, and transferable to other any
- professional context.
- Practised self confidence.
- Positive reception of the complication of real world problems, and a
- learned capacity to cope with uncertainty.
- Higher level of disciplinary understanding – students get an opportunity to 'know' the law better.
- an appreciation of the need for on-going personal professional development – commitment to 'lifelong learning' becomes a 'taken for granted' attitude – valuable, indeed indispensable, to any future career
- Actively involves participants and stimulates peer group learning.
- Helps participants explore pre-existing knowledge and build on what they know.
- Facilitates exchange of ideas and awareness of mutual concerns
- Promotes development of critical thinking skills amongst the students untimely useful in their profession.
- Develops leadership, teamwork, communication, and association skills
- Promotes higher levels of thinking and reduces memorization.
- Can be a challenge to ensure participation by all in the groups.



(Source: <http://www.dlsweb.rmit.edu.au/eng/beng0001/PBL-LIST/PBL>)

### **3.2.7. Demerits of Problem Method:**

- Can be frustrating for participants when they are at significantly different levels of knowledge and skill
- Can be unpredictable in terms of outcomes
- Increases potential for interpersonal conflicts
- Can be time-consuming

### **3.3. Reference:**

1. Barrows, H. and Tamblyn, R. *Problem-based Learning: An Approach to Medical Education*. New York: Springer. (1980)
2. <http://www.dlsweb.rmit.edu.au/eng/beng0001/PBL-LIST/PBL>
3. <http://www.meli.dist.maricopa.edu/pbl/info/>
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5. module of McMaster University available on [www.chemeg.mcmaster.ca/pbl/pbl.htm](http://www.chemeg.mcmaster.ca/pbl/pbl.htm) visited on 17/09/2012 23:27pm