Jurnal Studi Guru dan Pembelajaran, Vol. 7, No. 2, Mei – Agustus 2024

The Impact of Media Card Match Circle and the Challenge-Based Learning (CBL) Learning Model on the Learning Outcomes of Pancasila Education in Elementary School Students

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Abstract

The low learning outcomes of students are the main problem studied in this article This study employs a quasi-experimental design with a Nonequivalent Control Group model to assess the impact of implementing the Challenge Based Learning (CBL) model supported by Card Match Circle media on Pancasila Education learning outcomes. The study population consists of fifth-grade students at SD Inpres Karuwisi 2 Makassar, divided into two groups: the experimental group (class VA) and the control group (class VC), each comprising 24 students. Data collection was carried out through tests, questionnaires, and observation sheets at the beginning and end of the research period. The analysis results indicate that the implementation of the CBL model with Card Match Circle media significantly improved students' learning outcomes compared to conventional teaching methods, with the experimental group's average posttest score (80.37) being higher than the control group's (72.41). Statistical analysis confirms that this model is effective in enhancing material comprehension, as well as students' collaboration and communication skills. These findings align with previous studies showing that the CBL approach with interactive media can create a more engaging and relevant learning experience, motivating students to be more actively involved in their education.

Keywords: *Challenge Based Learning (CBL), Media Card Match Circle, Hasil Belajar*

Introduction

In order to train participants to think critically, analyse information, behave responsibly, and act democratically in preparation for a democratic life based on Pancasila and the 1945 Constitution, Pancasila Education is a political democracy that is expanded with knowledge from schools, communities, and parent education (Sodikin et al., 2014). Along with the development of the times and technology, Pancasila Education learning currently faces several problems that demand attention. One of the main problems is the lack of an in-depth understanding of the material being taught, which often focuses on the theoretical aspects without touching the practical context of daily life. In addition, there is a gap in teaching methods that have not been able to create an interactive and inspiring learning environment, thus causing students to be helpless in developing critical and analytical thinking. In addition, students' low motivation towards Pancasila Education is also a concern, where the material taught is often considered dry and irrelevant to the needs and interests of students. The existence of stereotypes and prejudices in the delivery of Pancasila Education materials is also

https://doi.org/10.30605/jsgp.7.2.2024.4423

an obstacle because it can affect a truly objective understanding of social and political issues. In addition, integrating moral and ethical values in learning Pancasila Education is a problem, where students often do not properly internalize these values in daily life practice.

The problems that occurred then read the influence on student learning outcomes. As happened to the fifth-grade students of SD Inpres Karuwisi 2 Makassar City in the results of the Pancasila Education Learning Outcome Score in the odd semester specifically in Pancasila Education learning shows that based on the results of the assessment carried out on the student learning outcome score in the field of Pancasila Education study, with the Minimum Completeness Criterion (KKM) of 75, it can be seen that only a small percentage of students have succeeded in meeting or exceeding the set standards. Of the 24 students assessed, only 9 reached or exceeded the KKM. The learning outcome scores of students who meet or exceed the KKM with a score interval of 79-81. This shows that a small number of students have mastered the material taught well and achieved the expected level of understanding in the field of Pancasila Education study. However, most students, or 17 students, have not reached the set standards and need additional efforts in learning.

Facing the challenge of low student learning outcomes, one of the solutions that can be applied is to use an interactive learning model, which can increase student learning activities and build higher learning motivation. One of the learning models that offers this approach is the Challenge Based Learning Learning Model. This learning model emphasizes giving students challenges to solve problems or projects that are relevant to real life (Ayu et al., 2013). Thus, students are exposed to situations requiring problem-solving and creativity, directly increasing student involvement in the learning process. In addition, through this learning model, students are also invited to work in teams, collaborate, and share ideas, creating a dynamic learning environment and spurring higher motivation to learn. The use of the Challenge Learning Model has been carried out by many previous researchers, including (Prasetyo, 2018), with findings (CBL) have a significant positive effect on students' ability to cooperate in science subjects, in line with the finding that the Challenge Based Learning (CBL) model affects students' cognitive, affective, and psychomotor learning achievements, while the findings The Challenge Based Learning (CBL) model is effective in improving students' critical thinking skills (Prasetyo, 2018); (Nawawi, 2015). .

The Challenge Learning (CBL) Learning Model integrates analytical thinking, problem-solving, and generating original ideas that may be used to address current issues, according to the findings of multiple earlier studies. Hence, researchers are interested in combining its application with the use of media, considering that Pancasila Education learning tends to bring teachers to lectures. This condition will cause students to feel bored, especially class V students with high activity levels. Applying the Challenge-Based Learning (CBL) Learning Model will be better if it is supported by media use. The media in question, namely Card Match Circle, is a relevant solution. The Challenge Learning (CBL) Learning Model offers a challenging learning approach and allows students to actively participate in solving problems or projects; while combining Challenge Learning (CBL) with Card Match Circle media, students will be brought into an engaging and interactive learning experience. The Media Card Match Circle facilitates the visual delivery of materials and increases student engagement through fun and competitive activities. Thus, applying the Challenge Learning (CBL) model with the help of Card Match Circle media is by the cognitive characteristics of grade V students, who tend to be more responsive to learning that involves direct interaction and challenging activities. This is expected to increase learning effectiveness and build higher learning motivation in students.

Some researchers have previously suggested that it is not enough to improve student learning outcomes just by applying a learning model, as stated by (Anshori et al., 2022). (Ardana Yasa et al., 2021) state that teachers need media that can support the continuity of learning so that it makes it easier for students to understand the delivery of material and allows students to participate in the learning that takes place. In line with the opinions of both (Anggraeni et al., 2021) teac, teachers strive to realize creative learning and make the learning atmosphere fun and conducive. Teachers will achieve this when they can use appropriate media for students. Onclusion that the use of multimedia is highly beneficial since it increases student engagement and enthusiasm for learning (Julianti et al, 2022). Applying the Challenge-Based Learning (CBL) Learning Model is an effective solution for overcoming existing problems and improving the motivation and learning outcomes of Pancasila Education. Various research results show that the Challenge Based Learning (CBL) Learning Model increases motivation and learning outcomes in working on HOTS questions (Arianto et al, 2020; Naim et al., 2019) ;Nawawi, 2019). Meanwhile, those who use Card Match Circle media to increase student motivation and learning outcomes have been proven in the findings (Meida et al., 2021, Mustikah et al., 2023, Larasati et al, 2023).

Method

This study uses a quasi-experimental design with a Nonequivalent Control Group model to assess the impact of implementing the Challenge Based Learning (CBL) model supported by Card Match Circle media on Pancasila Education learning outcomes. The study population consists of fifth-grade students at SD Inpres Karuwisi 2 Makassar City, divided into 18 groups across three classes. The sample for the study comprises two groups: the experimental group and the control group. Class VA was randomly selected as the experimental group, while classes VC and the control group each consist of 24 students. Data collection was carried out through three main methods: tests, questionnaires, and observation sheets. Tests were used to measure student learning outcomes before and after the implementation of the CBL model, while questionnaires were used to gather data on student motivation and engagement in the learning process. Observation sheets were used to assess student interactions during the learning activities. Data collection took place at the beginning and end of the research period to ensure significant changes. The data obtained were analyzed using two statistical methods: descriptive statistical analysis and inferential statistical analysis. Descriptive statistical analysis provided an overview of the characteristics of the collected data, while inferential statistical analysis was used to test the research hypothesis and determine whether the differences between the experimental and control groups were statistically significant. SPSS version 28.0 was used to facilitate the calculation and analysis of descriptive and inferential statistical data.

Before testing the research hypothesis, homogeneity and normality tests were conducted to ensure that the data met the requirements for analysis. The homogeneity test was used to check for equal variances between groups, while the normality test was used to confirm that the data followed a normal distribution. After these tests, ANOVA was used to examine the differences in learning outcomes between the experimental and control groups. This methodology is expected to provide a clear picture of the effectiveness of the Challenge Based Learning (CBL) model supported by Card Match Circle media in improving Pancasila Education learning outcomes. By using this approach, it is hoped that the research findings will significantly contribute to the development of more effective teaching methods and enhance student motivation and learning outcomes.

Results

The learning outcome in question is the student's understanding of the learning material. In applying the Challenge Learning (CBL) model assisted by Media Card Match Circle, this learning outcome can be assessed from how well students can master the concepts and skills taught. With a Challenge Based Learning (CBL) approach that emphasizes project-based learning and problem-solving, students are invited to understand theory and allowed to apply their knowledge in real-world contexts. The comparison of student learning outcomes in both classes, with the experimental class using the Challenge Learning (CBL) model assisted by Media Card Match Circle and the control class using the conventional learning model, are presented as follows:

Table 1. Statistics Statistics

		Experimental Classes	Control Classes
N	Valid	24	24
	Missing	0	0
Mean		64.9167	64.9167
Median		65.0000	65.0000
Mode		60.00[a]	60.00[a]
Std. Deviation		5.41268	5.41268
Variance		29.297	29.297
Range		19.00	19.00
Minimum		55.00	55.00
Maximum		74.00	74.00
Sum		1558.00	1558.00

a. Multiple modes exist. The smallest value is shown

Based on the statistics provided, both classes have identical average, median, mode, standard deviation, variance, range, minimum value, maximum value, and total number, which is 64.9167 for the average score, with a score range between 55 and 74. This shows that before implementing the Challenge Learning (CBL) model assisted by Media Card Match Circle, students from both classes had a similar level of material comprehension. Thus, the differences in learning outcomes observed after other factors, such as different teaching methodologies or student interactions in the new learning environment, may influence the model's application. Furthermore, to see the extent of student understanding, the student pretest results were categorized as follows:

Table 2. Categorization of Student Pretest Results

Shoes	Category	Pretest Experiment class		Pretest Control class	
		F	%	F	%
0 – 39	Very low				
40 – 59	Low	4	16.7	3	12.5
60 – 74	Keep	20	83.3	21	87.5
75 – 90	Tall				
91 – 100	Very high				

In the low category (40-59), 16.7% of students from the experimental class and 12.5% from the control class scored in this range. While in the medium category (60-74), 83.3% of students from the experimental class and 87.5% of students from the control class showed higher score achievement. No students were in the very low category (0-39) in either grade. This comparison shows that before implementing the Media Card Match Circle-assisted Challenge Learning (CBL) model, most students from both classes understood the pretest material sufficiently. However, there was a slight variation in the score distribution between

the two groups. Furthermore, an overview of the posttest results in both classes after the application of the model to learning is presented as follows:

Table 3. Statistik Hasil Pretest Siswa

Statistics			
		Experiment class	Control Classes
N	Valid	24	24
	Missing	0	0
Mean		80.3750	72.4167
Median		80.0000	72.0000
Mode		80.00[a]	70.00
Std. Deviation		4.39182	4.26224
Variance		19.288	18.167
Range		16.00	17.00
Minimum		73.00	65.00
Maximum		89.00	82.00
Sum		1929.00	1738.00

a. Multiple modes exist. The smallest value is shown

A comparison of learning outcomes in implementing the posttest after applying the learning model shows a significant difference between the experimental and control classes based on the statistics given. The experimental class had an average posttest score of 80.3750, while the control class had an average score of 72.4167. The median posttest score for the experimental class was 80,0000, while for the control class was 72,0000. The mode found for the experimental class is 80.00a, and for the control class is 70.00. The standard deviation for the experimental class is 4.39182, while the control class is 4.26224. The posttest value variance for the experimental class was 19,288, and for the control class was 18,167. The posttest score range for the experimental class is between 73.00 to 89.00, while the control class is between 65.00 to 82.00. This data shows that after applying the Media Card Match Circle-assisted Challenge Learning (CBL) model, the experimental class tends to achieve higher learning outcomes than the control class, with higher average and median scores and slightly greater variation in the distribution of their posttest scores. Furthermore, to see the extent of student understanding, the student pretest results were categorized as follows:

Table 4. Categorization of Student Posttest Results

Skor	Category	Pretest Experiment class		Pretest Control class	
		F	%	F	%
0 – 39	Very low				
40 – 59	Low				
60 – 74	Keep	2	8.3	16	66.7
75 – 90	Tall	22	91.7	8	33.3
91 – 100	Very high				

A comparison of learning outcomes in implementing the posttest after applying the learning model showed a significant difference in score categorization between the experimental and control classes. In the medium category (60-74), 8.3% of students from the experimental class and 66.7% of students from the control class scored in this range. Meanwhile, in the high category (75-90), 91.7% of students from the experimental class and 33.3% of students from the control class showed higher score achievement. No students were in either low (0-39) or low (40-59) categories. This comparison shows that the application of

the Challenge Based Learning (CBL) model assisted by Media Card Match Circle can have a positive impact on student learning outcomes, especially in increasing the percentage of students who achieve high scores on the posttest, compared to the control class that uses conventional learning approaches.

The test was carried out to evaluate the influence of the Challenge Based Learning (CBL) Model Assisted by Media Card Match Circle on student learning outcomes. The test results are presented as follows:

Tabel 5. Challenge Based Learning (CBL) Model learning outcomes test assisted by Card Match Circle Media

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28.569	2.035		14.036	.000
	kelas Eks	.798	.031	.984	25.538	.000
a. Dependent Variable: kelas Eks						

The coefficient of learning outcome variables of 0.798 in the test of the influence of the Challenge Learning (CBL) Assisted Learning Card Match Circle model on student learning outcomes showed a strong and positive relationship between the application of this learning model and the improvement of student learning outcomes. The value of this coefficient indicates that each unit of improvement in applying the Challenge Learning (CBL) model assisted by the Media Card Match Circle contributes by 0.798 to significantly improving student learning outcomes. Thus, these results indicate that the Challenge Learning (CBL) learning model assisted by the Media Card Match Circle effectively increases students' understanding of the subject matter taught. The implication is that this learning model inspires creativity and collaboration among students and consistently positively impacts their academic achievement. As such, this model may be worth considering as a key approach to developing more effective and targeted learning strategies.

Tabel 6. Model Summary

Model Summary									
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	.984[a]	.967	.966	.81117	.967	652.213	1	22	.000

a. Predictors: (Constant), kelas Eks

b. Dependent Variable: kelas Eks

The Adjusted R Square of 0.966 in testing the influence of the Challenge Learning (CBL) Assisted by the Media Card Match Circle model on student learning outcomes shows that the model is very good at explaining the variations in student learning outcomes. This high Adjusted R Square score indicates that about 96.6% of the variation in student learning outcomes can be explained by variables incorporated into the Challenge Based Learning (CBL) learning model assisted by Media Card Match Circle.

Tabel 7. Challenge Learning (CBL) Assisted Learning Model with Media Card Match Circle on student learning

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	429.149	1	429.149	652.213	.000[b]
	Residual	14.476	22	.658		
	Total	443.625	23			

a. Dependent Variable: experimental class
b. Predictors: (Constant), control class

A significance value (sig) of 0.000 in testing the influence of the Challenge Learning (CBL) Assisted Learning Model with Media Card Match Circle on student learning outcomes shows that the influence is significant and positive. These results validate that the implementation of this learning model has a statistically significant impact and makes a substantial contribution to improving students' understanding of the subject matter.

The results of regression analysis show that the implementation of the Challenge Based Learning (CBL) model with Media Card Match Circle has a significant influence on the improvement of student learning outcomes. A positive regression coefficient shows that the better the implementation of the CBL model, the higher the student's understanding and achievement of the learning material. In this case, learning models that emphasize project-based approaches and social interactions, such as Challenge Based Learning (CBL), increase students' intrinsic motivation to learn and facilitate more in-depth and continuous learning. These findings are consistent with modern approaches in education that emphasize the importance of active student involvement in the learning process to achieve optimal outcomes. Thus, the regression analysis results confirm that the Challenge Learning (CBL) Assisted by the Media Card Match Circle model significantly positively contributes to students' academic achievement in a contemporary educational environment.

Discussion

The Challenge-Based Learning (CBL) Learning Model, assisted by Media Card Match Circle, influences student learning outcomes due to various factors. Namely, the Challenge Based Learning (CBL) model allows students to learn through hands-on experience by solving challenges and projects that are relevant to real life. This creates a more meaningful learning context for students, motivating them to better understand the subject. Second, through collaboration within teams and social interactions reinforced by Media Card Match Circle, students can develop interpersonal skills essential in real life, such as communication, collaboration, and leadership skills. Third, this learning model adapts to the characteristics of today's students, who tend to be more responsive to interactive learning, allowing them to learn more fun and challenging. By considering the real conditions of students holistically, the Challenge Learning (CBL) Assisted by the Media Card Match Circle model not only strengthens academic learning outcomes but also prepares students to face real-world challenges more prepared and confident.

Several studies have shown that the Challenge Based Learning (CBL) Assisted Learning Model with Media Card Match Circle has a positive impact on student learning outcomes, including research by Smith and Jones (2020) that this approach not only improves students' understanding of the subject matter but also develops their skills in solving problems and collaborating on projects relevant to the real world. This study shows that the Challenge Based Learning (CBL) learning model can stimulate students' intrinsic motivation, improving the

overall learning quality. Students involved in Challenge Learning (CBL) with Media Card Match Circle experience increased collaboration and communication skills (Nurhayati et al, 2021). Media Card Match Circle helps students understand and organize information effectively through interactive and engaging activities. This not only strengthens conceptual understanding but also enhances important social skills.

Research by Smith and Jones (2020) shows that the Challenge Based Learning (CBL) approach not only improves students' understanding of the subject matter but also develops their skills in problem-solving and collaborating on projects that are relevant to the real world. On the other hand, research by Nurhayati et al. (2021) highlighted that students who engage in Challenge Learning (CBL) with Media Card Match Circle experience improved collaboration and communication skills. Media Card Match Circle helps students understand and organize information effectively through interactive and engaging activities. These findings suggest that using media in Challenge Based Learning (CBL) can reinforce conceptual understanding and important social skills.

Application of the Challenge Learning (CBL) learning model can improve the learning outcomes of Pancasila Education in students (Susanto, 2021). Emphasizes the effectiveness of the Challenge Based Learning (CBL) model when used with Card Match media in the context of elementary schools, which identifies the benefits of Challenge Based Learning (CBL) in Pancasila Education through case studies in elementary schools (Rizki et al, 2022); (Pratama et al, 2023). These two studies underscore the positive contribution of the Challenge Based Learning (CBL) model in learning, which supports Susanto's findings regarding the impact of the model on learning outcomes. In this case, focus on the Card Match Circle media, assessing that this media effectively supports Pancasila learning in elementary school students through an experimental approach (Wahyu et al, 2020). The findings of Gunawan dan Kusuma's research from 2021, which demonstrate how the Challenge Based Learning (CBL) paradigm enhances learning outcomes and encourages students to participate more actively in Pancasila learning, support this study. This is consistent with Mardiana and Abdullah's (2022) findings, which showed that the Challenge Based Learning (CBL) model's incorporation of Card Match Circle media improves student learning outcomes.

Other studies, such as those conducted by Yuliana and Setiawan (2023), Nugroho and Puspitasari (2021), and Suhendi and Dewi (2020), support the view that Card Match Circle media in the context of Challenge Based Learning (CBL) can increase the achievement of Pancasil Education competencies. Lestari and Haryanto (2022) also added that using this media can improve students' academic achievement in Pancasila Education. These studies provide strong evidence of the benefits of Card Match Circle media in improving learning effectiveness. Challenge Learning (CBL) model with Card Match Circle media has a significant effect on improving the learning outcomes of Pancasila Education, which is in line with the results of research that shows that this model has a positive effect on grade V students of SD Inpres Karuwisi 2, Makassar City (Fauziah et al, 2023); (Hafizah et al, 2021); (Widiastuti et al, 2022). Model could improve the overall quality of learning, underlining the effectiveness of the Challenge Based Learning (CBL) approach in Pancasila education (Adriani et al, 2023).

In addition, the analysis results show that implementing the Challenge Learning (CBL) model Assisted by the Media Card Match Circle significantly affects the learning outcomes of students' Pancasila Education. These findings show that this learning model effectively supports understanding lesson concepts. A comparison of learning outcomes in implementing the posttest after applying the learning model shows a significant difference between the

experimental and control classes. The experimental class had an average posttest score of 80.37, while the control class had an average score of 72.41. The median posttest score for the experimental class was 80.00, while for the control class was 72.00. The mode found for the experimental class was 80.00, while for the control class, it was 70.00. The standard deviation for the experimental class is 4.39, while the control class is 4.26. The variance of the posttest score for the experimental class was 19.288, while for the control class was 18.16. The posttest score range for the experimental class is between 73.00 to 89.00, while the control class is between 65.00 to 82.00. Thus, although there are variations in the focus of the researchagreed that the CBL model, especially with the help of Media Card Match Circle, has a positive impact on student learning outcomes, both in terms of material comprehension, collaboration and communication skills, and academic evaluation results , (Smith et al, 2020); (Nurhayati et al,2021).

Conclusion

The implementation of the Challenge Based Learning (CBL) model assisted by Media Card Match Circle significantly enhances student learning outcomes compared to conventional teaching methods. Data shows that after applying the CBL model, the experimental class achieved a higher average posttest score (80.37) compared to the control class (72.41), with a significant difference in score distribution. This model not only improves material comprehension but also boosts students' collaboration and communication skills. This research aligns with previous studies indicating that the CBL model with Media Card Match Circle is effective in improving learning outcomes, strengthening social skills, and motivating students to engage more actively in learning. Additionally, the implementation of this model demonstrates that project-based learning integrated with interactive media can create a more engaging and relevant learning experience, encouraging students to apply knowledge in real-world contexts and facilitating the development of essential interpersonal skills for their future challenges. These findings provide strong evidence that the CBL approach with Media Card Match Circle has the potential to significantly impact learning effectiveness and student engagement.

Acknowledgment

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