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Problem-Based Learning: Enhancing Writing Ability in Thai EFL Students

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ABSTRACT

The purposes of this research are to examine how problem-based learning affected to narrative writing ability and to investigate the progression of students' narrative writing ability after using problem-based learning. In this study, a semi-experimental design with time series single group was used. The participants, 22 students were selected by purposive sampling. The instruments used were pre-post-test, lesson plans were based on problem-based learning, narrative writing tests, and rubrics towards problem-based learning. The data was statistically analysed by mean scores, standard deviation and Repeated Measures ANOVA. At the end of the study, it revealed that; students' narrative writing ability was significantly improved at the .01 level after using problem-based learning and the progression of students' narrative writing ability towards the Problem-Based Learning was significantly improved at the .01 level

Keyword: narrative writing, problem-based learning, writing ability, PBL

Introduction

Writing skill is a productive skill that contains the writer's purposes, ideas, grammatical ability, and organization. Mastery of those components will affect to the quality of writing. Gail (1994) claimed that written language is developed for interrelations of purposes, audience, and form in writing. Moreover, Rerg-anan (2011) mentioned that writing skill is the ability to arrange and rearrange thoughts because writers have to think about the topic, purpose of writing and the audience. From the multi-relationship of word arrangement, thoughts, ideas, and the writer's imagination, students might integrate their ideas and systemize them from words into a paragraph. However, students also might confused about how to write it correctly, especially in areas such as using verb forms, organizing parts of speech, and grammar. The complex rules and structure of writing make students confused on how to even produce basic writing, for example, paragraph writing, narrative writing, descriptive writing, and expository writing, and so on. Thus, there are some obstacles to overcome in the process of teaching English writing. Similarity, Mulmanee (2009) claimed that the problem of Mathayomsuksa students with writing is that they were not taught to use their ideas for writing. Moreover, Cadet (2009) mentioned in her thesis that writing was a complicated skill because it required diversely skills from hand-writing, spelling, and syntax to organize it. On the other hand, PBL or Problem-Based Learning has been promoted as a way to enhance students' thoughts, and engagement.

Problem-Based Learning or PBL is an instructional method which provides situations for students to solve practical problems. In addition, Kumar and Refaei (2013) wrote that problem-based learning is a new pedagogy which constructs and practices knowledge with social interaction. Also, Delisle (1973, p.9) pointed out that PBL will change passive activity in classroom into active activity in the classroom.

Problem-based learning techniques can provide a lot of benefits in writing. Horn and Marie (1994) indicated in their research that after using problem-based learning, students become better problem-solvers when they analyze problems utilizing the writing process. In addition, Smart, Hicks, and Melton (2012) mentioned that this approach teaches students to write in a professional context because the use of scenarios prompts students to think critically about what, why, and the purpose to whom they are writing. Deborah E. et al (2011) claimed that problem-based learning, a method which incorporates student engagement and collaboration that is student-centered and self-directed, challenged students to solve realistic problems with accurate assessment of their abilities. It requires students to talk to their friends to collaborate on their project to make it successful. In addition, Loyen, S. M. et al (2015) claimed in their research that PBL could increase the likelihood of conceptual change. In brief, PBL might encourage or enhance students to use their own ideas to write something that actually reflects their thoughts. Also, student writing would develop from just a mix of words to a thoughtful and well-organized paragraph.

In summary, problem-based learning has many benefits for students to enhance their writing ability, but little research goes into the details of narrative writing, expository writing, cause and effect writing, etc. This technique would be helpful for secondary school students using PBL in the classroom because the scenarios are related to students' lives.

Objective of the Research

1. To examine narrative writing ability after using problem-based learning;
2. To investigate the progression of students' narrative writing abilities after using problem-based learning.

Research Questions

1. Does Problem-Based Learning enhance students' narrative writing ability?
2. How is the progression of students' writing abilities enhanced after using problem-based learning?

Methodology

This research study uses non-randomized single group pretest and posttest with time series design. There is quantitative data collection from students' scores in pretest, writing test and posttest. The data was analyzed by mean scores, standard deviation and Repeated Measures ANOVA.

Participants

The participants, 22 students who enrolled in English subject as Core subject, were selected by purposive sampling procedure. Those were selected because the students received scores lower than the average writing placement test score.

Data Collection Procedure

Before conducting the research, researcher administered the English Writing Placement Test to Secondary school students to survey the range of the writing ability. The English Writing Placement test, containing 20 points, was a test to measure general writing ability for secondary school students which based on Thai Curriculum Criteria. The result of the survey showed that participants in got lower scores than the average. Thus, Problem-Based Learning together with contents and lessons' objectives were accommodated in the classroom. Then, the researcher utilized research instruments such as pre-test and post-test, rubrics for evaluation narrative writing, lesson plans based on PBL, writing practice, and writing tests.

These instruments were analyzed and checked by 3 experts who are specialists in language teaching.

After getting reliability instruments, researcher collected the data from participants in academic year 2015. The participants were oriented to know how the PBL would be implemented in the classroom. Then, the participants took the pre-test to examine their starting narrative writing ability. Participants incorporated PBL into their classroom lessons for four weeks. Lastly, their scores were analyzed by mean score, standard deviation, and measuring the narrative writing ability's progression through Repeated Measures ANOVA.

Data Analysis

In this research, collected data was separated into 2 parts to answer research questions. The 1st part was to examine by descriptive statistics: mean score and standard deviation. For the 1st part, it answered whether technique would improve students' narrative ability. The 2nd part was measure narrative writing's progression of students through Repeated Measures ANOVA. This part would answer whether students' progression increased after students were preceded by PBL repeatedly.

Results of the Study

The results of the study showed that the post-test scores were higher than pre-test scores. The improvement of participants at the end of the study was significant at the level .001 (F= 6.78, df = 2.45, 51.44, p = .01)

Table 8.1
Mean Scores and Standard Deviation of Students' achievement

	Mean	Std. Deviation	N
Pretest	6.73	2.71	22
Posttest1	9.55	3.40	22
Posttest2	9.05	3.23	22
Posttest3	10.05	4.48	22

According to the Table 8.1, mean scores and standard deviation after using PBL was increased significantly collecting from 22 participants within 4 times. The results were Mean and S.D.; pretest was 6.73, and 2.71, the 1st posttest was 9.55, and 3.40, the 2nd posttest was 9.05, and 3.23, and the 3rd posttest was 10.05, and 4.48.

Table 8.2
The Variance of Participants through Mauchly's Test of Sphericity

WSE	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilonb		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	.69	7.12	5	.21	.82	.93	.33

According to the results of the study in Table 8.2, Mauchly's Test of Sphericity was design to measure the repeatedly variation of participants in this research. The results revealed that p-value was .21 which meant significant in this test of sphericity was not improved. Thus, that result was not good enough because it rejected hypothesis in this test. In addition, the measuring repeatedly variances through using PBL four times was compound (Mauchly's W = .67, df = 5, p = .21). In short, it summarized that the variances of students' narrative writing ability four rimes were normal distribution.

Table 8.3
Measuring within Narrative Writing Ability

Source		Type I Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Time	Sphericity Assumed	142.05	3	47.35	6.78	.00	.24
Error (Time)	Sphericity Assumed	439.96	63	6.98			

As shown in Table of Measuring within Narrative Writing Ability, this table aimed to measure how Problem-Based Learning affecting to Students' Narrative Writing Ability through F-test. The result of F-test in this research was significantly improved at the .00 level (F = 6.78, df = 3, p. = .00). In brief, it revealed that 2 times out of 4 times measuring students' narrative writing ability were significantly improved. In addition, it meant that there might have 2 times out of 4 times that the average score were higher than the average score of pretest.

Table 8.4
Pairwise Comparison by Repeated Measures ANOVA

Student' s narrative writing ability	Pretest	Posttest 1	Posttest 2	Posttest 3
	(\bar{x} =6.73)	(\bar{x} =9.55)	(\bar{x} =9.05)	(\bar{x} =10.05)
Times	-	2.82*	2.32*	3.32*

*p. < .05

According to Table 8.4, the pairwise comparisons revealed the average score which was analysed by SPSS to evaluate the progression of students' narrative writing ability after using PBL in the classroom. The results were Pretest and Posttest 1 (p. = 2.82), Pretest and Posttest 2 (p. = 2.32), and Pretest and Posttest 3 (p. = 3.32). From the results, it claimed that the progression of students' narrative writing ability was improved increasing than pretest when they were treated by Problem-Based Learning in the classroom.

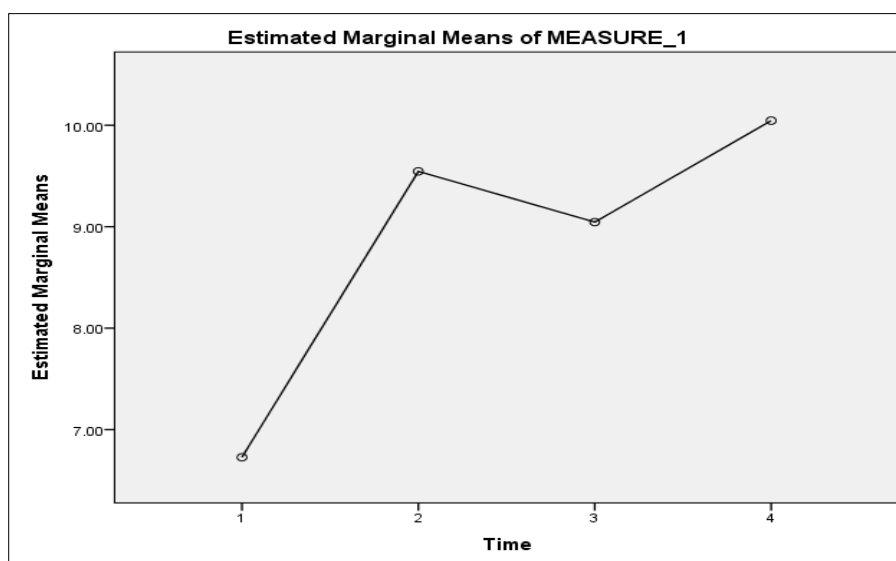


Figure 1. Graph of students' progression – narrative writing ability through PBL

According to Figure 1, the results of this figure showed average score from posttest 1, 2, and 3 were increasingly higher than pretest. It claimed to this technique was able to enhance students' narrative writing ability. However, the average score of posttest 2 was dropped in the diagram. In addition, researcher would like to explain why that score was lower than others because students learnt extremely different context and not related to their experiences. Thus, participants could not express the story from scenarios. Eventually, posttest 4 was adapted and increased again. In short, Problem-Based Learning was able to enhance the progression of students' narrative writing ability.

Conclusion

According to the results of the study, students' narrative writing ability was significantly improved at the .01 level. It showed that PBL or Problem-Based Learning was able to enhance students' ability to perform narrative writing. Not only does this show student achievement, but it also demonstrates a pathway for teachers who seek professional development. In addition, the graph of students' progression shows that students would be increased when they used PBL in the classroom. However, PBL was not a perfect fit to every participant. The researcher would like to suggest that content choice in creating scenarios used in problem-based learning methodologies is the most important factor for successful implementation. Students were not able to imagine and write comprehensively unless the content provided enough information.

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