THE APPLICATION OF PROBLEM-BASED LEARNING AS THE NEW METHOD TOWARDS SECONDARY STUDENTS IN DEMONSTRATION SCHOOL

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Abstract - The main purposes of this study were to investigate the success of the implementation of problem-based learning in classroom and to evaluate the level of satisfaction. The population of this study was Suan Sunandha Rajabhat University Demonstration's students. A survey was conducted in Suan Sunandha Rajabhat University during May to August of 2017. The quota sampling was utilized to obtain the sample which included 50 students, 50 percent male and 50 percent female students from 2 classrooms. The findings revealed that the majority of respondents had showed the success of study with Problem-Based Learning with high satisfaction significantly

Index Terms - Comparison, Problem Based Learning.

I. INTRODUCTION

In modern world with new technology, learning process must be developed and enhanced with many techniques. Integrated learning management is nowadays a key success for academic excellence of many modern learning organizations of a country. In order to be successful in the world competitiveness in this globalization [1] Learning organization require strengths in both students and faculty members. Learning organizations with new learning techniques are distinguished by their success. Problem-based learning is one of the very important active learning that must be used to offset the old lecture in classroom. Problem-based learning may affect benefits of individual students, groups of students, and teachers. In the modern day the quality standard of education need to be improved very fast since there are new techniques and new learning technologies. It is imperative that many schools in Thailand enhance methods of teaching. The passive learning method has gained less support from many intellectuals as well as educational policy makers and ministry of education [2].Problem-based learning method is an good alternative to the teacher-led classroom and has been introduced to many demonstration schools in recent years and has gained the momentum as one the popular method to get their students to actively participate to solve problem on hands and willing to search new knowledge on their own way or as a group rather than sitting passively in the classroom for their teachers and professors to provide the knowledge for them.The success of problem-based learning comes from the fact that the teacher is not center of the classroom but the students are playing the role of problem solvers by using the real-world problems which capture students' interest and provoke serious thinking as the students acquire and apply new knowledge to solve these problems.[7]

II. LITERATURE REVIEW

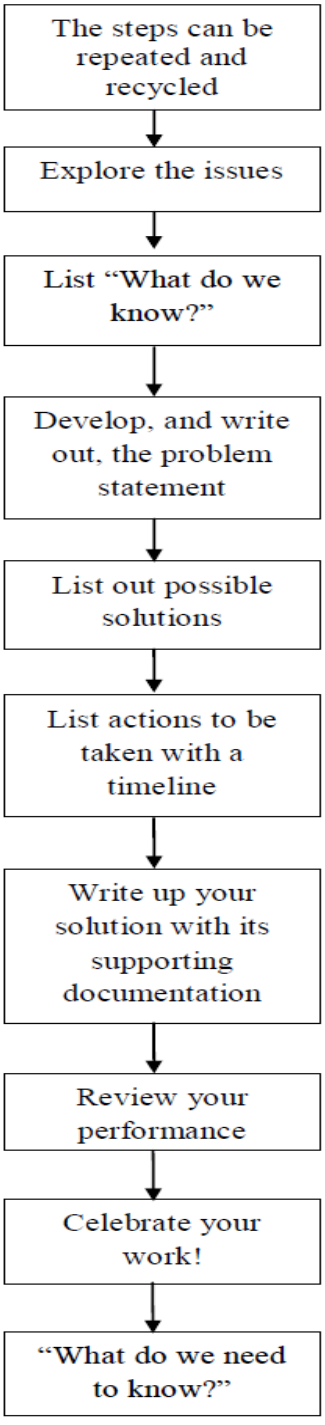
The benefit of problem-based learning has been accepted among educational community for many decades.

The Opportunities of PBL

No.	Opportunities of PBL
1.	Students can examine and try out what they know?
2.	Students can discover what they need to learn by themselves?
3.	Students can develop their people skills by working as a team and achieving a high performance.
4.	Students have a better chance to improve and develop their communication skill by working as a team.
5.	Students have a better chance to practice how to state the evidence and sound argument within the team.
6.	Students have learned a better judgment and how to be flexible to achieve the higher purposes.
7.	Students have a chance to practice important skills that will benefit them in the future.

However, the practice of learning by using problem-based learning is limited in Thailand [3]. This teaching method is an active approach that shifts the role of students to be center of the classroom and the focus is not to get the knowledge from the expert in classroom which used to be the teacher but to find out and report to their group and their class. The key to success is to design a problem that is not too hard or too easy in the eyes of students. In this way, a meaningful problem leads to the purpose of education and allow students to be more creative in their answers. Problem-based learning is active learning

while old fashion lecture-based learning is passive learning. Ramey, in his successful study, used problem-based learning with calculus students and report that there were positive results attitude of learning and enjoyment in learning from group study and interaction of group members [4]. Hidinger used problem-based learning as a project of group study and confirmed that students became interested in their self-learning and actively searching for new knowledge and enjoying their contributing new information to the group and enjoying the role of leader of the group [5]. The summary of problem based learning in general has nine steps that can be repeated and recycled as follows.



III. METHODOLOGY

The objective of this study was to examine the success of the implementation of problem-based learning with students of Suan Sunandha Rajabhat Demonstration School and to assess the performance and level of satisfaction of these students who participated in project. The sample for this study consisted of 50 respondents who was taught by using problem-based learning technique, from May to August of 2017.A pilot data collection was conducted to get sample size of 400 respondents was determined by Taro Yamane table with a 0.05 level of significance [6]. However, there were a limited time and budget, the number 50 students was chosen. Mean and standard deviation, T-test, One- Way ANOVA: F- test were used in the analysis of the study. The framework of Problem-based learning is shown in Fig. 1.

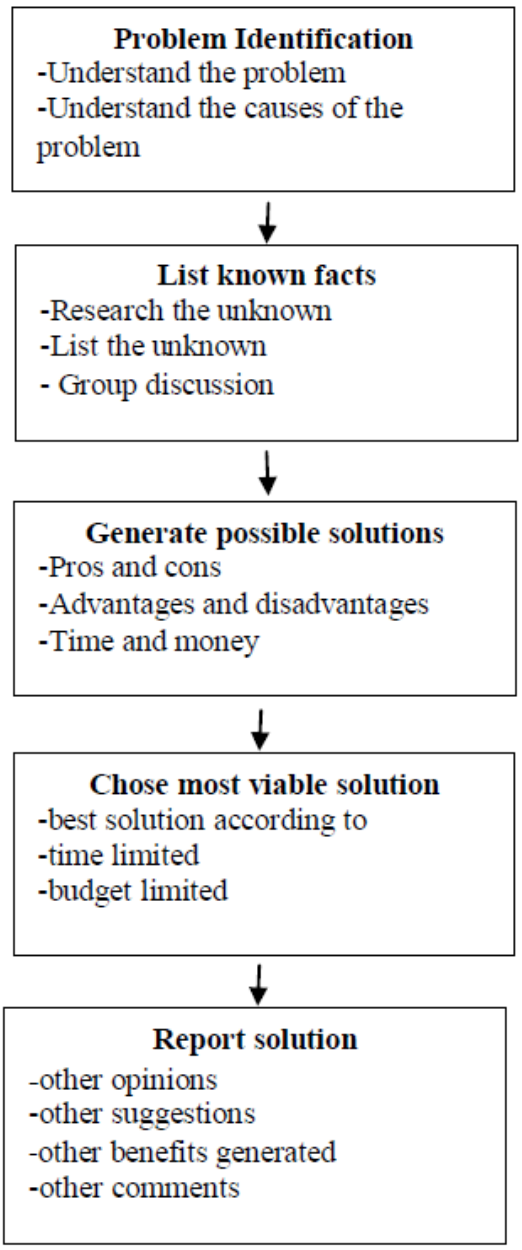


Fig. 1 Problem-based Learning

III. FINDINGS

From the data analysis, the findings showed a demographic profile indicated that male and female students were sampled with a ratio of 50:50.From the implementation of problem-based learning in classroom for 12 weeks, the findings revealed that there was a positive gap between pretest and posttest. There was 40 percent increase. This would indicate the high level of success of the implementation of the problem-based learning

	Mean	S.D.	Rank
Factors			
1. The problem-based learning model.	3.88	.7859	5
2. The activities of the problem-based learning	4.32	.7230	3
3. The interaction of students from the methods of problem-based learning	3.69	.6350	4
4. The proper role of both teacher and students from problem-based learning	4.78	.9263	1
5. The knowledge gained from the method of the problem-based learning	4.46	.7334	2
All categories	4.23	.7565	

TABLE I
Level of Satisfaction

From Table I, the mean score can be used to rank the highest to the lowest level of satisfaction as follows: 1) The proper role of both teacher and students, 2) The knowledge gained from the method of the problem-based learning, 3) The activities of the problem-based learning, 4) The interaction of students from the problem-based learning, and 5) the problem-based learning model. Also, the mean score of all categories was 4.23 with a standard deviation of 0.7565 which indicated that the level of satisfaction was high.

LIMITATION AND FUTURE STUDIES

One of the main limitations of this paper came from a small sample size which sampling only 50 respondents which may not represent all other students. Also, future studies should cover not only the level of satisfaction but also the reasons that respondent were satisfied or were not satisfied. An in-depth interview may be useful for a small sample size to get a deeper understanding of the implementation.

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