Student Interest and Motivation towards Project-based Learning and their Contribution to Writing Achievement

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ABSTRACT

It is believed that Project-based Learning is very essential for the accomplishment of higher education students including Polytechnic students because it offers autonomy, collaboration and mastery in learning. In line with this, the researcher tried to explore student interest and motivation towards Project-based Learning and to examine their contributions towards the writing achievement of students. It was a quantitative correlational research conducted on 50 samples taken randomly. The research was conducted in the English Department Sriwijaya State Polytechnic in the academic year 2013-2014. There were two instruments used in this current research: a Measure of Student Interest and a Measure of Student Motivation. A Measure of Student Interest was used to measure student interest towards Project-based Learning and a Measure of Student Motivation was used to measure student motivation towards Project-based Learning. Meanwhile, writing scores taken from the archive of the English Department was used to describe the writing achievement of students. The hypotheses were tested by using Pearson Product moment Correlation Coefficient, Multiple Regressions, and One way ANOVA. The results showed that student interest and motivation in Project-based Learning correlated significantly towards the writing achievement of students partially and simultaneously. Meanwhile, the difference in terms of gender towards the writing achievement of students was not significant. Therefore, the recommendations are to continue this Project-based Learning and to promote equal learning process between the two genders, especially in the course of writing.

1.0 INTRODUCTION

The shift in educational paradigm from teacher-centred learning to student-centred learning has changed the role of the teacher to partner, facilitator, mediator and supervisor.

Currently, the paradigm shift is getting more prominent because today is the information age where someone can get the information very easily without any significant barriers by using Internet and other sources (Taylor, 2000). The students can browse most of the information they need very easily from Internet and/or from other sources like printed media and/or audio visual media. In this situation, the teacher's role as a partner, facilitator, mediator, and supervisor ~~is~~ becomes increasingly important. As a partner, the teacher shares the information he/she has; as a facilitator, the teacher facilitates the students with everything they need to get the information; as a mediator, the teacher bridges the relationship among the students, the environment and the information they need; and as a supervisor, the teacher supervises the students so that the students work on the right tracks (Bell, 2010).

In line with this, a learning approach that enables the students to enhance their attainments is really needed. Many researchers like Blumenfeld et al. (1991) and Bell (2010) believe that Project-based Learning is what students need.

In this current research, the researcher tried to explore the student interest and motivation towards Project-based Learning. This research was very important for the management to understand student interest and motivation in accordance with the approach. Next, the researcher tried to examine the contribution of student interest and motivation towards Project-based Learning in line with the writing achievement of the students partially and simultaneously. Full comprehension concerning their contribution to writing achievement of the students made the management understand whether to continue this learning approach or not. Finally, the researcher tried to find out the mean difference in terms of gender towards the writing achievement of students to enable the management to understand what to do towards different gender in the State Polytechnic of Sriwijaya.

The hypotheses of this current research were: Ho 1). There was no significant correlation between student interest towards Project-based Learning and writing achievement of the students; Ha 1). There was a significant correlation between student interest towards Project-based Learning and writing achievement of the students; Ho 2). There was no significant correlation between student motivation towards Project-based Learning and writing achievement of the students; Ha 2). There was a significant correlation between student motivation towards Project-based Learning and writing achievement of the students; Ho 3). There was no increase in contribution when both variables were correlated to writing achievement of the students: Ha 3). There was an increase in contribution when both variables were correlated to writing achievement of the students; Ho 4). There was no significant difference in terms of gender towards writing achievement of the students; Ha 4). There was a significant difference in terms of gender towards writing achievement of the students.

2.0 LITERATURE REVIEW

Project-based Learning is a kind of learning approach which focuses on students as the decision-makers regarding the projects they make (Bell, 2010). In Project-based Learning, the students are exposed to work in a wide range of skills and competencies and given opportunities to colloborate with mates in designing complex and authentic projects, in making decisions, in producing the artefacts and in evaluating their own projects actively, independently, autonomously and confidently (Blumenfeld et al, 1991; Thomas Mergendoller & Michaelson, 1999; and Westwood, 2008). Moreover, they mention that Project-based Learning bridges the phenomena in the classroom and in the real-life experiences. In relation with this, the role of Internet, printed media and audio visual media as providers of information in this information age cannot be denied because they make the process of Project-based Learning easier than before (Zhong, 2008).

In terms of learning, interest can be divided into three types: individual interest, situational interest and topic interest (Ainley, Hidi & Berndorff, 2002). Individual interest has been described as a relatively enduring predisposition to attend to certain objects and events, and to engage in certain activities (Renninger, 2000). The psychological state of interest can also be generated by specific environmental stimuli and is referred to as situational interest (Hidi & Baird, 1988). Topic interest, the level of interest triggered when a specific topic is presented, seems to have both individual and situational aspects (Ainley, Hidi, & Berndorff, 1999).

Student motivation to be engaged in one project is much influenced by his/her interest in the problem and elements in that project (Blumenfeld et al, 1991). Meanwhile, student interest is getting bigger when the problem and elements in the project are varied, authentic, challenging, covered with real artefacts, give choices about what and how to do the project and make it possible to collaborate in team (Malone & Lepper, 1987).

A research conducted by Geier et al. (2008) showed that students involved in Project-based Learning achieved higher scores in their basic academic subject proficiency compare to their friends involved in traditional education. In addition, Kusmartini found that there was a positive correlation between academic motivation and writing achievement of the students (2012) and there was a positive correlation between reading interest and reading achievement of the students (2013).

3.0 METHODOLOGY

It is a quantitative correlational research. There are three variables in this current research; two independent variables and one dependent variable. The independent variables were Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning. Meanwhile the dependent variable was Writing Achievement of the students. The researcher tried to explore the student interest and motivation towards Project-based Learning and to examine their contribution towards writing achievement of the students.

The research which was conducted in the English Department Sriwijaya State Polytechnic in the academic year 2013-2014 involved the whole students of the English Department as the population and 50 of them were taken randomly as the sample of the current research.

There were two instruments which were used in this current research; they were Measure of Student Interest and Measure of Student Motivation. Measure of Student Interest was used to measure Student Interest towards Project- based Learning and Measure of Student Motivation was used to measure Student Motivation towards Project-based Learning. Meanwhile, writing scores taken from the archive of the English Department was used to describe Writing Achievement of the Students. The rating scale for both measures was from 1 to 5. The number of the item of the Measure of Student Interest was 22. Therefore, the lowest possible score was 22 and the highest possible score was 110. The number of the item of the Measure of Student Motivation was 23. Therefore, the lowest possible score was 23 and the highest possible score was 115. The possible score of the Writing Achievement of Students varied from 0 (the lowest possible score) to 100 (the highest possible score). At the beginning before the research was conducted, the respondents were ensured that the data would be kept‒confidential. It was used only for the purpose of this current research. Next, the researcher delivered the questionnaire number one about Student Interest towards Project-based learning to the respondents. The researcher asked the respondents to fill in the form about personal data including name, student number, gender, semester and class. The researcher also asked the respondents to circle one of the figures from 1 (strongly disagree) to 5 (strongly agree) to show their agreement with the statements given. Finally, the researcher asked the respondents to do the same things for the questionnaire number 2 about Student Motivation towards Project-based Learning. The researcher administered these two instruments in 50 minutes.

To analyse the data, the researcher applied Descriptive Statistics, a Pearson Product Moment Correlation Coefficient Analyses, Multiple Regression Analyses and One-Way ANOVA. First, the researcher applied Descriptive Statistics to find out the mean, standard deviation, minimum score and maximum score of each variable. Second, the researcher applied a Pearson Product Moment Correlation Coefficient Analyses to find out the correlation between the variables partially, i.e., to find out the correlation between Student Interest towards Project-based Learning and Writing Achievement of the Students; to find out the correlation between Student Motivation towards Project-based learning and Writing Achievement of the Students; and to find out the correlation between Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning. Third, the researcher applied Multiple Regression Analyses to find out the correlation and the contribution of Student Interest in Project-based Learning added to Student Motivation in Project-based Learning towards the Writing Achievement of Students simultaneously. Finally, the researcher applied One-Way ANOVA to find out the mean difference in terms of student gender.

4.0 RESULTS AND DISCUSSION

The following were the results and discussion of the current research. The results included the descriptive statistics of the variables, the correlation between the variables, contribution to writing achievement, and mean difference in terms of gender. Meanwhile, the discussion focused on the interpretation towards the results of the current research, limitations and suggestions for future studies.

4.1 Results

The results were divided into four points. The first point exposed the descriptive statistics of the variables. In this point, the researcher described mean, standard deviation, minimum score and maximum score of independent and dependent variables. The second point exposed the correlation between the variables. In this point, the researcher described the correlation between Student Interest towards Project-based Learning and Writing Achievement of the Students; the correlation between Student Motivation towards Project-based learning and the Writing Achievement of Students; and the correlation between Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning. The third point exposed the contribution to writing achievement. In this point, the researcher described the correlation and the contribution of Student Interest in Project-based Learning added to Student Motivation in Project-based Learning towards Writing Achievement of the Students simultaneously. The last point exposed the mean difference in terms of gender. In this point, the researcher described the mean difference in terms of gender of the students.

4.1.1 Descriptive statistics of variables

Table 1. Descriptive Statistics of Variables

Variable	N	Mean	Std. Deviation	Min. Score	Max. Score
Writing Achievement of Students	50	75.54	3.643	68	83
Student Interest towards PBL	50	98.60	5.159	88	110
Student Motivation towards PBL	50	104.14	5.577	92	114

This current research tried to explore the student interest and motivation towards Project-based Learning and to examine their contribution towards writing achievement of the students. There were 50 respondents who participated and completed the measures of this current research. There were three variables in this current research. The first variable was Student Interest towards Project-based Learning (PBL). This variable was measured by using the Measure of Student Interest. The mean of the variable was 98.60; the standard deviation was 5.159; the minimum score was 88; and the maximum score was 110. The second variable was Student Motivation towards Project-based Learning (PBL). This variable was measured by using the Measure of Student Motivation. The mean of the variable was 104.14; the standard deviation was 5.557; the minimum score was 92; and the maximum score was 114. The two previous variables were independent ones. The last variable was Writing Achievement of the Students. It was dependent variable. This variable was used to find out the writing achievement of the students. For this variable, the score was taken from the archive of the English Department, Sriwijaya State Polytechnic. The mean of the variable was 75.54; the standard deviation was 3.643; the minimum score was 68; and the maximum score was 83.

4.1.2 Correlation between the variables

Table 2. The Correlation between the Variables

		Writing Achievement of Students	Student Interest towards PBL	Student Motivation towards PBL
Pearson Correlation	Writing Achievement of Students	1.000	.420	.763
	Student Interest towards PBL	.420	1.000	.732
	Student Motivation towards PBL	.763	.732	1.000
Sig. (1-tailed)	Writing Achievement of Students	.	.001	.000
	Student Interest towards PBL	.001	.	.000
	Student Motivation towards PBL	.000	.000	.
N	Writing Achievement of Students	50	50	50
	Student Interest towards PBL	50	50	50
	Student Motivation towards PBL	50	50	50

The table showed that the correlation between Student Interest towards Project-based learning (PBL) and the Writing Achievement of Students was 0.420 with probability value of 0.001 which was lower than the alpha level (0.001 < 0.01). Therefore, Ho 1 was rejected and Ha 1 was accepted. It can be concluded that there was a significant correlation between Student Interest towards Project-based Learning and the Writing Achievement of Students (R=0.420).

Next, the table also showed that the correlation between Student Motivation towards Project-based Learning (PBL) and Writing Achievement of the Students was 0.763 with probability value of 0.000 which was lower than the alpha level (0.000 < 0.01). Therefore, Ho 2 was rejected and Ha 2 was accepted. It can be concluded that there was a significant correlation between Student Motivation towards Project-based Learning and the Writing Achievement of Students (R=0.763). Finally, the table showed that there was a correlation between Student Interest towards Project-based Learning (PBL) and Student Motivation towards Project-based Learning (R=0.732). Because the probability value was 0.000 which was lower than the alpha level (0.000 < 0.01), so it can be concluded that the correlation was significant.

4.1.3 Contribution to Writing Achievement

Table 3. Contribution to Writing Achievement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.420[a]	.176	.159	3.341	.176	10.281	1	48	.002
2	.789[b]	.623	.607	2.285	.446	55.567	1	47	.000

a. Predictors: (Constant), Student Interest towards PBL

b. Predictors: (Constant), Student Interest towards PBL, Student Motivation towards PBL

c. Dependent Variable: Writing Achievement of Students

In partial, the correlation between Student Interest towards Project-based Learning (PBL) and Writing Achievement of the Students was 0.420, and its contribution was 17.6 %. However, if the

variable of Student Interest towards Project-based Learning (PBL) was added to the variable of Student Motivation towards Project-Based Learning (PBL), then the correlation was 0.789 simultaneously and their contribution was 62.3 %. The result showed that there was an increase in contribution when both variables were correlated to the Writing Achievement of Students. Therefore, Ho 3 was rejected and Ha 3 was accepted.

4.1.4 Mean difference in terms of gender

Table 4. Mean, Std. Deviation, Minimum, and maximum Score

Writing Achievement of Students

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	16	75.50	4.761	1.190	72.96	78.04	68	83
2	34	75.56	3.067	.526	74.49	76.63	69	82
Total	50	75.54	3.643	.515	74.50	76.58	68	83

The table showed that the number of male respondents was 16 and the number of female respondents was 34. The mean of male respondents was 75.50; standard deviation was 4.761; minimum score was 68; and maximum score was 83. The mean of female respondents was 75.56; standard deviation was 3.067; minimum score was 69; and maximum score was 82. The number of the total respondents was 50. Mean of total was 75.54; standard deviation of total was 3.643; minimum score of total was 68; and maximum score of total was 83.

Table 5. Mean Difference in terms of Gender

Writing Achievement of-Students

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.038	1	.038	.003	.958
Within Groups	650.382	48	13.550		
Total	650.420	49			

The result showed that F-obtain of gender towards the Writing Achievement of Students were 0.003 which was smaller than the F-table (df 1 = 1, df 2 = 48) 4.043 and the level of probability was 0.958 >α 0.05. Therefore, Ho 4 was accepted and Ha 4 was rejected. It can be concluded that there was no significant difference in terms of gender towards the Writing Achievement of Students.

4.2 Discussion

The positive correlation between Student Interest towards Project-based Learning and Writing Achievement of the Students shows that the better the student interest towards Project-based learning, the higher the writing achievement of the students. The evidence also suggests that if the writing achievement of students increases, then the student interest towards Project-based Learning should increase too. It is in line with the research conducted by Kusmartini (2013) who showed that there was a positive correlation between reading interest and reading achievement of the students.

The positive correlation between Student Motivation towards Project-based Learning and the Writing Achievement of Students shows that the better the student motivation towards Project-based Learning, the higher the writing achievement of the students. The evidence also suggests that

if the writing achievement of students improves, then student motivation towards Project-based Learning should improve, too. It is also in line with the research conducted by Kusmartini (2012) who showed that there was a positive correlation between academic motivation and the writing achievement of students.

The positive correlation of Student Interest in Project-based Learning added to Student Motivation in Project-based Learning towards the Writing Achievement of Students shows that the better the student interest in Project-based Learning and student motivation in Project-based learning simultaneously, the higher the writing achievement of the students. The evidence also suggests that if the writing achievement of the students improves, then student interest and student motivation towards Project-based Learning should improve, too. It is in line with the research conducted by Geier et al. (2008) who showed that students involved in Project-based Learning got higher scores in their basic academic subject proficiency compare to their friends involved in traditional education.

Even though the correlation between student interest towards Project-based Learning and writing achievement of the students was only fair (R=0.420), however, the correlation was significant. It means that everyone involved in the learning process should consider this variable as one of the important variables in improving writing achievement of students.

The strong correlation (R=0.763) between student motivation towards Project-based Learning and the Writing Achievement of students suggests that everyone involved in the learning process should consider the variable of student motivation towards Project-based Learning as one of the important factors in improving writing achievement of the students.

The strong correlation (R=0.789) between student interest towards Project-based Learning added to student motivation towards Project-based Learning and the Writing Achievement of ~~the~~ students suggests that everyone involved in the learning process should consider both variables as important factors in improving the writing achievement of the students.

An increase in contribution when both variables were correlated to the Writing Achievement of Students shows that if the writing achievement of students are developed, then student interest and student motivation towards Project-based Learning should be developed simultaneously.

The contribution of 62.3% of the variables of Student Interest and Student Motivation in Project-based Learning towards the writing achievement of students suggests that there are other factors outside of Student Interest and Student Motivation towards Project-based Learning (37.7 %) which also contribute to the Writing Achievement of students.

No significant difference in terms of gender towards the Writing Achievement of Students shows that both genders have equal capability to learn writing by using Project-based Learning. Furthermore, the evidence also suggests that equal learning process should be promoted to the two genders especially in the course of writing.

The current research about Student Interest and Motivation towards Project-based Learning and their Contribution to Writing Achievement was a quantitative research. This quantitative research only discussed about descriptive statistics of the variables, the correlation of the variables partially and simultaneously, the contribution to writing achievement and the mean difference in terms of gender towards the writing achievement of students. This current research did not answer the questions why the mean of Writing Achievement of Students, Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning was 75.54; 98.60; and 104.14 consecutively. The research did not answer the question why the standard deviation of Writing Achievement of the Students, Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning was 3.643; 5.159; and 5.577 consecutively. The research did not answer the question why the minimum score of the Writing Achievement of the Students, Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning was 68; 88; and 92 consecutively. The research did not answer the question why the maximum score of the Writing Achievement of Students, Student Interest towards Project-based Learning and Student Motivation towards Project-based Learning was 83; 110; and 114 consecutively.

Furthermore, the research did not explore how Student Interest towards Project-based Learning correlated significantly to the Writing Achievement of Students. The research did not explore how Student Motivation towards Project-based Learning correlated significantly to the Writing Achievement of Students. The research did not explore how Student Interest towards Project-based Learning added to Student Motivation towards Project-based Learning correlated significantly and gave contribution to the Writing Achievement of Students.

Finally, the research did not explore why and how there was no significant difference in terms of gender towards the Writing Achievement of Students. Therefore, it is suggested that the future studies explore deeply in terms of qualitative research, so that those questions can be answered in detail.

5.0 CONCLUSION

There was a significant correlation between Student Interest towards Project-based Learning and the Writing Achievement of students. There was a significant correlation between Student Motivation towards Project-based Learning and the Writing Achievement of students. There was an increase in contribution when both variables were correlated to the Writing Achievement of Students. Finally, there was no significant difference in terms of gender towards the Writing Achievement of Students. Therefore, it is recommended that this Project-based Learning be continued and to promote equal learning process between the two genders, especially in the course of writing.

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