

The Impact of Higher Education Problem Based Learning in 21st Century: Evidence from Malaysia & Pakistan

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Abstract

Problem based learning (PBL) approach has attained prominence due to its novelty in higher education. Problem based learning is pedagogical shift from traditional educational approaches to innovative educational approaches. Problem based learning alerts and challenges to classical and traditional assessment approaches because PBL is concerned with unique assessment approaches. Alternative pedagogies and assessment approaches enhance and give new insights to the effectiveness of PBL at higher education level. Students of higher education institutions learn through cognitions, socialization and experimental connections. Different students make different cognitive, social and experiential connections. This new phenomena has given new insights to the idea of shift of pedagogical paradigm in higher education with focus of teaching to learning. This approach has got prominence in scientific research and has equal importance in various fields of knowledge. It is equally important in other fields of knowledge. The major objective of this study was to explore the impact of higher education problem based learning in comparative perspectives of Malaysia and Pakistan. The participants of the study were included from Malaysia and Pakistan. Cross sectional research design has been used to analyze the collected data to achieve the objectives of the study. The study is significant for researchers in higher education institutions in comprehending the impact of higher education problem based learning in 21st century.

Keywords: *Problem-Based Learning, Higher Education, Impact, Teaching & Learning*

1. Introduction

Barrows (1960) introduced first time Problem Based Learning (PBL) in medical field at McMaster University, Canada (Hung, 2009; Norhaslini, 2011). After the introduction of PBL, different universities all over the world e.g. Michigan State University in the United States, Maastricht University in the Netherlands, and Newcastle University in Australia followed this new technique

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in the field of medical education (Barrows, 1996). Thus, Problem Based Learning (PBL) also spread in other field of education except medical sciences for example, history, literature & language, education, economics, engineering as well as science. More specifically, the introduction of PBL method in the field of education is the biggest curriculum revolution. Thus, the main purpose of the method is that to boosts learners to be clear, mobile, having varied techniques of discerning as well as well-thought-out as a model of different studies. Problem Based Learning (PBL) incorporates learning content with our daily life uses in the circumstance of a certain difficulty. Thus, in the present century the main focus of the PBL approach is to develop and strengthen research in the field of education. It is also called a learning technique and the main application of this method is that it is used in our day to-day actual problems. By the help of this method, learners point out the requirement to help in learning process. Barrows and Tamblyn (1980) stated that PBL has a straight effect in learning development to comprehend as well as to solve a problem. Different steps were used in PBL method to identify the problems and how to solve these problems. The first step in PBL method is problem discovery. These problems help to increase as well as through directing on the use of problem-solving abilities and thinking, learners were stimulated to discover innovative facts as well as establish understanding. Thus, at last problem is solved. According to Tan (2003), PBL method emphasizes on first to solve the problems existing to learners. The 2nd part is understood in words of the part, knowledge as well as supervision of an organizer. Furthermore, it is also observed in words of the learner's part, and their central application is to participation of learners, and they actively solved their problems. Graff & Kolmos (2003) stated that Problem Based Learning (PBL) method is used in problem solving. According to Goodman (2010), it is also a problem solving process, and he supported the concept of Graff & Kolmos towards PBL. He further stated that in the application of PBL method, learners were interested to study perceptions as well as thoughts. Generally the difficulties originating from the daily matters as well as modified founded on the purposes as well as standards of education.

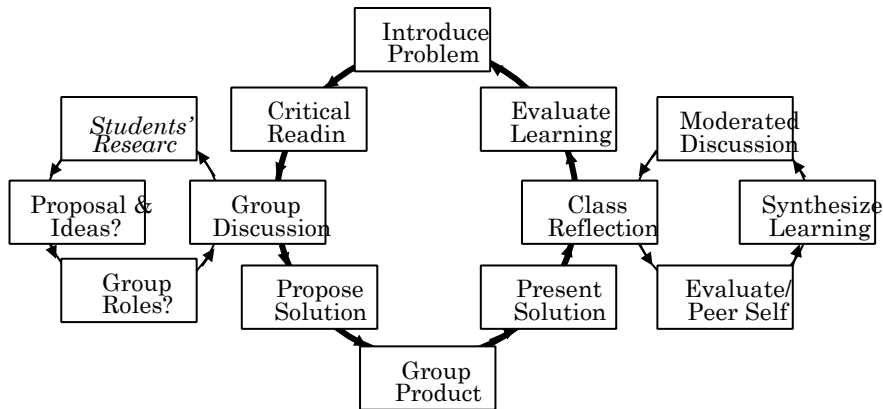


Figure 1. Problem Based Learning Process (Surif et al, 2003, p-66)

According to Figure 1, Problem Based Learning (PBL) process starts in acquiescing critical reading as well as pinpointing the problem and then monitored in a group discussion. Therefore, in groups, learners can do investigation, and then express thoughts in groups up to the attainment of suggested reimbursement. In process of development, result is obtained in class as well as explained. Assessment can take in the classroom, which is tracked in group learning & explanation of the planned assumption. Lastly, assessment is completed in the application of effective problem solving aims.

1.1 Objectives of the Study

This study intended to identify the 21st century impact of problem based learning on the achievement of university graduates at International Islamic university, Malaysia (IIUM) and International Islamic University Islamabad, Pakistan (IIUI). The objectives of the study included:

1. To determine the implementation of Problem Based Learning in teaching & learning process at International Islamic University, Malaysia and International Islamic University Islamabad, Pakistan.
2. To what extent the effect of the implementation of Problem Based Learning in teaching & learning process at International Islamic University, Malaysia and International Islamic University Islamabad, Pakistan.
3. To investigate the level of students' satisfaction towards teaching & learning using Problem-based learning process at International Islamic University, Malaysia & International Islamic University Islamabad, Pakistan.

2. Literature Review

Views on learning in higher education (HE), include the application of a curriculum which is theoretical as well as needs high-level intellectual abilities. Information in higher education requirements to be provided till the truth can be functional to an associated state. Therefore, the action of acute & innovative philosophy must be initiated in all institutions' courses so as to confirm the use of facts. Though, research revealed that the use of higher-order philosophy is inadequate as maximum of learning as well as teaching approaches in higher education level are exhausting speeches (Lyle et al (2001)).

The deductive method is based on lecturer, which reflects knowledge and it is a method of information transmission from a professor to learners. Learners can increase merely the validity as well as correctness of facts obtainable in lacking the requirement to reflect more towards them. Actually, learning is an everlasting changes in human behavior through experiences. Individuals initiated to study meanwhile they were instinctive, as well as knowledge is associated to skill (Slavin, 2005). So, these modifications appear in intellectual construction and recognized in the method of incorporation as well as in lodging consequently of the collaboration among an individual's situation (Hill, 2002). Classroom activities which need for learners to hear inactively as well as remember data which not endorse precarious philosophy (King & Kichener, 1994). Consequently, universities did not produce high quality of education and high quality of graduates who have high level of thinking power as well as they were unable to fulfill the criteria of their jobs. Developments in H.E must ensure suitable learning & teaching method. This method must develop the fundamentals of high-order thinking to facilitate the learners to operate data & concepts. Thus, it can inspire students to discover connotation & suggestions, while they try to attach among realities as well as thoughts. So as to attain this aim, Problem-Based Learning is reflected as one of the planned methods to increase higher-level of thinking. So, the operational terminology of Problem-Based Learning contains teaching in problem solving groups on our daily circumstances, it entails learners to reflect analytically to solve certain problems. Problem-Based Learning is capable to guide learners to study the ideas as well as content successfully. Furthermore, Problem-Based Learning crops students, and they have the abilities to resolve problems as well as it take logical and serious philosophy. Consequently, learners would be capable to incorporate awareness, abilities in numerous fields, obtain soft talents, capable to do effort in groups. Thus, impact of problem based learning needs to be explored to determine the significance on the learning of students in higher education institutions in 21st century. For this purpose, this study has been conducted in two international

universities in two different countries. First is, International Islamic University, Malaysia and second is International Islamic University, Pakistan. The study reflects the impact of PBL on students' achievements.

3. Research Methodology

3.1 Research Design

It was quantitative study; the nature of this research was descriptive as well as survey type.

3.2 Population of Study

Population of this study was comprised of MS and PhD students of faculty of social sciences, International Islamic University, Islamabad Pakistan (IIUI) and International Islamic University, Malaysia (IIUM).

3.3 Sample & Sampling Technique

Simple random sampling technique was used in the selection of the sample for this study. More specifically, sample of the study was comprised of 145 students of faculty of social sciences, IIUI and IIUM.

3.4 Instrumentation

Questionnaire based on five point Likert Scale was used as the data collection instrument.

3.5 Data Collection

Researchers collected data personally as well as by using online sources including email.

4. Data Analysis and Interpretation

Statistical Package for Social Science (SPSS 20) was used for data analysis. Cross sectional research design has been used to analyze the collected data to achieve the objectives of the study. Given below is data interpretation and analysis procedure. Percentage and mean score were used as the data analysis technique.

Table 4.1

Implementation of Problem Based Learning in teaching and learning process

S#	Statements	SA	A	N	DA	SDA	Mean
1.	Attend lectures using PBL	87	66	17	06	04	1.74
2.	Work in a PBL group led by a teacher	38	101	33	05	03	2.07
3.	Work in unsupervised PBL groups	46	83	37	12	02	2.11
4.	Write PBL individual reports	51	81	35	10	03	2.06
5.	Write PBL group reports	42	79	41	13	05	2.22
6.	Give presentations in PBL class	44	65	51	14	06	2.29

Table 4.1, reflected that the mean score of lecture using in problem based learning (mean = 1.74), work in PBL group (mean = 2.07), work in unsupervised (mean = 2.11), write PBL in individual reports (mean = 2.06), and give representation in PBL class (mean = 2.29). Therefore, it is concluded that PBL is dominated by lecture method.

Table 4.2

Effect of the implementation of Problem Based Learning in teaching and learning process

S#	Statements	SA	A	N	DA	SDA	Mean
1.	Motivation in PBL Class	45	67	50	15	03	2.23
2.	Self-Directed Learning (SDL in PBL Class)	46	77	40	13	04	2.18
3.	Collaborative skills in PBL Class	50	76	37	12	05	2.13
4.	Communication skills in PBL Class	72	67	24	11	06	1.95

Table 4.2 presented that most of the learners were motivated in teaching and learning process in PBL. So, the mean score of motivation in PBL class (mean = 2.23), self-directed learning in PBL class (mean = 2.18), collaborative skills in PBL class (mean = 2.13), and communication skills in PBL class (mean = 1.95). Therefore, it is concluded that PBL improve motivation, self-directed learning, collaborative skills, and communication skills in the class.

Table 4.3

Students' satisfaction towards teaching and learning using problem-based learning process

S#	Statements	SA	A	N	DA	SDA	Mean
1.	I learned more in PBL compared to traditional lecture	42	91	35	10	02	2.95
2.	I will recommend PBL in other subject	36	80	51	10	03	2.22
3.	I will attend another course using PBL	48	68	41	18	05	2.24
4.	I like tackling unfamiliar problems in PBL	38	79	44	15	04	2.26

According to table no 4.3, most of the learners agreed that majority of concepts can be learnt with the help of problem based learning in teaching and learning process, if compared to classical method of teaching. So, the mean score of PBL compared to classical method (mean = 2.95), PBL in other subjects (mean = 2.22), attend another courses using PBL (2.24), and unfamiliar problems in PBL (mean = 2.26).

The findings of the study represented that, majority of the students agreed that PBL is dominated by lecture method (Table 4.1). Moreover, table 4.2, showed that PBL improve motivation, self-directed learning, collaborative skills, and communication skills in the class. According to table 4.3, most of the learners agreed that majority of concepts can be learnt through problem based learning in teaching and learning process, if compared to classical method of teaching.

5. Discussion and Conclusion

Learners have specified that decent communication as well as collaboration amongst groups of friends which is the best essential feature can encourage their learning in Problem-Based Learning. Communication with a group of friends is a significant aspect in Problem-Based Learning because learner has to go as well as share data, whereas they were attempting their best to resolve a specified problem. Therefore ultimately Problem-Based Learning method can implement as well as improve decent communication abilities amongst learners. According to Barrows & Tamblyn (1980), the key intents in Problem-Based Learning is that in which learners were capable to improve their conversation abilities. This research furthermore originate that situation in Problem-Based Learning in group conversation, which inspires teamwork can also impact learner's concentration in Problem-Based Learning. Moreover,

outcomes of the investigation presented that 80% of learners agreed that accomplishments, which endorse conversation boost their concentration in Problem-Based Learning (Gibbon & Wall, 2000).. Therefore, the learners will be further excellent as well as advanced as matched to those one, who adopt outdated method of learning. According to Norbaizura (2006), learners decided that one of the merits of Problem-Based Learning is that it can encourage character-learning abilities. It was maintained by Nafis (1999) who also attained a comparable outcome. Study also revealed that the intents and merits of Problem-Based Learning are stimulating and self-governing learning abilities. By administration of a particular issue, learner is liable for their personal knowledge.

Connecting prevailing information as the initial phase to accomplish the issue, learners will identify their parameters as well as what is required for knowledge. Prevailing procedures in problem based learning permit learners to get appropriate facts as well as communicate the facts gained with the prevailing data. Moreover, it also recognizes that the information received is sufficient otherwise not to resolve the particular issue. Learners were also stimulated to imitate as well as permanently prepared to resolve innovative issue. Awareness denotes to the opinions of learners on numerous features of PBL. Moreover, learners manipulated that problem based learning reinvigorated them to study unceasingly (Nafis, 1999). Norbaizura (2006) showed that learners manipulated that they required to put on their critical as well as Creative Thinking Skills (CCTS) in order to resolve the difficulties in problem based learning. In same case, this study also presented that critical thinking is the usage of operative philosophy, which formulate the foundation for investigating. Therefore, effective usage of thinking is understood as the beginning to examine, understand as well as assess an argument. The critical thinking abilities can be separated into two lesser elements i.e.; analyse ideas as well as analyse arguments. Analyzing as well as likening concepts contain the skill to discriminate, categorize the association between complete thoughts. Analyzing arguments contain result bases as well as assumptions otherwise create conventions. Assessing abilities are also separated into further sub-types i.e.; evaluating information as well as assessing the consistency of data. Constructing similarities as well as provisional thinking also comprises measuring component interpretation. It's clear that each and every parts of the philosophy abilities can be made by the usage of problem based learning in learning & teaching. It is because that each and every parts of such type of abilities are compulsory throughout a given result. It is the ability of problem based learning to improve the efficiency in teaching & learning process, mainly in increasing higher-level

thinking abilities endorsing soft abilities among learners. In this line of thinking it can be concluded that Problem-Based Learning also improves the collaboration and communication skills of the learners. Moreover, majority of the learners agreed with the implementation of Problem-Based Learning in higher education institution regarding its usefulness in the process of teaching and learning.

6. Recommendation

It is recommended problem based learning may be used for in-depth understanding of concepts of students in higher education institutions. The problem based learning may be used to enhance critical thinking in students of higher education institutions. The problem based learning may be applied to strengthen the team work and research skills among the students.

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