



PROBLEM BASED LEARNING: PBL SESSIONS PLAN ON INTRA NATAL CARE

Nursing

**Dr Mehvish
Khalid***

Principal Dev Bhoomi Institute of Nursing, Navgaon Dehradun. *Corresponding Author

Dr Ratna Prakash Academic Director Pal College of Nursing & Medical Sciences Haldwani.

ABSTRACT

The objectives of PBL are to help the students develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation and to create awareness and motivate the nursing students & facilitators to adopt innovation in nursing education. Problem-based learning is a student centered and small group style of active learning through the experiences of problem solving and it stimulates cognitive process. Facilitators must revolve his or her teaching style around five main criteria i.e. centrality, driving questions, constructive investigations, autonomy and realism. The PBL process have four phases i.e. problem engagement, Inquiry and investigation, problem resolution and problem debriefing. PBL session should be based on actual and well constructed problem. Students and facilitators must have the proper understanding of PBL method. Implementing PBL successfully depends on faculty being skilled in all aspects of the PBL learning process. PBL session plan was constructed on the Intra natal care. Six PBL sessions were planned on the basis of scenario based problems of the first, second, third and fourth stages of labour. Objectives of each session were developed for student's learning through problem solving. Advantages of PBL are – Its student centered, more enjoyable, satisfying, encourages understanding and develop lifelong learning skills. Disadvantages- It requires suitable problem and more preparation time.

KEYWORDS

problem based learning, students, facilitators, PBL process, PBL session plan problem and problem solving.

INTRODUCTION

Problem-based learning (PBL) was first introduced to the field of education in the 1960s by medical education specialist Howard Barrows, who argued that the teaching of medicine at McMaster University in Ontario, Canada should be organized in a way that emulated the reasoning of a skilled practitioner.¹

Monash University was the second institution to adopt PBL within a medical school environment and continues to apply this within its Faculty of Medicine, Nursing, and Health Sciences for the Bachelor of Medicine/Bachelor of Surgery (MBBS) programs delivered in Australia and Malaysia. More than 80 percent of medical schools in the U.S. now use some form of PBL.¹

Problem-based learning (PBL) is a student-centered learning in which students learn about a subject through the experience of problem solving. Students learn both thinking strategies and domain knowledge. The goals of PBL are to help the students develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation. Problem-based learning is a style of active learning.²

The constructs for teaching PBL are very different from traditional classroom/lecture teaching.

Barrows defines the Problem-Based Learning Model as:³

1. Student Centered Learning
2. Learning is done in Small Student Groups, ideally 6-10 students
3. Facilitators or Tutors guide the students rather than teach
4. A Problem forms on the basis for the organized focus of the group, and stimulates learning
5. The problem is a vehicle for the development of problem solving skills. It stimulates the cognitive process.
6. New knowledge is obtained through Self-Directed Learning (SDL).

In order to instill a problem based learning environment into a classroom, the teacher must revolve his or her teaching style around five main criteria⁴⁻⁻

1. Centrality
2. Driving Question
3. Constructive Investigations
4. Autonomy
5. Realism

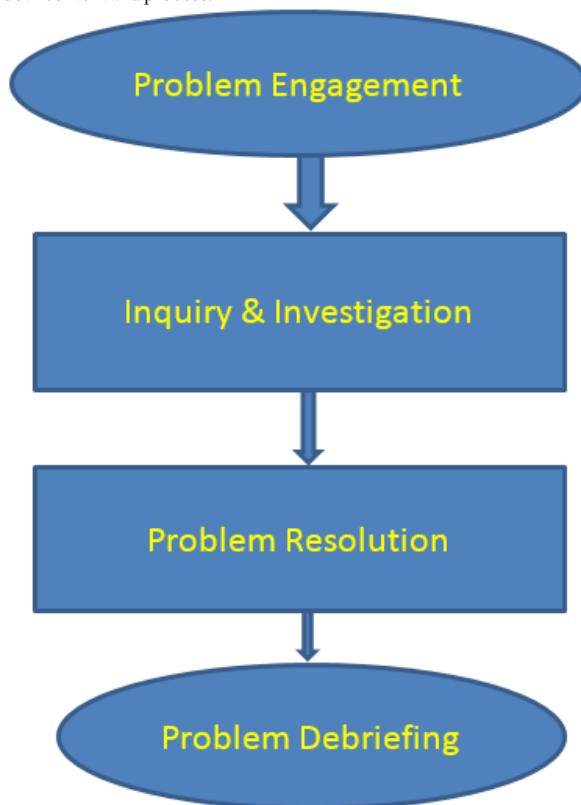
PBL process: The four following phases are include in the PBL process-⁵

Engagement – Students become interested in problem situation and begin posing questions that lead to investigation.

Investigation – Students explore problem to extend their knowledge & skills. Toward the end of this phase, they frame a problem statement.

Resolution – Students make a decision with regard to a solution and decide how best to represent their solution.

Debriefing – Students step outside problem to reflect and generalize both content and process.



Problem Based Learning Process

How to plan a PBL session

Identify Problem

Any subject area can be adapted to PBL with a little creativity. While

the core problems will vary among disciplines, there are some characteristics of good PBL problems that transcend fields (Duch, Groh, and Allen, 2001):^{6,7}

- The problem must motivate students to seek out a deeper understanding of concepts.
- The problem should require students to make reasoned decisions and to defend them.
- The problem should incorporate the content objectives in such a way as to connect it to previous courses/knowledge.
- If used for a group project, the problem needs a level of complexity to ensure that the students must work together to solve it.
- If used for a multistage project, the initial steps of the problem should be open-ended and engaging to draw students into the problem.

Dealing with students' first before PBL session

The transition of students from secondary school to nursing school proved to be challenging at various ground including the learning environment. Students may face difficulty in shifting from traditional learning method to self-directed PBL approach. Though, before entering into the PBL class students get orientation about the process of PBL, still they may find it initially unsettling. This is because they are being asked to take responsibility for their own learning, to work on ill-structured problems where there isn't a pre-established "right answer," and where they are expected to solve problems as self directed learners. In this regard Barbara et al. (2001) state "Imagine a classroom full of students who have spent their entire education in lectures and are seated nicely in rows facing the front of the room. This course will be unfamiliar to them or, if not unfamiliar, something they might have found unpleasant. Will they buy into PBL?"⁸

Role Of The Facilitator

Implementing PBL successfully depends on faculty being skilled in all aspects of the PBL learning process (Farmer, 2004). Tutor's role as facilitator is of pivotal importance, as student learning would depend on the facilitator's understanding and appreciating of his/her responsibilities in the small group sessions (Dolmans, et al., 1994). Schmidt (1999) in a study found that 'tutor performance' was positively associated with the 'quality of the learning problem' and directly influenced 'group functioning'. However, tutor's legitimate role in PBL can be undermined by wrongly viewing "student centered" as "tutor inactive." (Maudsley 1999). Tutor's interference in the PBL process may be very less, but he/she plays a significant role in facilitating the students for self-directed learning. Tutor's main role in PBL is to facilitate the proceedings and to ensure that the group achieves appropriate learning objectives in line with those set by the curriculum developers (Wood, 2003). Thus, Glick (1991), says "A good tutor maximizes tutorial opportunities by being active in a variety of ways: in planning and preparing, in listening, in encouraging critical thinking, in enriching, in offering spoken and unspoken feedback."⁸

Self-directed Learning And The Tutor

Working in groups, students identify what they already know, what they need to know, and how and where to access new information that may lead to resolution of the problem. The role of the instructor (known as the tutor in PBL) is to facilitate learning by supporting, guiding, and monitoring the learning process.⁹ The tutor must build students' confidence to take on the problem, and encourage the students, while also stretching their understanding. PBL represents a paradigm shift from traditional teaching and learning philosophy,¹⁰ which is more often lecture-based.

Tutor, in PBL, should not transmit his expert knowledge to the student, but should probe students' knowledge by encouraging them to contribute to keep the learning process running properly (Diana et al., 2005). Tutor has to make sure that students are engaged both in the process and content of PBL. In terms of process, students should be encouraged to select/volunteer leader and scribe for each problem (Savin-Baden and Major, 2004). Students should move forward step by step in the process participating actively, working collaboratively as team with least.

interference of tutor. Even after the brain storming session, they should undertake their research work independently by themselves. They should be encouraged to have interjection within the group, even, in-between the brain storming and discussion session either by face to face or via social media. Tutor should make sure that discussion session is quite engaging. In term of content, tutor's role is to motivate

the students for identifying learning issues, formulating hypotheses, framing objectives and collecting information. Instead of assisting students by giving mini-lectures, tutor should ask questions like 'how'; 'why'; 'what cause'; 'what do you think'; etc. so that they can think critically using their prior knowledge. While framing hypotheses, contribution of each student with different ideas and views should be appreciated.⁸

Characteristics of Good PBL Facilitator

- A knowledge of the PBL process
- Commitment to student directed learning
- Ability to generate a non-threatening environment whilst still acting to promote discussion and critical thinking
- An ability to facilitate and not teach.
- Willingness to make constructive evaluation of student and group performance.

Characteristics of Good PBL student

- Prompt and present for all sessions
- A knowledge of the PBL process
- Commitment to self/student directed learning
- Active participation in discussion and critical thinking whilst contributing to a friendly non-threatening environment
- Willingness to make constructive evaluation of self, group and tutor

PBL Session Plan on Intra natal care

Session I

Problem:- Mrs. Seeta W/o Mr. Gaurav, a 26 years old, G2P2L1A0, 39 weeks of gestation with vertex presentation is admitted at 5 am today with the complain pain in back which is radiating to abdomen since 2 am. No H/o LPV and show is present .

Objectives:-

- Define labour?
- Differentiate between true and false labour pain?

Session II

Problem:- Mrs. Sheela W/o Mr. Chiranjeev, a 23 years old primi grvida 38 weeks + 4 days of gestation is admitted at 10am today with the symptoms of labour pain since 6 am .

Objectives:-

- As a nurse midwife you perform the health assessment of mother in labour under the following aspects -
 - Preparation of articles
 - History taking
 - Check vital signs
 - Abdominal examination
 - After care

Session III

Problem:- Mrs. Shanti W/o Mr. Sunil, a 27 years old G3P3L2A0 39 weeks + 2 days of gestation was admitted at 5 am today with the symptoms of labour pain since 2 am. Her membranes had ruptured at 4 am. At the time of admission on examination her cervix was 2 cm dilated and she had 2 contractions in 10 minutes for less than 20 seconds.

Findings of the PV examination are

At 9 am the cervix is dilated 5 cm. she had 3 contractions in 10 minutes for 20-40 seconds. FHR is 120 beats / min. Amniotic fluid is clear, BP 110/70 mmHg, temperature 98.4°F & pulse 80/min.

9.30 am FHR 120, contractions 3/10 min for 30 seconds , pulse 80/min, amniotic fluid clear.

10.00 am FHR 120, contractions 3/10 min for 35 seconds , pulse 80/min, amniotic fluid clear.

10.30 am FHR 120, contractions 3/10 min for 40 seconds , pulse 80/min, amniotic fluid clear.

11.00 am FHR 130, contractions 3/10 min for 45 seconds , pulse 80/min, amniotic fluid clear.

11.30 am FHR 130, contractions 3/10 min for 50 seconds , pulse 84/min, amniotic fluid clear.

12.00 noon FHR 136, contractions 3/10 min for 50 seconds , pulse 88/min, amniotic fluid clear.

12.30 pm FHR 130, contractions 3/10 min for 55 seconds , pulse 88/min, amniotic fluid clear.

1.00 pm FHR 130, contractions 3/10 min for 60 seconds , pulse 90/min, amniotic fluid clear. Cervix 10 cm fully dilated , BP 100/70 mmHg.

Objectives:-

As a nurse midwife you would --

- I. Perform the PV examination and record the findings on Partograph.
- ii. Discuss the stages of labour.
- iii. Do the management of first stage of labour.
- iv. Enumerate the phases of labour.

Session IV

Problem: - Mrs. Shanti W/o Mr. Sunil, a 27 years old delivered (FTNVD) a girl baby at 1.20 pm, 3 kg birth weight, baby cried immediately.

Objectives:-

As a nurse midwife you would

- I. Explain the mechanism of labour.
- ii. Perform the management of second stage of labour and provide immediate new born care.

Session V

Problem: - Mrs. Shanti W/o Mr. Sunil, at 1.30 pm had a spontaneous delivery of placenta with all the membranes.

Objectives:-

As a nurse midwife you would -

- I. Perform the active management of third stage of labour.
- ii. Examine the placenta.

Session VI

Problem: - Mrs. Shanti W/o Mr. Sunil, at 2.30 pm is shifted to the observation room. The baby is handed over to mother.

Objectives:-

As a nurse midwife you would -

- I. Perform the management of fourth stage of labour.

Advantages of PBL^{11,12}**For Students**

- It's a student-centered approach.
- Typically students find it more enjoyable and satisfying.
- It encourages greater understanding.
- Students with PBL experience rate their abilities higher.
- PBL develops lifelong learning skills.
- Old and new knowledge embedded in the context of the problem helps student to integrate the knowledge and see their relationships.

For Facilitator

- Class attendance increases.
- The method affords more intrinsic reward.
- It encourages students to spend more time studying.
- It promotes interdisciplinarity.
- PBL usually synthesizes a broad range of subjects and topics.

Disadvantages of Problem-Based Learning^{11,12}**For Students**

- Prior learning experiences do not prepare students well for PBL.
- PBL requires more time and takes away study time from other subjects.
- It creates some anxiety because learning is messier.
- Sometimes group dynamics issues compromise PBL effectiveness.
- Less content knowledge may be learned.

For Facilitator

- Creating suitable problem scenarios is difficult.
- It requires more preparation time.
- Students have queries about the process.
- Group dynamics issues may require faculty intervention.
- It raises new questions about what to assess and how.

Summary

Problem Based learning is a group learning which facilitate by the facilitator through actual or scenario based problems. PBL is an innovative teaching method which develops critical thinking & motivation for learning. PBL is characterized by open-ended generative tasks, collaborative decision-making and problem-solving.

CONCLUSION

Problem Based Learning is an instructional and curricular learner-

centered approach that empowers learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem? Critical to the success of the approach is the selection of ill-structured problems and a tutor who guides the learning process and conducts a thorough debriefing at the conclusion of the learning experience. Introduction of PBL can bring major advancement in clinical care competency of nursing students by improving confidence, critical thinking, problem solving skills and lifelong learning skills.¹³

By keeping value points about PBL in mind, the researcher has felt the necessary to introduce PBL in nursing education, as an effective method of teaching and bring awareness on PBL in nursing educational institutions. Researcher hopes that PBL introduction will over weigh the outcome of traditional method of teaching.

Financial support and Sponsorship

Nil

Conflicts Of Interest

There are no conflicts of interest

REFERENCES

1. Briggs Saga, 10 Tips For Effective Problem-Based Learning: The Ultimate Instructional Solution, May 23rd, 2015
2. Hmelo-Silver, Cindy E. Problem-Based Learning: What and How Do Students Learn. Educational Psychology Review. 2004; 16 (3): 235
3. Barrows, Howard S. Problem-based learning in medicine and beyond: A brief overview. New Directions for Teaching and Learning. 1996; (68): 3.
4. Krajeik, Joseph, Phyllis C. B, Ronald W. M, Elliot S. Collaborative Model for Helping Middle Grade Science Teachers Learn Project-based Instruction. Chicago Journals. 1994; 94: 483-497.
5. Stepien, W.J., & Pyke, S.L. (1997). Designing problem-based learning units. Journal for the Education of the Gifted, 29(4), 380-400.
6. Duch, B. J., Groh, S. E., & Allen, D. E. (Eds.). (2001). The power of problem-based learning. Sterling, VA: Stylus.
7. [https://citl.illinois.edu/citl-101/teaching-learning/resources/teaching-strategies/problem-based-learning-\(pbl\)](https://citl.illinois.edu/citl-101/teaching-learning/resources/teaching-strategies/problem-based-learning-(pbl))
8. Dr. Pradeep Kumar Sahu & Dr. Bidyadhar Sa Tutor's Role in Problem-based learning: Minimum Interference with Maximum Responsibility International Journal of Multidisciplinary & Contemporary Research Vol. I, Issue II, Dec.2015, pp. 1-9
9. Schmidt, Henk G R, Jerome I Y, Elaine HJ. The process of problem-based learning: What works and why. Medical Education 2011; 45 (8): 792-806.
10. Hung, Woei. Theory to reality: A few issues in implementing problem-based learning. Educational Technology Research and Development. 2011; 59 (4): 529.
11. Pawson, E., Fournier, E., Haight, M., Muniz, O., Trafford, J., and Vajoczki, S. 2006. Problem-based learning in geography: Towards a critical assessment of its purposes, benefits and risks. Journal of Geography in Higher Education 30 (1): 103-16.
12. Maryellen Weimer, Phd. Problem based learning: benefits and risks. Faculty focus higher ed. Teaching strategies from magna publications. November 12, 2009.
13. Savery J. R. Overview of Problem-based Learning: Definitions and Distinctions. Interdisciplinary Journal of Problem-based Learning. 2006; 1(1).