



University of Maribor

Faculty of Health Sciences

ASSESSMENT OF THE QUALITY OF PROBLEMS IN THE CONTEXT OF PROBLEM- BASED LEARNING BY NURSING STUDENTS

Vida GÖNC

Mateja LORBER

Jasmina NERAT



Introduction

Problem based learning as a pedagogy changes the learning context as it encourages the critical thinking, group interaction and application of theory.

(Kong, et al., 2014; Martyn, et al., 2014).



Introduction

PBL is characterized as:

- student centered learning,
- learning in small student groups with teachers as facilitators
- acquiring new information through self-directed learning

(DeYoung, 2009; Hmelo Silver, 2004).



Introduction

The most dominant factor that affected the PBL process in the high quality of the problems presented to the students (Munshi, et al., 2008).



Introduction

Attributes for a PBL problem design:

- Relevant
- Realistic
- Engaging
- Challenging
- Instructional



The aim of our research

Students' assessment of the quality PBL problems used in context of problem-based learning.

Methods

- Quantitative research methodology
- Structured questionnaire (Munshi et al., 2009)
 - 19 statements
- 6 dimensions: (1) stimulates thinking, (2) stimulates self-directed learning, (3) leads to studying the intended contents, (4) enhances interest in subject matter, (5) relevance to the future profession with realistic context, (6) matches the level of prior knowledge
- 5-point Likert scale
- Cronbach $\alpha = 0.948$

Sample

- 196 nursing students: 22 (11,2%) male, 174 (88,8 %) female
- Average age 21,2 let
- 101 (51%) first year; 92 (47%) second year
- 146 (74%) full-time; 47 (26%) part-time students
- 18 (9,3 %) employed in nursing



Results

| Quality assessment of PBL problems | \bar{x} | SD |
|---|-------------|-------------|
| Stimulates thinking and analysis | 4,30 | 0,70 |
| Stimulates of self-directed learning | 4,41 | 0,65 |
| Leads to studying the intended contents | 4,33 | 0,66 |
| Enhances interest in subject matter | 4,31 | 0,72 |
| Relevance to the future profession with realistic context | 4,60 | 0,51 |
| Matches the level of prior knowledge | 4,37 | 0,65 |
| TOTAL | 4,39 | 0,56 |



T-test

| Quality assessment of PBL problems | t | p |
|---|--------------|--------------|
| Stimulates thinking and analysis | -0.286 | 0.101 |
| Stimulates self-directed learning | -0.721 | 0.472 |
| Leads to studying the intended contents | -0.604 | 0.546 |
| Enhances interest in subject matter | -0.071 | 0.944 |
| Relevance to the future profession with realistic context | -0.990 | 0.324 |
| Matches the level of prior knowledge | -0.742 | 0.191 |
| TOTAL | 0,587 | 0,558 |



T-test and the correlation analysis

| Variables | Number of respondents | Proportion of respondents (%) | | p |
|-------------------------------------|-----------------------|-------------------------------|------|---------|
| Gender | | | | |
| Male | 22 | 11,2 | 4,40 | 0,354* |
| Female | 174 | 88,8 | 4,37 | |
| Type of study | | | | |
| Full-time study | 146 | 74,5 | 4,33 | 0,558* |
| Part-time study | 47 | 25,5 | 4,50 | |
| Employment in nursing | | | | |
| Yes | 18 | 9,3 | 4,67 | 0,040* |
| No | 176 | 90,7 | 4,35 | |
| Age | | | | |
| Minimum | 19 | | 4,17 | 0,002** |
| Maximum | 42 | | 5,00 | |
| Average | 21,2 | | | |
| * T-test ** Correlation analysis | | | | |



Discussion

Average values are high (4.39 from 5).

- The strong-points of PBL problems:
 - Problems are based on real cases
 - Problem-solving is interesting for students
 - Clear and direct connection with the learning subject
 - Faster adaptation to the clinical environment

Discussion

The weak-points of PBL problems:

- Problems do not respond to the students' knowledge levels
- Different methods in previous education
- Difficulties of entry-level students



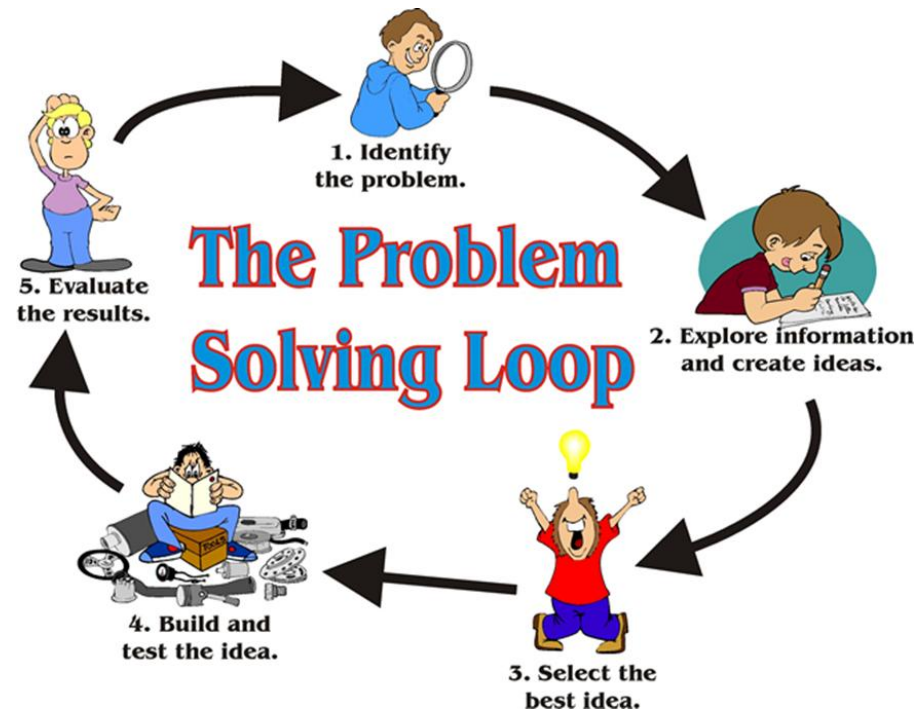
The PBL problem should match the student's level of the prior knowledge and motivate students for studying.

It should show a clear linkage to the future profession.

It must be suitable for analysis and open enough for discussion.



High-quality problems are crucial for successful learning in Problem Based Learning



Thank you for your attention

