

**Evaluation the student`s concepts and performance  
Between Problem Based Learning and Traditional Lecture  
Faculty of Nursing Shendi University 2011 Sudan**

**Part -2 (Social Science)  
Chapter-I  
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**Abstract:** This study was done in Sudan , Naher Elneel state ,shendi town, at shendi university faculty of high nursing during September 2011 to evaluate student`s concepts and performance between problem based learning ( PBL ) and traditional lecture. Seventy three second-year nurses students were asked to complete a brief anonymous questionnaire regarding their attitudes about problem-based learning (PBL) as an educational strategy in relation to traditional lecture. The questionnaire was administered to all students in their PBL groups and required approximately five minutes to complete.

This study documents nurse`s students' opinions of the relative efficacy of PBL versus lectures. Most students valued PBL 79.5%. Students favored PBL for efficiency and directing learning, while PBL was endorsed for breadth of learning and enhancing interpersonal skills. Students more often endorsed PBL over lectures in achieving various educational goals. Agreement among the students reached over 80% for some items.

Moreover the study showed that, a majority of students reported that lectures were not effective than PBL, for the goal "making connections between new and existing knowledge" most students rated PBL as superior to lectures.

In addition to that, PBL were viewed as more effective than traditional lecture in terms of learning efficiency and providing direction to the learner, PBL helped students be more efficient in their use of study time, learning basic science knowledge, and providing students with a means of focusing their learning.

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### **Aim of the study**

The aim of this study was to explore student attitudes, and perceptions of assessment concerning student fulfilment of roles and responsibilities within their PBL tutorials. The PBL environment, with its emphasis on self-directed and collaborative learning, provides a unique context in which to study students' attitudes, and perceptions of, their self-directed learning experiences.

### **Introduction**

In the problem based learning model the students' turn from passive listeners of information receivers to active, free self-learner and problem solvers. It also shifts the emphasis of educational programs from teaching to learning. It enables the students to learn new knowledge by facing the problems to be solved instead of feeling boredom. Problem based learning affect positively certain other attributes such as problem solving, information acquisition, and information sharing with others, group works, and communication etc. Again problems solving is a deliberate and serious act, involves the use of some novel method, higher thinking and systematic planned steps for the acquisition set goals. The basic and foremost aim of this learning model is acquisition of such information which based on facts (Yuzhi, 2003 & Mangle, 2008). According to Gallagher et. al,(1999)

In problem based learning environment, students act as professionals and are confronted with problems that require clearly defining and well-structured problems, developing hypothesis, assessing, analyzing, utilizing data from different sources, revising initial hypothesis as the data collected developing and justifying solutions based on evidence and reasoning. The practice of problem based learning is richly diverse as educators around the world and in a wide range of disciplines have discovered it as a route to innovating education, The educators used problem solving method as an educational tool to enhance learning

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as a relevant and practical experience, to have students' problem solving skills and to promote students' independent learning skill. Eng. (2001).

Opined problem based learning as a philosophy aims to design and deliver a total learning environment that is holistic to student- centered and student empowerment. 1.3 Students' understanding in Problem Based Learning Environment Presenting the students with a problem, give them opportunity to take risks, to adopt new understandings, to apply knowledge, to work in context and to enjoy the thrill of being discoverers. Tick, (2007) stated that in the student-centred learning environment that is desirable for problem based learning; the central figure of the learning-teaching process is the student. The learning objective is not the reproduction, recall and learning of passively received learning material but the active and creative engagement of students in group work and in individual study thus transferring the skills and The most important achievement of a teacher is to help his/her students along the road to independent learning. In problem based learning, teacher acts just as facilitator, rather than a primary source of information or dispenser of knowledge. Roh, (2003) argued that within problem based learning environments, teachers' instructional abilities are more critical than in the traditional teacher-centred classrooms.

Lectures have always been central to teaching in Higher Education and continue to be both the mainstay of many modules and the focus of student expectations of a university education. They are good for transmitting information from the lecturer to a large number of students simultaneously, increasingly, however, there is criticism of the lecture which is seen as a potentially quite passive and therefore not a particularly effective learning experience for students. A traditional lecture is a long way from the sort of active learning that is generally seen as being beneficial. In recent years, increasing student numbers and new learning technologies have created a new set of pressures on, and possibilities for, the lecture.

Lecturing is probably the most widely used formal educational method in the world, and has been for some time. Bligh defines lecturing as "more or less continuous exposition[s] by a speaker who wants the audience to learn something, and notes that its use is not restricted to the formal educational setting, but is used in arenas such as politics (speeches) and religion (sermons). Noting that "lecture" has its etymological roots in the Latin participle lectures (to read), it has been suggested that the academic lecture developed prior to the printing press as "the only way that the knowledge stored in books could be transmitted to a large number of students." 3 There are many readily available resources on effective lecturing, such as the classic texts by Bligh and McKeachie. 3Many universities have on-line resources, as do other academic programs. Christopher(2012).

A lecture can be used to provide a broad-brush overview or introduction of a topic, particularly where the educational goal is for the learner to acquire a background familiarity with the subject, as opposed to a working knowledge. For learners who have a general knowledge of a topic, a lecture can provide an explication of the material, a cognitive framework for organizing the material, or a restructuring of the material to make it more relevant to the situation at hand. Lectures are much less effective at changing attitudes, developing other learning skills (e.g., analysis, evaluation, teamwork, etc.) or helping learners apply knowledge to working situations. Christopher (2012 ).

## Methodology & Material

**Study design :** This study was descriptive cross sectional research done at faculty of nursing Shendi January to Evaluate student's concepts and performance between problem based learning and traditional lecture 2011.

**Study area:** The research was done in Sudan in Shendi town, in the Revier Nile state, which located 174 Km north of the capital Khartoum. Shendi university was established in the year 1990 and it include different collages, medicine , arts, ENT , science , low , laboratory , and nursing faculty which established in 1990 with ration of admission ( 70-84) student per year .

**Study population:** Its include semester eight (fourth years) students registered .

**Sampling:** Total coverage sample and they were 73 students.

**Data collection tools:** Standard closed ended questionnaire was developed by the researches based on available literature to evaluate the student's concepts and performance between problem based learning and traditional lecture.

**Data collection technique:** The data was collected within two weeks every participant filled the questionnaire by him / herself. Each questionnaire take from (4 to 8) minute to be filled, there was no missing questionnaire.

**Ethical considerations:** Permission has been taken from dean faculty and the institutional research board of the faculty. The purpose of the study was explained to every student verbally and the information should be confidential and used for purpose of the study only.

**Data analysis technique:** The data was analyzed manually by simple statistical method and presented in forms of table.

Figure No (1) the difference in student's batch 2007 & batch 2008 performance between traditional lecture and PBL:-

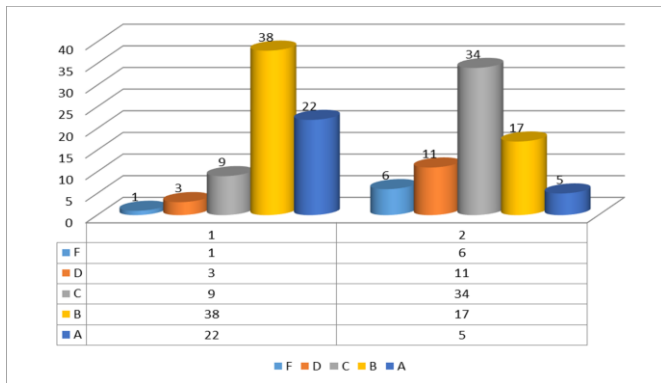


Table No (1) the student impression regarding PBL course:-

Student impression	Frequency	Percentage
An excellent course	33	45.2%
Very good course	17	23.3%
Good course	13	17.8%
Fair course	7	9.6%
Weak course	3	4.1%
<b>Total</b>	<b>73</b>	<b>100%</b>

Table No (2) the student impression regarding course contents

Student impression	Frequency	Percentage
An excellent	35	47.9%
Very good	22	30.1%
Good	11	15%
Fair	3	4.2%
poor	2	2.8%
<b>Total</b>	<b>73</b>	<b>100%</b>

Table No (3) the student skills in application course elements:-

student skills	Frequency	Percentage
An excellent	25	34.2%
Very good	25	34.2%
Good	15	20.5%
Fair	5	6.9%
Un useful	3	4.2%
<b>Total</b>	<b>73</b>	<b>100%</b>

Table No (4) the student impression and priority between traditional lecturer and PBL

Student impression	Frequency	Percentage
Traditional lecturer	15	20.5%
PBL	58	79.5%
<b>Total</b>	<b>73</b>	<b>100%</b>

Table No (5) the student comment regarding time taken to revise and searching course item in relation to traditional lecture

Student impression	Frequency	Percentage
Suitable ( PBL )	33	45.2%
PBL take more time	25	34.2%
No difference	5	6.6%
<b>Total</b>	<b>73</b>	<b>100%</b>

Table No (6) the student concept regarding how they get information from the sources and the common barriers for that:-

Student concept	Frequency	Percentage
Very easy to get the	17	23.3%
Too difficult to get	15	20.5%
Sometimes easy	41	56.2%
Common barriers		
Few references	36	49.3%
Time not enough	37	50.7%
In sufficient staff	0.0	0.0%

Table No (7) the skills adopt by student during PBL course

Skills	Skills level					Total
	Excel lent	Very good	Good	weak	Don't acquire	
Writing an instructional objectives	19	18	33	2	1	73
Identify learning Outcomes	36	8	17	4	8	73
Discussion and communication	31	19	18	2	3	73

**Table No (8) the student impression regarding course item in relation to traditional lecture**

Student impression	Frequency	Percentage
Enough	55	75.3%
Content in PBL More	11	15.1%
Difficult in both	4	5.5%
Unclear in PBL	3	4.1
Total	73	100%

**Table No (9) the recommendation regent by the student regarding PBL program:-**

Recommendations	Frequency	Percentage
To increase course time per week	67	91.8%
To have enough references	70	96%
Student have to use different educational techniques & technology ( video , audio , image , animation etc. ) during presentation	50	71.4%

## Discussion

Based on the finding of present study result , it was found that , majority of the study group commented regarding their impression about problem based learning as method of teaching as follow ;45.2% of them commented that it was excellent course , 23.3 % was very good , 17.8% good course , and 9.6 of them commented as fair course in relation to traditional lecture , these finding indicate that student have positive impression regarding BPL and they get benefit from it . In addition to that, half of the study group commented that PBL course content was an excellent ( 47% ) , 30% very good , 15% good course .

Moreover , the study revealed that , the skills of the study group was improved regarding application of the PBL course element as commented by them , and if they give chance to choose between PBL and traditional lecture , 79.5 most of them commented that they choose PBL rather than traditional lecture , because it was faire , provide them with skills to understand the course content and maintain course objective , easy to apply , student center .in spite of their positive impression regarding PBL as teaching method but they commented that problem based learning takes more time ( 34.2% ) , and there was no enough reference .

Regarding the concept of the study group about the common barriers they found during the course of PBL they commented that, few reference, and time was not enough.

Finally the study group recommended that, to increase time of session per week in order to give chance to them for discussion , to provide enough references , and using of different educational aids , media , technology during the session.

## Conclusion

The findings suggest that the judgments made by students about PBL and the relative effectiveness of PBL versus lectures change with further experience. There was a significant change in student attitudes towards PBL. The survey was administered to second year nurses students late in the fourth semester and then repeated again in the fives semester with the belief that students' attitudes and values related to PBL might change with experience.

## Recommendations

Recommendation regent by the student regarding improving PBL program an includes: increase course time per week, have enough references, and Student have to use different educational techniques & technology (video, audio, image, animation. etc) during presentation .

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