

The Effect of Blended Learning on Student Motivation in Civil Engineering Politeknik Negeri Bali

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ABSTRACT

Blended Learning is a hybrid of traditional face to face and online learning so that instruction occurs both in the classroom and online (Collis & Moonen, 2001). Some researchers believe that Blended learning positively impacts the students' motivations in class that the raise can see of the scores. This study aims at finding the effect of Blended Learning on students' motivations in class. The research is quantitative research using Pre-test and Post-test design. In the end, the tabulated data is formulated using the statistic method. The findings show that the application of Blended Learning has a significant influence on the students' motivation. This is shows by Sig. Value or P-Value $0,000 < 0,05$. This result means that there is a significant P-Value between Control and Experiment Class. While the Students achievement Score is also showing a significantly different show by Sig value. $0.000 < 0.05$. Therefore, Blended Learning has a significant effect on the students' motivations in class.

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INTRODUCTION

Finding an appropriate learning method is the key for every teacher to deliver their students to achieve the learning objectives. Suitable learning methods affect learning achievement, and this method should motivate learners to be active, curious, and always excited about learning. The blended learning model is a learning method that is currently widely used in various schools and colleges to make learners maximally achieve learning goals. This method is considered the suitable method following this Millennial Age where ICT (Information Communication Technology) is crucial. The challenge in 21 century is coping with the integration of technology in the education world. The two are inseparable. To fulfil qualified education is not the responsibility of the teachers but also the students (Amin, 2017).

Blended Learning has given some advantages in dealing with students' achievement in class. Rahman, Sukrawan and Rohendi (2019) mentioned that students' achievement in class

increased because of using Blended Learning methods. It is also in line with some other journals but focuses on motivation. Sjukur (2012) pointed out that Blended Learning can motivate students to study and enjoy themselves in class, making them feel motivated to study English. Therefore, it has a positive effect. While Hidayat, Junaedi, and Yakob (2020) show that Blended Learning has given the students better comprehension of English, it can be seen by their classroom achievements. He also stated that Blended learning is worthed to use in every class to help the students.

This Blended Learning Model is learning that combines or blends face-to-face learning and computer-based learning (online and offline) (Dwiyono in Husamah, 2014). This Blended Learning Model is a combination of the advantages of learning face-to-face and virtually. Blended Learning is the ease of learning that uses various delivery methods, teaching models and learning styles, introducing various choices of dialogue media between the facilitator and the person receiving the teaching. Blended Learning is derived from two English words: blended and learning. Blended means a mixture or combination. Blended Learning is a combination of the advantages of learning that is done virtually.

Semler (in Husamah, 2014) explains that Blended Learning combines the best aspects of online learning, structured face-to-face activities, and real-world practice. An online learning system, classroom practice and on-the-job experience will provide valuable experiences for them. Furthermore, blended Learning takes a valuable approach to themselves. Blended learning uses an approach that empowers various other sources of information. Blended Learning has begun to be widely used and popular in education and training in recent years. This means that Blended Learning is a method that has some advantages for the students because it uses various and many sources of information. Therefore, many institutions in world educations try and experience the benefit of this method.

Blended learning, hybrid learning, and mixed learning have the same meaning (Dziuban in Husamah, 2004). Blended Learning also means using various methods that combine face-to-face meetings in traditional classrooms and online teaching to obtain learning objectivity (Akkyumlu & Soyly in Husamah, 2004). In other words, Blended learning can be said as the accumulation of two methods that completed the conventional methods (face to face) and a new method that is the online method, which has equipped many sources that is valuable for the students.

Meanwhile, Graham said that Blended Learning is an approach that integrates face to face teaching and computer-mediated instruction in a pedagogic environment. The original and most common meaning of Blended Learning refers to learning that combines or mixes face-to-face learning and computer-based learning (online and offline) (Saryono, 2011).

All the expert experience indicated that Blended Learning has many advantages because it helps the conventional methods have more advantages. Furthermore, all experts point out that Blended learning has many advantages for the teachers and the students; therefore, it is worth trying to be applied in classrooms. Besides many expert opinions about Blended Learning, some journals also point out Blended Learning as a boosting agent in the learning process. Here are some journals on Blended Learning.

According to Istianah, Blended Learning aims to improve students' understanding of a second language. The article presents how blended learning was applied in an English Grammar Class. At the end of the semester, most students found that online activities help them comprehend and practice the materials. In addition, students' reflective journals also revealed that blended learning improved their understanding and interest in learning English grammar.

It was proved by the significant level of 0.05, which was $t = 3.983$ and $p = 0.000$. Sri Wahyuni also gave a similar opinion in the *Journal of English for Academic* (2018). There were statistically significant differences between the means of the two groups favouring the experimental group, which achieved better results in the post-test. On the other hand, there is a significant effect of the blended learning model on students' writing ability.

Nina Sofiana also found out that the implementation of Blended Learning in Extensive Listening has built a positive perception of students and the interactions between students and teachers. The students also felt satisfied using this method. While Fauziah (2020) mentioned that Blended Learning had made the students active in class better than in conventional class, the activity in class becomes various.

Noervadila and Astidari also supported this opinion by stating that Blended Learning can be said as a learning style that makes the students more productive and has high learning interest. Furthermore, this teaching method will make the teachers know that students have various stages of ability, and these methods can be said to be effective and practical teaching methods (Irwan et al., 2019).

METHODS

This research is quantitative research with a quasi-experimental approach. The design used is "Post-test Non-Equivalent Control Group Design". The group used in this study consisted of 2 groups, namely the experimental group using face to face learning and the control group using blended learning. According to Wiersma (1995), to determine the experimental class and control class, a random assignment was carried out to select the class.

This study involved two variables, namely the experimental variable and the dependent variable. The experimental variable is the treatment for the experimental class, and the treatment variable for the control class is used as a comparison, namely conventional learning. The dependent variable is motivation and learning achievement.

The data collection techniques in this study were questionnaires and written tests given in the form of questionnaires and written tests given to students and after treatment in both classes.

RESULTS AND DISCUSSION

There were two classes studied (control and experimental), and each consists of 28 students. Both classes were given "The English learning motivation questionnaire", which was drawn from references to pre-existing similar studies. The aim of giving this questionnaire was to measure the effect of Blended Learning on their motivation. Table 1 below shows the results.

Respondent	Control	Experiment	Respondent	Control	Experiment
1	60	57	15	49	66
2	56	63	16	51	65
3	53	64	17	49	64
4	45	57	18	48	68
5	47	68	19	46	63
6	50	66	20	51	66
7	49	63	21	41	65
8	44	67	22	42	64
9	58	59	23	46	68
10	48	64	24	45	64
11	55	68	25	47	60
12	51	66	26	47	66
14	50	64	27	42	65
14	51	65	28	46	65

Table 1: Motivation Scores

Furthermore, the classical assumption test includes normality and homogeneity tests using the SPSS V.26 program. The test results for normality and homogeneity of the motivation scores of the two classes can be seen in tables 2 and 3.

	Class	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Motivation score	Control	.134	29	.194	.961	29	.352
	Exp	.160	28	.065	.933	28	.073

Table 2: Normality Test
 a. Lilliefors Significance Correction

Based on the normality test in table 2, referring to the Kolmogorov-Smirnov test for the two classes, the sig value is obtained. $0.194 > 0.05$ and $0.065 > 0.05$. This means that the motivation score data for the control and experimental classes are normally distributed data. The requirements for normally distributed data for parametric statistical tests were fulfilled. However, the requirements for homogeneity of the variance of the motivation score data must also be fulfilled. Table 3 below will see whether the motivation score data of the two classes is homogeneity.

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Motivation score	Based on Mean	15.495	1	55	.000
	Based on Median	14.426	1	55	.000
	Based on Median and with adjusted df	14.426	1	34.567	.001
	Based on trimmed mean	15.289	1	55	.000

Table 3: Homogeneity Test

Sig value based on mean in Table 3 shows a value of $0.000 < 0.05$, indicating that the variance of the control and experimental class motivation score data is not homogeneous. The classic assumption test requirement for parametric statistics is that the data must be homogeneous and not fulfilled. Then the hypothesis testing will be carried out using non-parametric statistics. The Mann-Whitney test was taken to test whether there was a significant difference between the motivation scores of the two classes. The research hypothesis in this test is:

H_0 : There is no difference in the motivation scores of the control and experimental classes

H_a : There are differences in the motivation scores of the control and experimental classes

Based on decision making:

- H_0 is rejected, if the value is sig. or P-value < 0.05

- H_0 is accepted, if the value is sig. or P-value > 0.05

The results of the Mann-Whitney test with the SPSS v.26 programs can be seen in table 4.

Ranks				
Motivational score	Kelas	N	Mean Rank	Sum of Ranks
	Control	28	14.50	406.00
	Experiment	28	42.50	1190.00
	Total	56		

Table 4: Mann-Whitney Test - Ranks

Test Statistics	
	Motivation score
Mann-Whitney U	.000
Wilcoxon W	406.000
Z	-6.441
Asymp. Sig. (2-tailed)	.000

Table 5: Mann-Whitney Test – Test Statistics^a

a. Grouping Variable: kelas

Table 4 shows the Mean Rank or the average ranking of each group. In the control class, the mean rank is 14.50 lower than the average ranking of the experimental class, which is 42.50. Based on the statistical test, the U value is 0,000, and the W value is 406. If converted to the Z value, the magnitude is -6.441. Sig value. or P-value of $0.000 < 0.05$. It means that there is a significant difference in the motivation scores of the control and experimental classes. Thus, the application of blended learning in English courses has a significant effect on student learning motivation.

CONCLUSION

The conclusion of this study shows that the application of Blended Learning in English has a significant effect on student learning motivation. As evidenced by the Sig. or P-value of $0.000 < 0.05$, this means that there is a significant difference in the motivation scores of the control and experimental classes.

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