The Effect of Problem-Based Learning Based Pancasila Student Profile and Motivation towards Students' Learning Outcomes

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Abstract: The present study aimed at examining the effect of problem-based learning-based Pancasila student profile and motivation towards students' learning outcomes. The study was designed in a quasi-experimental pretest-post-test control group with 2x2 factorial designs. The data were collected using a questionnaire and test. The results of the present study shows 1) The economic learning outcomes among students who study with the problem-based learning based Pancasila students profile learning model is higher than students who study with the direct learning model; 2) there is an interaction effect between learning models and learning motivation on economic learning outcomes; 3) for students with high learning motivation, economic learning outcomes following problem-based learning based Pancasila students profile are higher than students following the direct learning model; 4) for students with low learning motivation, the economic learning outcomes following problem-based learning based Pancasila students profile are lower than those of students who follow the direct learning model. Problem-based learning-based Pancasila student profile gives contribution to the learning process.

Keywords: Economic Learning Outcome, Motivation, Pancasila Students's Profile, Problem-Based Learning.

A. Introduction

In the 21st century, a change happens in the education field in which students are demanded to master 6C skills covering creativity, citizenship, creativity, collaboration connectivity, and communication (Anugerahwati, 2019). Students are required to not only have the knowledge but also the skills to interact in real-world situations. In addition, the change of globalization demands students to solve complex problems and be able to use technology (Anagün, 2018). Students can use their thought to cover real problems as well as their ability to operate the technology. These skills can be reflected in students' learning outcomes.

Learning outcomes deal with the pattern of attitude, values, and skill (Aslam et al., 2021; Hayati et al., 2022; Muawanah et al., 2022; Zuhdi, 2022). In addition, learning outcomes refer to an indicator of change in both students' behavior and knowledge (Suprijono, 2009; Said & Muslimah, 2021). Besides, learning outcomes also become the indicator to achieve the national goals of education (Yulianti, 2017; Trihastuti et al.,

2021; S. Qomariyah & Rosyidah, 2022). Moreover, learning outcomes can be used as an educational assessment to know students' progress in their knowledge and skills (Fitri, 2014). Furthermore, learning outcomes become the standard of learning success viewed from the grade (Usman & Yulianingtias, 2022). It can be seen that learning outcomes can be a reflection of a student's ability in the learning process.

However, there was still a problem regarding economic learning outcomes shown by some previous studies. The low competence of students in economics education is also caused by the lack of ability of educators to understand the world of students (Nugraha et al., 2019). Teachers tend to use direct learning model. Teachers control all the activity of students and becomes the center in the learning process (Nudin dkk., 2021; Rainis, 2019). Teachers are the main concern during learning process. In addition, teachers tend to use textbooks in teaching their students (Nugraha et al., 2019). Moreover, Putri et al. (2019) found that a number of high schools in Indonesia are still oriented towards learning materials. The same thing was also expressed by Nurfitri et al. (2019) that the learning process did not involve real-life contexts causing lack of students' understanding of the concepts being studied. As a result, students quickly forget the concept. It directs students to have low economic learning outcomes.

In order to solve the mentioned previous problems above, designing an innovative learning model is urgently needed. One of them is problem-based learning-based Pancasila student profile. This innovative learning model is from the combination of problem based-learning and Pancasila student profile. Problem based-learning model provides students-cantered in which teachers become the facilitators to stimulate students in solving problems (Aslam et al., 2021). The syntax of problem-based learning starts from orienting students to the problem, organizing students during learning, guiding group investigations, developing & presenting the work, and analysing and evaluating the problem-solving process (Aslam et al., 2021). In addition, this model provides a room for students to discuss relevant problems in small groups (Astuti et al., 2020). It allows students to share their knowledge. Moreover, this model also present authentic problems which encourage students to collect information in order to solve problems (Bashith & Amin, 2017). On the other side, Pancasila student profile is a program from the Ministry of Education and Culture to build the values of Pancasila (five fundamental values) among students (Tricahyono, 2022). This program is one of the alternative efforts to prepare a golden generation by having a character that is in based on the values of Pancasila to be ready to face global challenges. This character leads students to get the best quality covering superior, productive, and character (Rizkasari, 2023). This program involves six main characteristics, namely critical thinking, creativity, independence, faith and piety to God Almighty, noble character, mutual cooperation, and global diversity (Kahfi, 2022). Thus, this innovative learning model can be an alternative way to solve the current problems.

The success of implementing project-based learning and Pancasila student profile have been reported by some researchers as an effective way to develop students' ability. Bashith & Amin (2017) and Dharma et al. (2020) reported that

problem-based learning affected significantly students' critical thinking both senior and vocational high schools. Besides, Ariyanti et al. (2018) found out that problem-based learning significantly affected learning outcomes of vocational school on their networking routing. In addition, Astuti et al. (2020) reported that problem-based learning showed significant effect on students' learning outcomes in elementary schools. Moreover, Lelapary (2022) found out that problem-based learning influenced the level of reasoning ability. On the other side, Rahmawati et al. (2023) reported that Pancasila student profile influence students' critical thinking. Not only that, Fajriansyah et al. (2023) also found that Pancasila student profile strengthened students' independence. Those previous results have proven that problem-based learning-based Pancasila student profile is an effective learning model to be used in the current learning condition.

In spite of the use of an appropriate learning model, motivation has proven as one of the influences on learning outcomes (Usman & Yulianingtias, 2022)(Ismaniati & Iskhamdhanah, 2023). Crookes and Schmidt (1991) argue that motivation deals with students' goals in the learning activities. Students have willingness to reach their goals. They join learning activities and pay attention during the learning process. In addition, Santoso et al. (2017) & (Shodikin et al., 2023) state that motivation is a basis to encourage students in doing something actively as well as taking part in the activity. It keeps students on the right mood during the learning process (Nuryanto, 2021). Moreover, Raibowo & Nopiyanto (2020) state that motivation increase students' building blocks. It indicates that students have their strengths to face some challenges (Indra et al., 2023). They have efforts to overcomes obstacles during their learning process. Thus, motivation is an essential factor influencing students' learning outcomes.

Regarding the explanation above, it can be concluded that problem-based learningbased Pancasila student profile is a powerful learning model to assist students in improving their learning outcomes. In addition, motivation becomes the main key factor contributing in the learning process. Being inspired by some results of the previous studies, the present study is interested to conduct further research on problem-based learning as what have been done by Bashith & Amin (2017), Dharma et al. (2020), Ariyanti et al. (2018), and Astuti et al. (2020). The present study will present different investigation compared to the previous studies since the present study presents an innovative learning model derived from combination of problem-based learning and Pancasila student profile. Therefore, the present study aims to investigate the effect of problem-based learning-based Pancasila student profile and motivation on students' economic learning outcomes.

B. Methods
Research Design

The present study was designed in a quasi-experimental pretest-post-test control group with 2x2 factorial designs. There were four groups designed in the present study as presented in Table 1.

Table 1. 2x2 Factorial Design Groups

Learning Method Motivation	Problem-based learning based Pancasila student profile (X1)	Direct learning model (X2)
	Experimental Group	Control Group
High Motivation (Y1)	X1Y1	X2Y1
Low Motivation (Y2)	X1Y2	X2Y2

Description:

X1 : students who were taught by problem-based learning-based Pancasila student profile

X2 : students who were taught direct learning model

Y1 : students with high motivation

Y2 : students with low motivation

X1Y1 : students with high motivation were taught by using problem-based learning-based Pancasila student profile

X2Y1 : students with high motivation were taught by using direct learning model

X1Y2 : students with low motivation were taught by using problem-based learning-based Pancasila student profile

X2Y2 : students with low motivation were taught by using direct learning model

This factorial design was used since there was a moderator variable in this study that was motivation. Through implementing this factorial design, it aimed to see the difference of the students from their moderator variable.

The population of the were the tenth grades students of SMA Negeri 1 Penebel as one of the senior high schools in Bali. It consisted of 226 students from 7 classes. Then, the samples were selected randomly using lottery to decide control and experimental group. Then, four classes were selected as the samples of the study. Then, in order to determine high or low motivation, motivation questionnaires were distributed to see their level of motivation. Experimental group was given treatment with problem-based learning-based Pancasila student profile during learning economy subjects, whereas control group was taught by the direct learning model.

Two instruments were used to gather the needed data, namely questionnaire and test (multiple choice). The questionnaire was used to determine students' level of their motivation and test was used to determine students' learning outcomes. Two techniques were applied to collect the data, namely survey and testing. Survey technique were to investigate the level of students' motivation. On the other side, testing was used to investigate the effect of problem-based learning-based Pancasila student profile on students' economic learning outcomes.

After obtaining the needed data, two analyses were conducted in this study, namely descriptive statistical analysis and inferential statistical analysis. In this study, one way between groups Anova was used to see the effect from two groups, namely control and experimental group.

C. Results and Discussion
Result

The analysis was conducted through inferential statistic in which it was assisted by the use of SPSS 22 application. The data were firstly analysed for its normality and homogeneity. The normality test result was presented in table 1, as follow.

Table 2. The Normality Test Result of Obtained Data

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Critical Skills	Thinking Control Group	.248	23	.001	.869	23	.060
	Experimental Group	.227	23	.003	.898	23	.023
Creative Skills	Thinking Control Group	.273	23	.000	.860	23	.024
	Experimental Group	.264	23	.000	.861	23	.039
a. Lilliefors Significance Correction							

Based on table 2, the consideration was taken by comparing the Sig. value presented in Shapiro-Wilk since the sample of this study was less than 100. It showed that the Sig. values shown by the control and experimental group in critical thinking skills scores were .060 and 0.23. It meant that the Sig. values of both groups were higher than the standard value 0.05. It indicated that the critical thinking skills data were normal. In addition, the normal distribution was also found in the data of students' creative thinking skills shown by Sig 0.24 and 0.39 which were higher than 0.05. The data were continued to be analysed through homogeneity testing to find out whether the data were homogeneous or not. The result was presented in table 3.

Table 3. The Homogeneity Test Result of The Obtained Data

Levene's Test of Equality of Error Variances[a]

		Levene Statistic	df1	df2	Sig.
Critical Skills	Thinking Based on Mean	.037	1	44	.848
	Based on Median	.067	1	44	.796
	Based on Median and with adjusted df	.067	1	43.866	.796
	Based on trimmed mean	.029	1	44	.867
Creative Skills	Thinking Based on Mean	.073	1	44	.788
	Based on Median	.025	1	44	.875
	Based on Median and with adjusted df	.025	1	43.956	.875
	Based on trimmed mean	.070	1	44	.793

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Group

Table 3 showed that both of the data had a significance (Sig.) lower than 0.05 viewed from the Sig on *Based on Mean*. The significance value of students' critical

thinking was 0.848 > 0.05 and the significance value of 0.788 > 0.05. It revealed that the data were homogenous. Since the data were normal and homogeneous, then inferential statistical analysis was conducted.

The Effect of Problem-Based Blended Learning on Students' Critical Thinking Skills

The descriptive statistical analysis was also conducted to compare the mean of post-test gained by control and experimental group. The result was presented in table 4, as follow.

Table 4. The Descriptive Analysis Result of Students' Critical Thinking Skills

Critical Thinking Score	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Control Group	23	81.22	2.66	.111	70.41	71.34	75	86
Experimental Group	23	84.91	3.78	.137	70.97	71.81	77	92
Total	46	82.37	3.21	.178	71.00	74.74	70	84

The descriptive analysis presented in table 4 showed that there was a difference on between the mean score gained by the students who were taught by conventional learning (control group) and the students who were taught by problem-based blended learning (experimental group). It was found out that the mean score gained by control group was 81.22 lower than the experimental group which reached the mean score 84.91. It indicated that there was an effect given by problem-based blended learning towards students' critical thinking skills. It was supported by the result of One-Way ANOVA analysis as presented in table 5.

Table 5. The result of One-Way ANOVA Analysis of Students' Critical Thinking Skills

ANOVA
Critical Thinking Scores

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	46.000	1	46.000	11.316	.002
Within Groups	178.870	44	4.065		
Total	224.870	45			

The result presented in table 4 showed that there was a significant effect of problem-based blended learning towards students' critical thinking skills considering that the Sig. value between group was .002 which was lower than the standard value 0.05.

The Effect of Problem-Based Learning Towards Students' Creative Thinking Skills

The obtained data related to students' creative thinking skills were firstly analysed descriptively in which the result was presented in table 6, as follow.

Table 6. The Descriptive Analysis Result of Students' Creative Thinking Skills

Creative Thinking Score	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Control Group	23	77.48	4.64	.256	80.82	81.94	70	84
Experimental Group	23	80.00	3.95	.265	80.84	81.88	70	84
Total	46	78.74	4.30	.182	81.00	81.74	70	84

Table 6 showed that the mean of control group was lower than the mean of experimental group indicated by 77.48 < 80.00. It meant that there was an effect of problem-based learning towards students' creative thinking skills. It was strengthened by the result of One-Way ANOVA analysis as presented in table 7.

Table 7. The Analysis Result of One-Way ANOVA of Students' Creative Thinking Skills

ANOVA
Creative Thinking Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	128.891	1	128.891	7.598	.000
Within Groups	746.435	44	16.964		
Total	875.326	45			

The table 6 showed that there was a significant effect contributed by problem-based blended learning shown by Sig.000 which was lower than the standard value .005.

The Simultaneous Effect of Problem-Based Blended Learning towards Students' Critical and Creative Thinking Skills

The data related to students' critical and creative thinking skills obtained from the post-test was analysed through One-Way MANOVA test. The multivariate test result was presented in table 8, as follow.

Table 8. The Multivariate Test Result

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	1.000	109717.912b	2.000	43.000	.000
	Wilks' Lambda	.000	109717.912b	2.000	43.000	.000
	Hotelling's Trace	5103.159	109717.912b	2.000	43.000	.000
	Roy's Largest Root	5103.159	109717.912b	2.000	43.000	.000
Learning Models	Pillai's Trace	.001	.020b	2.000	43.000	.006
	Wilks' Lambda	.999	.020b	2.000	43.000	.006
	Hotelling's Trace	.001	.020b	2.000	43.000	.006
	Roy's Largest Root	.001	.020b	2.000	43.000	.006

a. Design: Intercept + Group
b. Exact statistic

Based on table 8, it was interpreted that problem-based blended learning has a simultaneous effect towards students' critical and creative thinking skills. It was shown by the Sig. 0.006 which was lower than the standard value 0.05. Then, a detail interpretation was also viewed from the result of *test between subject effect* as presented in table 9.

Table 9. The Result of Test Between Subject Effect

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Critical Thinking Score	.348^a	1	.348	.029	.865
	Creative Thinking Score	.022^b	1	.022	.014	.907
Intercept	Critical Thinking Score	289937.043	1	289937.043	24410.673	.000
	Creative Thinking Score	304566.283	1	304566.283	195076.632	.000
Learning Model	Critical Thinking Score	.348	1	.348	.029	.000
	Creative Thinking Score	.022	1	.022	.014	.000
Error	Critical Thinking Score	522.609	44	11.877		
	Creative Thinking Score	68.696	44	1.561		
Total	Critical Thinking Score	290460.000	46			
	Creative Thinking Score	304635.000	46			
Corrected Total	Critical Thinking Score	522.957	45			
	Creative Thinking Score	68.717	45			

a. R Squared = .001 (Adjusted R Squared = -.022)
b. R Squared = .000 (Adjusted R Squared = -.022)

The result in table 9 showed that; 1) there was a significant effect of problem-based blended learning on students' critical thinking skills shown by Sig. 0.00 < 0.05, 2) there was a significant effect of problem-based blended learning on students' creative thinking skills shown by Sig. 0.00 < 0.05. Based on the results of MANOVA test that had been described, the third hypothesis in this study is accepted, namely that there is a simultaneous influence of the problem-based blended learning model on students' critical thinking skills and creative thinking skills.

Discussion

The result showed that there was an effect of problem-based blended learning towards students' critical thinking skills. It supported the statement argued by Ariyana (2019) which showed that one of the economic learning objectives was building students as an individual with a logic and critical thinking to solve the problem found in their social lives. Indirectly, the results of the study showed that the students' mean score in the experimental group was 81.22 which was greater than the control group's 84.91 indicating that students who were taught using the problem-based blended learning model had higher critical thinking skills and were able to achieve learning objectives. economy. The results of the current study also supported the previous study conducted by Zamroni et al., (2020) which found that students who were taught using problem-based learning methods through blended learning had higher critical thinking skills than students who were taught problem-based learning through offline learning. It was relevant to the current study considering that the control group was taught using problem-based blended learning model in an offline learning process where the mean score obtained by the control group was lower than the experimental group which was taught using problem-based learning through blended learning.

The previous studies conducted by Marnita et al., (2020) and Yennita and Zukmadini (2021) which also found a relevant finding with this current study. The studies found that problem-based blended learning improved students' critical thinking skills indicated by the different responses given by students in the learning process. The results of the current research were a continuation of those studies considering that the research samples were junior high school students, while the current research selected high school students as the research samples. These findings indirectly strengthen the existence of critical thinking skills in the economics learning process as evidenced by the use of HOTS-based critical thinking questions when collecting the data. The differences in critical thinking skills found in this study indicated that critical thinking was a competency that must be trained routinely for students through the provision of problems and questions arranged based on the level of cognitive dimensions (Srikan et al., 2021; Retnawati et al., 2018). This finding also reinforced the results of the pre-experimental research conducted by Lukitasari et al., (2019) which found that problem-based blended learning improved students' critical thinking skills in biology learning. The current research findings which was quasi-experimental studies strengthened the results of these studies regarding the use of problem-based blended learning in the learning process.

The current study showed that there was an effect of problem-based blended learning towards students' creative thinking skills shown by the difference of post-test score gained by students taught by conventional learning and students taught by problem-based blended learning. The result reinforced the findings of previous research related to the application of problem-based blended learning to improve 20th century skills. Suharyat et al., (2022) conducted research which revealed that problem-based blended learning improved students' 21st century skills including creative thinking skills reflected problem solving ability test. The students who are taught using problem-based blended learning achieved a higher mean score when given a case-based test than students who used conventional models. The results of One-Way ANOVA test which showed that there was a significant difference between students' creative thinking skills who were taught by using problem-based blended learning and students who were taught by conventional learning model indicating that problem-based blended learning improved students' creative thinking skills in economics learning particularly in taxation material. The result supported the previous research conducted by Supiandi and Julung (2016) pointed out that problem-based blended learning increased students' ability to analyse the data and responded to the problems. It was relevant to the definition of creative thinking skills stated by Qomariyah and Subekti (2021) in which creative thinking skills were skills in analysing data, and providing various problem solving responses.

The current study proved that the application of problem-based blended learning increased students' creative thinking skills which strengthened the previous study found that problem-based blended learning could be applied to increase students' creativity as a manifestation of students' creative thinking skills (Wahyuni et al., 2022). The results of the current research also supported the research conducted by Koyimah et al., (2021) revealing that problem-based blended learning was more effective than conventional learning. The results of the current research showed that there was a simultaneous effect of problem-based blended learning on students' critical thinking skills and creative thinking skills supported statements related to the application of problem-based blended learning. It was stated that problem-based blended learning was an innovative learning model that not only increased students' learning independence but also improved their critical and creative thinking skills as a significant contribution in the long-term learning process (Tsai & Tang, 2017; Saptenno et al., 2019). The existence of a significant simultaneous effect of problem-based blended learning on students' critical thinking skills and creative thinking found in this study supported the findings of previous study related to a significant correlation between students' creative thinking skills and critical thinking through learning blended learning implemented using problem-based learning methods.

The similar finding was shown by the previous studies in which problem-based blended learning becoming an effective open-ended learning model increasing students' cognitive development (Dawilai et al., 2018; Yulianawati et al., 2022). It was relevant to the results of current research where there was a significant effect of problem-based blended learning on students' creative thinking skills. In addition, the results of the current research also increased the existence of problem-based blended

learning as a learning model to improve students' ability to solve problems where this ability was inseparable from students' critical and creative thinking skills (Ati & Setiawan, 2020; Ismail & Edi, 2022). The simultaneous effect of problem-based blended learning on students' critical and creative thinking skills found in this study also strengthened the hypothesis proved by relevant research where the implementation of problem-based blended learning was effective for increasing participants' thinking skills students (Alfi et al., 2016).

D. Conclusion

Based on findings discussed in the previous section, the conclusion was taken in which there were three main important things concluded in this study; 1) there was an effect of problem based-blended learning towards students' critical thinking skills, 2) there was an effect of problem based-blended learning towards students' creative thinking skills, 3) there was a simultaneous effect of problem-based blended learning towards students' critical and creative thinking skills. Those findings strengthened the existence of problem-based blended learning as a learning model in economic learning process in which it was practically implemented in the learning process. Further research needed to be conducted to gain a deeper investigation in a broader scope related to problem-based blended learning implementation.

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