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**THE POSITIVE IMPACT OF THE IMPLEMENTATION OF
PROBLEM-BASED LEARNING ON UNITEN'S STUDENTS**

Izzatul Ussna Ridzwan (a)*, Alhana Othman (b), Mohamad Ishak Mohamad Ibrahim (c) &
Norlaila Mazura Hj. Mohaiyadin (d)

*Corresponding author

(a) College of Business Management & Accounting, Sultan Haji Ahmad Shah Campus, Universiti Tenaga Nasional,
26700 Bandar Muadzam Shah, Pahang, Malaysia, Izzatul@uniten.edu.my

(b) College of Business Management & Accounting, Sultan Haji Ahmad Shah Campus, Universiti Tenaga Nasional,
26700 Bandar Muadzam Shah, Pahang, Malaysia, Alhana@uniten.edu.my

(c) Yayasan Canselor, Putrajaya Campus, Universiti Tenaga Nasional, 43000 Kajang, Selangor, Malaysia,
Ishak@uniten.edu.my

(d) Faculty of Defence Studies & Management, National Defence University of Malaysia, Sungai Besi Camp, 57000
Kuala Lumpur, Malaysia, norlaila@upnm.edu.my

Abstract

The use of problem-based learning (PBL) as a method of delivery in teaching and learning appears to be a growing interest to the higher learning education system. From favourable collective research outcomes regarding PBL implementation, it appears to be a good reason to introduce PBL as a method of delivery by educators. Thus, the aim of the study is to investigate the positive impact of the implementation of PBL. The methodology for this research is based on qualitative analysis and was conducted through the open-ended survey and the video recording. This research discussed on five positive impact; namely: (1) Enhanced Communication Skills, (2) Developed Teamwork, (3) Positive Attitude, (4) Flexible Learning Experience, and (5) Learner's Accountability. This research will contribute to the improvement of problem-based learning implementation and encourage a more comprehensive action to enhance its implementation. Based on the findings, it is proven that PBL has been a successful method of delivery in teaching and learning process, especially to enhanced communication skills, developed teamwork, encourage positive attitudes, give more flexibility in learning experience, and improve learner's accountability.

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1. Introduction

Problem-based learning (PBL) is a teaching and learning strategy widely practiced in education in order to develop in students the ability to apply knowledge, develop problem-solving skills and reasoning skills, and scope and depth in critical thinking, as part of the process of training professional (Murphy, Hartigan, Walshe, Flynn & O'Brien, 2011).

Generally, students are usually divided into groups in PBL. This is because learning in small groups is more efficient than individual learning in prompting students to achieve (Lou, Abrami, & D'Apollonia, 2001). This study focused on the implementation of concept maps in a nursing PBL class. This activity was developed using elements of art education, as the adoption of arts elements in education can enhance artistry, critical thinking, and creativity in students (Chan, 2013). According to Leonardo (2010), students also can express their beliefs through the agency of literate subjects or cultural work, and this educational approach is very important in the curriculum.

PBL is also an active way for students to learn basic problem-solving skills and acquire knowledge through interaction with others, a key skill demanded by nearly every work environment. Students learn within small, self-directed groups to define and carry out specific tasks, either real-life or study-based (Phungsuk, Viriyavejakul, & Ratanaolarn, 2017).

PBL represented a major development in educational practice that continues to impact courses and disciplines worldwide. The roots of PBL date back to the mid-1960s at McMaster University Medical School in Hamilton, Canada (Loyens, Kirschner, & Paas, 2011).

It is common for students to be motivated to give more effort when involving with the PBL model than with traditional models in learning. Student participation is much less in conventional courses, where the students have no say in the problem formulation. There is a connection between the teaching method and the depth and complexity of the learning, as the student may be expected to reach an analytically complex level of comprehension through the project work, which would not be possible in conventional classes.

Currently student faced difficulties in understanding using the teacher-centered learning. This consumes more effort and time rather than focusing on the level of understanding in a particular subject matter. Students need more exposure on the Student Centered Learning to enhance learning's quality. Failing to understand the courses taught in classroom give a negative impact on the student academic results. Therefore, by using PBL, students may possess a higher level of understanding. The implementation of PBL will trigger the strengths and weaknesses. This paper will focus on the positive impact faced by the students in the implementation of PBL

2. Problem Statement

Based on Ahern (2010), PBL helps students to become deep and active learners by encouraging them to adopt active ownership of their own learning process. Furthermore, with the implementation of PBL, students are able to define the stimulus problems and deliver solutions to those problems better than non-PBL approach (Raja Maznah, Wan Hasmah, Norai, Rohaida, & Harland, 2007). Since majority appreciates PBL as a positive experience (Salimah & Zaitun, n. d.), the following discussion will look at the positive impact on the implementation of PBL among students of higher learning institutions.

2.1. Literature review.

2.1.1. Enhanced communication skill.

A PBL is the process of problem-construction that intersects with critical thinking and communication as learning outcomes. Mitchell, Canavan and Smith (2010) found out a PBL approach demanded more complex approaches to communication and this is based on student's perspective. Additionally, Mitchell et al. (2010) found that the employers placed significant value on the generic skill at group working like enhancing communication skill developed through PBL. Eltantawy et al. (n. d.) and O'Grady, Yew, Goh and Schmidt (2012) stated that a PBL is currently viewed as an effective pedagogy and enhancing critical thinking and oral and written communication as well. Daliyanie (2011) mentioned that a PBL is one of the learning methods that can help students build skills to argue and communicate.

2.1.2. Developed high level of teamwork.

Mitchell et al. (2010) found that the employers placed significant value on the generic skill at group working such as teamwork developed through PBL. PBL has been employed as a partial teaching approach that encourages the students' teamwork with authentic or simulated real life problems (Duch, Groh, & Allen, 2001; Luis Roberto, 2011). On the other hand, Onyon (2012) stated that teamwork, delegation and the use relevant literature to solve a clinical problem in the PBL process in clinical education.

2.1.3. Provide more positive attitude.

PBL enhances behaviours, attitudes and disposition such as persistence, civic engagement or personal responsibility. PBL capable to develop the skills and attitudes valued in their chosen careers (Savin-Baden, 2000) and promotes the students' professional skills and attitudes (Luis Roberto, 2011). PBL allows students to develop generic skills and attitudes desirable in their future practice. Chang, Wang, Ko, Yu, Lin, and Tsai (2017) found that the PBL combines the acquisition of knowledge with the development of generic skills and attitudes. Besides that, Mohd Muzaitulakmam (2014) found that PBL enhances student attitudes towards the environment, environmental knowledge and academic performance in physic subject.

2.1.4. Flexible learning experience.

Professional educators must be a flexible educators who recognizes the learning context priorities or at least encourages their students to have individual learning styles (Forrester, 2004). Mark and Catherone (2010) stated that flexible learning provides learners with choices about where, when, and how learning occurs and it can be assisted by the use of technologies support. According to McTighe and Wiggins (2013), flexible learning environment supports the development of such a learning experience through fewer learning standards, flexible structure and support inquiry and problem solving. Fewer learning standards will enable educators to create the most appropriate learning environment for their students.

2.1.5. Learners accountability.

Based on Havenga (2016), learners should be equipped with skills to take responsibility for their own learning. The accountability-centered characteristic means taking accountability of students for one

another's learning as well as their own. Students should be an emerging leader in performing fixed quality of such given project tasks (Tilchin & Kittany, 2016). Furthermore, findings by Donald (2006) finds that tutorless groups function exceptionally well with the amount of reflection, monitoring and writing they must do in self-assessment and accountability been increased.

3. Research Questions

What are positive impact of the implementation of problem-based learning (PBL) on students of Universiti Tenaga Nasional?

4. Purpose of the Study

The main focus of this study is to determine the positive impact on the implementation of problem-based learning (PBL) among students of higher learning institution. The findings which come from the perspective of students are drawn at the end of this study. This may indirectly motivate and guide educators and higher learning institutions to maximise the use of PBL in order to improve students' academic performance.

5. Research Methods

Qualitative research is intended to penetrate to the deeper significance that the subject of the research ascribes to the topic being researched. It involves an interpretive, naturalistic approach to its subject matter and gives priority to what the data contribute to important research questions or existing information. Noyes, Popay, Pearson, Hannes, and Booth (2008) claimed that qualitative research aims to understand people's experiences and perspectives and can influence how health care and social interventions are conceptualized, developed, and implemented. Qualitative research is well suited to understanding factors that affect the acceptability and feasibility of interventions, as well as implementation fidelity (Noyes et al., 2008).

The study conducted two ways of qualitative researches; the open ended survey and the video recording among undergraduate accounting students in College of Business Management and Accounting, Universiti Tenaga Nasional. It showed students' PBL experiences and their perception on PBL in their academic life throughout their study. Furthermore, from the above two ways of qualitative researches, respondents are able to describe and examine their academic and contributions to education.

The self-developed open ended survey were developed based on the previous literatures as stated in the literature review section and it was conducted in the last third week of the semester during the class period. Instruction was given by researchers and approximately students responded within 20 minutes. There were two parts in the open ended survey; 1) To identify strengths of PBL activities and 2) To identify weaknesses of PBL activities. Researchers are also encouraged respondents to ask any queries from the open ended survey. A convenient sample of 30 was selected as respondent of the study. Selection of respondents considered to have a good vision in PBL activities because they went through the PBL activities during the class. Further, researchers also proceed to the video recording from three respondents within the same sample and approximately it took about 30 minutes for the purpose of to hear or see the further insights from respondents with their permission.

Then, researchers conduct the analytic tools for qualitative research procedures such as coding the data, identified themes or patterns and organized the data into coherent categories by using the abbreviation codes and illustrated it in a diagram of boxes as adopted and adapted by Sorie (2012). In order to ensure the reliability of the coding system, each member of the research team reviews the transcript and some changes have been made.

6. Findings

Table 1 presents the profiles of thirty respondents that had participated in this study. At the time of this study, respondents are currently pursuing their Bachelor of Accounting (Hons) at Universiti Tenaga Nasional (UNITEN), Bandar Muadzam Shah, Pahang. They were chosen at random in a particular class as a form of focus group to obtain their feedback. Since there are more female students as the major population in UNITEN, most of our respondents are female. Respondents are sponsored students by a well-known and established sponsors.

This study was conducted on a particular course using PBL as a delivery method. Their feedback were recorded and analyse to determine their experience in learning using PBL compared to the traditional way of teaching and learning. Few of them were videotaped as to evidence the findings. Respondents were in their third year of study taking a particular subject conducted via PBL as a learning tool.

Table 01. Detail profile of the respondents

Name	Address	Gender	Sponsorship
1. Student 1	Petaling Jaya, Selangor	Female	MARA
2. Student 2	Kluang, Johor	Female	Jabatan Perkhidmatan Awam
3. Student 3	Kuarters Polis Bukit Aman, Kuala Lumpur	Female	MARA
4. Student 4	Sepang, Selangor	Female	MARA
5. Student 5	Kuantan, Pahang	Female	MARA
6. Student 6	Tampin, Negeri Sembilan	Female	PTPTN
7. Student 7	Skudai, Johor	Male	MARA
8. Student 8	Rawang, Selangor	Male	MARA
9. Student 9	Semenyih, Selangor	Female	MARA
10. Student 10	Rawang, Selangor	Female	MARA
11. Student 11	Pasir Mas, Kelantan	Female	MARA
12. Student 12	Kluang, Johor	Female	MARA
13. Student 13	Gerik, Perak	Female	MARA
14. Student 14	Tumpat, Kelantan	Female	MARA
15. Student 15	Batu Pahat, Johor	Female	MARA
16. Student 16	Pasir Puteh, Kelantan	Female	MARA
17. Student 17	Sungai Petani, Kedah	Female	MARA
18. Student 18	Shah Alam, Selangor	Female	MARA
19. Student 19	Kajang, Selangor	Female	MARA
20. Student 20	Nibong Tebal, Pulau Pinang	Female	MARA
21. Student 21	Bandar Baru Bangi, Selangor	Female	MARA
22. Student 22	Maran, Pahang	Female	MARA
23. Student 23	Seremban, Negeri Sembilan	Female	MARA
24. Student 24	Ampang, Selangor	Female	MARA
25. Student 25	Kluang, Johor	Female	Jabatan Perkhidmatan Awam
26. Student 26	Kulim, Kedah	Female	PJMY (D)
27. Student 27	Shah Alam, Selangor	Male	PTPTN
28. Student 28	Seremban, Negeri Sembilan	Female	PTPTN
29. Student 29	Batu Gajah, Perak	Female	PTPTN
30. Student 30	Bukit Mertajam, Pulau Pinang	Female	PTPTN

Various opinions and experiences related to the positive impact of the implementation of PBL has been raised in the discussion. Their feedback has been noted and recorded and transcribe into useful analyzed information. The feedback gathered from the students has been summarized into five major areas that are, (1) Enhanced Communication Skills, (2) Developed Teamwork, (3) Positive Attitude, (4) Flexible Learning Experience, and (5) Learner's Accountability. Therefore the analysis of data will follow according to the feedback gathered.

6.1. Enhanced communication skills.

The central to PBL is the use of group work (Von Kotze & Cooper, 2000). Student activity revolves around a complex series of interactions between team members over time and draws on a range of key transferable skills through good communication. Good communication skills are able to convey information among students clearly, simply, and thus gets thing done and understood. This leads to valuable skills for students at higher learning institutions. Group work has also been identified as holding potential for student satisfaction. Students able to do things such as giving and understanding instructions, learning new experience, make requests, ask questions and finally convey messages as and when it is required.

6.2. Developed teamwork.

Developing teamwork in teaching will encourage students to cooperate, using their potential skills and providing valuable feedbacks despite any personal conflict between individuals. Teamwork using PBL demand that reduction in instructor's roles. Without PBL, the instructor's role as content providers, but with PBL it guides students the processes of self-directed learning and skill building. This approached is called as student-centered learning and can implement as parts of courses, entire courses, or across the curriculum.

6.3. Positive attitude.

PBL sessions conducted during teaching and learning leads to a positive attitude. The power of positive attitude can enhance students learning experience. It brings optimism to their life and makes learning much easier, brighter and more successful results. Currently, students faced with the demands of different courses together with a myriad of readings, assignments, and projects. Students often find themselves lack of synergy and driving force to stay motivated till the end of a semester. The answer lies in developing a positive attitude. PBL contributes to the success of learning experience via positive attitude. Students feel that to keep staying motivated in their studies require a clear purpose and positive attitude.

6.4. Flexible learning experience.

In this sense, PBL can be a major departure from the usual learning experience that is heavily lecturer-centered to a more flexible learning experience. Lecturers will usually address the flexibility of the subject matter and put various measures into place to make sure that it creates a flexible learning environment. The research shows that using PBL approach, students being able to learn and define learning objectives based on own needs and interest. This becomes an integral part of the whole learning process.

6.5. Learner's accountability.

The research found that using PBL as a learning environment creates greater student accountability in learning. They become more responsible in completing their task given a lecturer. Example assignments, projects and quizzes completed on time with quality results. Give them more understanding with commitment provided by all members in a team. It serves a relatively stable indicators of how a learner perceives, interacts with, and be more accountable with the correct strategies and can generate better academic achievement.

7. Conclusion

The benefits of PBL are numerous and varied despite the facts that it works in some situations with some students. Based on the findings, it is proven that PBL has been a successful method of delivery in teaching and learning process, especially to enhanced communication skills, developed teamwork, encourage positive attitudes, give more flexibility in learning experience, and improve learner's accountability. Thus, to maximise the positive impact on the implementation of PBL, educators are expected to "know" their students' needs and abilities and provide individual support. Classes and activities must be planned to reach the students, not just the top achievers. Educators need to provide the best possible opportunity to every student and understand all available methods and learning theories and use whichever is best suited to each student, group, or class. As for future studies, it is suggested to include more higher learning institutions that practices PBL as the sample for the study.

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