

# PENGARUH METODE PEMBELAJARAN BERBASIS PROYEK DAN *SELF-EFFICACY* TERHADAP KOMPETENSI MENULIS SISWA

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## ABSTRAK

Penelitian ini bertujuan untuk menyelidiki pengaruh metode pembelajaran berbasis proyek dan *self-efficacy* terhadap kompetensi menulis siswa. Ini merupakan penelitian eksperimen dengan menggunakan rancangan penelitian *posttest-only control group design* dengan faktorial 2x2. Dalam penyelesaian penelitian ini, 84 siswa kelas VII di SMP Negeri 1 Denpasar pada tahun pembelajaran 2015/2016 dipilih sebagai sampel. Data penelitian ini dikumpulkan melalui kuesioner *self-efficacy* dan tes kompetensi menulis yang selanjutnya dianalisis dengan menggunakan ANAVA dua jalur dan tes *Tukey*. Temuan-temuan penelitian ini meliputi (1) siswa yang belajar dengan metode pembelajaran berbasis proyek mampu meraih hasil yang lebih baik secara signifikan dalam menulis daripada siswa yang belajar dengan strategi konvensional, (2) terdapat efek interaksi yang signifikan antara metode pembelajaran yang digunakan dan *self-efficacy*, (3) untuk siswa yang memiliki *self-efficacy* tinggi, mereka yang belajar dengan menggunakan metode pembelajaran berbasis proyek mampu mencapai hasil yang lebih baik secara signifikan dalam menulis dibandingkan dengan mereka yang belajar dengan menggunakan metode konvensional, (4) untuk siswa yang memiliki *self-efficacy* rendah, tidak ada perbedaan yang signifikan dalam kompetensi menulis antara mereka yang belajar dengan menggunakan metode pembelajaran berbasis proyek dan metode konvensional. Temuan-temuan penelitian ini menyiratkan bahwa pengimplementasian metode menulis dengan menggunakan metode pembelajaran berbasis proyek dan juga mempertimbangan *self-efficacy* siswa patut untuk dipertimbangkan untuk mengembangkan kompetensi siswa dalam menulis.

Kata kunci: pembelajaran berbasis proyek, *self-efficacy*, kompetensi menulis

## ABSTRACT

*This research aimed at investigating the effect of project based learning method and self-efficacy on students' writing competency. It was an experimental study of posttest-only control group with 2x2 factorial design in which there were twelve treatments lasted from February 2012 until the end of March 2016. For the accomplishment of the study, 84 of the seventh grade students of SMP Negeri 1 Denpasar in the academic year 2015/2016 were selected to be the sample. The data of this study were collected through self-efficacy questionnaire and writing competency test which were analyzed using Two-way ANOVA and Tukey test. The findings of the research are: (1) students who were taught by using project based learning method can significantly achieve better in writing than those who were taught by using conventional method, (2) there is a significant interactional effect of project based learning method and self-efficacy toward students' writing competency, (3) for high self-efficacy students who were taught by using project based learning method achieved significantly better than those who were taught using conventional method, (4) for low self-efficacy students, there is no significant difference between those who were taught by using project based learning method and those who were taught by using conventional method. The results of the study imply that the implementation of project in writing with the consideration of students' self-efficacy is worth to be considered for developing students' writing competency.*

Keywords: project based learning, *self-efficacy*, writing competency

## INTRODUCTION

Writing is a language skill which becomes an important component of any English curriculum including 2013 curriculum. Writing is considered as a complex activity since it covers several cognitive and linguistic abilities. Cognitive ability is viewed from the ideas created as the result of writing process. According to Ashman and Conway (1997), cognitive is a fusion of brain activities. The activities involve understanding, especially, about how the integration of existing knowledge with stimuli that originate inside and outside of the individual takes place. In this case, the students are expected to be competent in applying linguistic ability to express their ideas so that their writing can be understood clearly by the reader.

Since writing is a complex activity, it is considered difficult for the students to write good writing in short time (Marhaeni et al., 2005). According to Chakraverty and Gantum (2001) writing is a reflective activity that requires enough time to think about the specific topic, to analyze and to classify any background knowledge. It means writing integrates several processes, such as: finding topic, providing information to support the topic, classifying ideas, organizing ideas in logical sequence and implementing linguistics knowledge. From Marhaeni et al (2005) and Chakraverty and Gantum (2001) point of views, it interferes that writing is a continuous process that needs several stages. Consequently, the students must be given ample time to finish their writing assignment.

In relation to the statement above, there is an effective method called Project Based Learning (henceafter: PBL) which provides ample time for students to finish their writing assignment. This method is appropriate to teach writing (Borich, 2007), since there are (1) authentic and interesting topics that can be decided by the teacher, ( 2) some meetings provided to finish some phases in writing activities, and (3) meaningful assessment which focuses on the process and the product of students' writing itself.

Besides, according to Blumenfeld, Soloway, Marx, Krajcik, Guzdial, Palinscar (in Diaz-Rico 2008), there are four characteristics of PBL, those are:

1. Students are engaged with a driving question that is related to real world situation.
2. Students conduct an active research that engages them in a study of concepts, analysis of data, and presentation of their findings.
3. The collaboration takes place between students, teacher and others in such a way that the learning is shared among the members of the learning community.
4. Cognitive tools such as; computers, LCD, internet and other telecommunication medias are used to support the students work.

From the characteristics above we can see that all of the items would match the needs of the students to improve their writing competency.

However in writing project, PBL recognizes that learners will acquire important knowledge and skills from the project only if they (1) attribute their success to effort, (2) believe they can accomplish the goals of the project, and (3) perceive themselves as competent. PBL also recognizes that learners are more likely to perceive themselves as competent if they have the prior knowledge, prerequisite skills, and learning strategies necessary for completing the project (Borich, 2007). It means that Borich belief that students will be successful in completing such a project if they have high self-efficacy.

Self-efficacy is the belief of one's capabilities to organize and execute an action to manage a prospective situation (Bandura, 1995). It is a person's belief in their own competence. One who has a high level of self-efficacy is capable of performing in a certain manner to achieve certain goal. It is believed that self-efficacy affects our social interaction in almost every way. For example, people's motivation, affective states, actions are based on what they belief about their selves whether or not they are able to do something. Furthermore, people with high self-efficacy are more likely to view a difficult task as something to be mastered than something to be avoided (Webber, 2011).

Additionally, someone who has high self-efficacy will view a difficult task as a challenge. He/she has high commitment for the purpose that he/she wants to achieve. In contrast with the one who has low self-efficacy, he/she will view a difficult task as a threat. This kind of people usually try to avoid difficult tasks, have a low aspiration, have a weak commitment toward the purpose that they want to attain, tend to be pessimist, and easily to feel depressed and surrender when facing a difficult task. The characteristics above also found in SMPN 1 Denpasar. Some students were found showing the indication of having low self-efficacy. In fact, the teacher faced difficulties in teaching writing. He said that the conventional method that he applied in teaching writing was no more effective to get attractive classroom activity. Students were found unmotivated, they preferred to chat with their friends and did the task of writing unseriously. Therefore, the score that they got cannot achieve the standard score that they should get. It was because, the teacher believe that his students have more ability and knowledge than that.

Based on that fact, the researcher decided to have an observation in SMP N 1 Denpasar, it was found that the students faced difficulties in writing. They considered that writing was a boring subject. Most of the students were found to get low score in this subject. In the process of teaching and learning English as a foreign language (EFL), writing was placed at the last stage after three other English skills (Listening, Speaking, and Reading). Moreover, teaching writing was allocated just 2 school hours (90 minutes) in two weeks. In teaching writing, process writing approach had been implemented by the teacher in which the students were provided ample time to finish their writing assignments. In one session class (2 school hours), the teacher guided the students starting from pre-writing until drafting stages. After that, the students may take and finished their writing at home. At the end of allocated time, each student should produce a writing product and collected it to the teacher.

Meanwhile, SMPN 1 Denpasar was one of school using RSBI standard in which there should be proper method to teach the students. Indirect method that focuses on student centered learning is a requirement for teaching nowadays. However, indirect method still general since it covers some methods in it. Therefore, the researcher proposed a method which is still under the approach of indirect method to teach writing. This method is called Project Based Learning.

As far as PBL connects students with challenges that are motivating, putting students in charge of seeking knowledge, selecting and generating the activities that they will pursue as part of the project. For that reason, self-efficacy in learning English had to be considered as a moderator variable in implementing PBL method in writing to improve students' writing competency. Moreover, self-efficacy in language learning played significant role in writing in order to receive and maximize the feedback given during teaching and learning process.

From the background above, the research problems of this study can be formulated as below:

- 1). Is there any significant effect of Project Based Learning on the writing competency of the seventh grade students of SMP Negeri 1 Denpasar?
- 2). Is there any significant interactional effect of Project Based Learning and self-efficacy on the writing competency of the seventh grade students of SMP Negeri 1 Denpasar?
- 3). Is there any significant difference in the writing competency between high self-efficacy students who were taught by using Project Based Learning method and those who were taught by conventional method?
- 4). Is there any significant difference in the writing competency between low self-efficacy students who were taught by using Project Based Learning method and those who were taught by Conventional Method?

## RESEARCH METHODS

This research was done in SMP Neg-

eri 1 Denpasar. The research was conducted in two months, specifically in the even semester of academic year 2015/2016 on February and March 2016. The data of the study were selected by using random sampling technique to determine 84 students as the sample.

The research design that was used Experimental Design of post-test only control group design (Gall, Gall, and Borg, 2003). This design was used to find out the significant difference between the students' writing competency of the experimental group and the control group. Thus, it did not use pre-test since it was not intended to find out the improvement of students' writing competency of the two groups. The experimental group was treated using project based learning method, while the control group was treated using conventional method.

This research used 2x2 factorial arrangements. There were three variables on the study, namely dependent variable, independent variable, and moderator variable. The dependent variable was writing competency (Y). The independent variables were two teaching instructions (A1 and A2) namely project based learning method (A1), and conventional method (A2). The moderator variable was self-efficacy (B) with two level, namely high self-efficacy (B1) and low self-efficacy (B2). The constellation of the 2x2 factorial arrangement used for this study can be seen as follows.

Table 1: Research Design with 2x2 Factorial Design

Teaching Method (A) \ Self-efficacy (B)	PBL Method (A1) <i>Experimental Group</i>	Conventional Method (A2) <i>Control group</i>
High (B1) N = 42	A1B1 N=21	A2B1 N=21
Low (B2) N = 42	A1B2 N=21	A2B2 N=21
Total N = 82	A1B1 + A1B2 21 + 21	A2B1 + A2B2 21 + 21

## FINDING AND DISCUSSION

### Hypothesis Testing

This study used four alternative hypotheses which are categorized into three classifications, namely the hypothesis of main effect based on the teaching instruction, the hypothesis of interaction effect between teaching instruction and students' self-efficacy, and hypothesis of post hoc testing. The hypothesis testing in this study was done by testing the both Alternative and Null hypotheses ( $H_a$  and  $H_o$ ).

1. There is a significant effect in students' writing competency between the students who are taught using project based learning method and conventional method. This is the main effect hypothesis based on the learning instruction.
2. There is a significant interaction effect between project based learning method and students' self-efficacy on writing competency.

### Hypotheses of Post-hoc testing

3. There is a significant difference in students writing competency between students with high self-efficacy taught by project based learning method and those with high self-efficacy who are taught by using conventional method.
4. There is a significant difference in students' writing competency between students with low self-efficacy taught by project based learning method and those with low self-efficacy who are taught by using conventional method.

Hypothesis testing in this research was accomplished statistically by two-way ANOVA. If there is an interaction, the hypothesis testing is followed by Tukey test to find out the interaction effect (simple effect).

#### 1. The First Hypothesis Testing

The criteria: If  $F_{ob}$  is higher than  $F_{cv}$  ( $F_{ob} > F_{cv}$ ),  $H_o$  is rejected.

Based on the result of Two-way ANOVA testing, the value of  $F_A$  is 19.446 which is higher than the value of  $F_{cv}$  that is 3.967 (1;80;0.05). Consequently,  $H_o$  is rejected and

Ha is received. It means that there was significant difference in writing competency between the students who are taught by using project based learning method and those who are taught by using conventional method.

The result of descriptive statistical analysis indicated the mean score of students' writing competency taught by project based learning was 79.14; while the mean score of the students' writing competency taught by conventional method was 73.14. It proved that the students' writing competency taught by project based learning was higher than the students' writing competency taught by conventional method.

## 2. The Second Hypothesis Testing

The criteria: If  $F_{ob}$  is higher than  $F_{cv}$  ( $F_{ob} > F_{cv}$ ),  $H_0$  is rejected.

Based on the result of Two-way ANOVA testing, the value of  $F_{AB}$  is 6.707 which is higher than the value of  $F_{cv}$  that is 3.967 (1;80;0.05). Consequently,  $H_0$  is rejected and  $H_a$  is accepted. It means that there was an interaction between the teaching methods and self-efficacy upon students' writing competency.

The interactional effect between teaching methods and self-efficacy on students' writing competency can be clearly seen on figure 4.1 below.

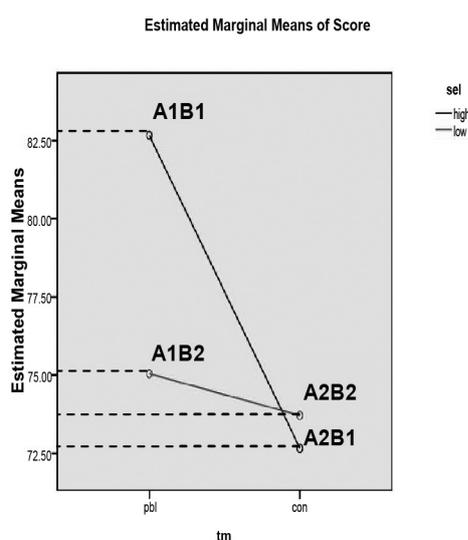


Figure 1: The figure of the significant interactional effect between teaching methods and self-efficacy upon writing competency

The figure actually describes the mean score of students' writing competency of the students having high self-efficacy who were treated by using project based learning method (A1B1), the students having high self-efficacy who were treated by using conventional method (A2B1), the students having low self-efficacy who were treated by using project based learning method (A1B2), and the students having low self-efficacy who were treated by using conventional method (A2B2).

An important conclusion can be drawn in accordance with the figure. It reflected that the students having high self-efficacy had better writing competency when they were treated by using project based learning method than when they were treated by using conventional method. Furthermore, the students who had low self-efficacy also had a better writing competency when they were treated by using project based learning than by using conventional method.

Because it was obtained that there was a significant interactional effect between teaching methods and self-efficacy on students' writing competency, the hypothesis testing was continued to know the effect of interaction by means of Tukey test.

## 3. The Third Hypothesis Testing

The criteria: If  $Q_{ob}$  is higher than  $Q_{cv}$  ( $Q_{ob} > Q_{cv}$ ),  $H_0$  is rejected.

From the result of some testing to test the third hypothesis there were several findings:

First, A1B1 Group (the group with high self-efficacy who are taught by project based learning method) had average score  $\bar{X}_1 = 83.23$

Second, A2B1 Group (the group with high self-efficacy which was treated by using conventional method) had average score  $\bar{X}_2 = 75.04$

Third, the means square was found 38.877 (see the summary of two ways ANOVA)

After the above findings have been stated, the Tukey test can be done. The sum of Tukey test computation can be presented in the table below.

Table 2: The result of Tukey test between A1B1 and A2B1

	GROUP		Q <sub>ob</sub>	Q <sub>cv</sub> (0.05)	Remark
	A1B1	A2B1			
Average score	83.24	72.57	7.85	Q <sub>cv</sub> (0.05) = 2.80	Ha is accepted
Mean Square within	38.88				

Based on the result of Tukey test, it was found that the Q value is 7.85 which is higher than the critical Q<sub>cv</sub> that is 2.80 (= 0.05). Consequently, H<sub>0</sub> is rejected and H<sub>a</sub> is received. It means that there was significant difference between the writing competency of the students with high self-efficacy taught by project based learning method and those taught by conventional method.

#### 4. The Fourth Hypothesis Testing

The criteria: If Q<sub>ob</sub> is higher than Q<sub>cv</sub> (Q<sub>ob</sub> > Q<sub>cv</sub>), H<sub>0</sub> is rejected.

From the result of some testing to test the fourth hypothesis there were several findings: *First*, A1B2 Group (the group with low self-efficacy which was treated by project based learning method) had average score  $\bar{X}_1 = 72.57$

*Second*, A2B2 Group (the group with low self-efficacy which was treated by using conventional method) had average score  $\bar{X}_2 = 73.71$

*Third*, the means square was found 38.877 (see the summary of two ways ANOVA)

After the above findings have been stated, the Tukey test can be done. The sum of Tukey test computation can be presented in the table below.

Table 3: The result of Tukey test between A1B2 and A2B2

	GROUP		Q <sub>ob</sub>	Q <sub>cv</sub> (0.05)	Remark
	A1B2	A2B2			
Average score	75.05	73.71	0.98	Q <sub>cv</sub> (0.05) = 2.80	Ha is rejected
Mean Square within	38.88				

Based on the result of Tukey test, it was found that the Q value is 0.98 which is lower than the critical Q<sub>cv</sub> that is 2.80 ( $\alpha = 0.05$ ). Consequently, H<sub>a</sub> is rejected and H<sub>0</sub> is received. It means that there was no significant difference between the writing competencies of the students with low self-efficacy when they are taught by using project based learning method and conventional method.

## CONCLUSION

Based on the findings of this research, it can be concluded that:

- 1). There is a significant difference in the writing competency between the students who are taught by using Project Based Learning and those taught by using the conventional method.
- 2). There is a significant interactional effect of the application of Project Based Learning and students' self-efficacy in improving the students' writing competency.
- 3). There is a significant difference in writing competency between the students with high self-efficacy who are taught by Project Based Learning Method and those who are taught by the conventional method.
- 4). There is no significant difference in writing competency between the students with low self-efficacy who are taught by Project Based Learning Method and those taught by conventional method.

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