



**THE INFLUENCE OF THE MAKE A MATCH LEARNING MODEL ON STUDENT
LEARNING OUTCOMES IN BASIC AUTOMOTIVE ENGINEERING PRACTICES AT
SMKN 3 BULUKUMBA**

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ABSTRACT

This study aims to examine the effect of the Make A Match learning model on student learning outcomes in the subject of Basic Automotive Engineering Practices (BAEP) at SMKN 3 Bulukumba. This research uses a quantitative approach with a quasi-experimental design. The population consisted of two classes of X TKR totaling 49 students. Class X TKR II was used as the experimental class and was taught using the Make A Match model, while class X TKR I served as the control class without treatment. The instrument used was a learning outcome test consisting of pre-test and post-test. The results showed that the average pretest score of the experimental class was 50.74 and the posttest score was 81.79, while the control class had an average pretest score of 50.68 and posttest 75.22. The t-test results obtained $t_{count} = 3.813 > t_{table} = 1.676551$, indicating a significant difference between the two classes. Thus, it can be concluded that the Make A Match learning model has a significant effect on improving student learning outcomes in the Basic Automotive Engineering Practices at SMKN 3 Bulukumba.

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran Make A Match terhadap hasil belajar siswa pada mata pelajaran Pekerjaan Dasar Teknik Otomotif (PDTO) di SMKN 3 Bulukumba. Jenis penelitian ini adalah penelitian kuantitatif dengan pendekatan eksperimen semu. Populasi penelitian terdiri atas dua kelas X TKR dengan jumlah 49 siswa. Kelas X TKR II ditetapkan sebagai kelas eksperimen yang diberi perlakuan dengan model Make A Match, sedangkan kelas X TKR I sebagai kelas kontrol tanpa perlakuan. Instrumen penelitian berupa tes hasil belajar yang

terdiri atas pretest dan posttest. Hasil penelitian menunjukkan bahwa nilai rata-rata pretest siswa kelas eksperimen adalah 50,74 dan posttest sebesar 81,79, sedangkan kelas kontrol memiliki rata-rata pretest 50,68 dan posttest 75,22. Berdasarkan hasil uji-t, diperoleh $t_{hitung} = 3,813 > t_{tabel} = 1,676551$, yang menunjukkan adanya perbedaan signifikan antara hasil belajar siswa kelas eksperimen dan kelas kontrol. Dengan demikian dapat disimpulkan bahwa penerapan model pembelajaran Make A Match berpengaruh signifikan terhadap peningkatan hasil belajar siswa pada mata pelajaran PDTO di SMKN 3 Bulukumba.

INTRODUCTION

The quality of education in Indonesia remains a serious concern. One of the reasons for low student learning outcomes is the use of conventional teaching methods that tend to make students passive. In the Basic Automotive Engineering Practices (BAEP) subject at SMKN 3 Bulukumba, teachers still predominantly use the lecture method, resulting in students being less active and having low learning outcomes. The Make A Match learning model is one of the cooperative learning models that incorporates a question-and-answer card game element, which can make students active and engaged in the learning process. Through this game, students can increase their learning motivation and conceptual understanding because the learning process is carried out in a fun way. Therefore, this research was conducted to determine the effect of the Make A Match learning model on the learning outcomes of students at SMKN 3 Bulukumba.

RESEARCH METHOD

This type of research is quantitative research with a quasi-experimental design. The study population consists of all 49 students in class X TKR at SMKN 3 Bulukumba. The research sample was divided into two classes: X TKR II as the experimental class with 24 students who received treatment using the Make A Match learning model, and X TKR I as the control class with 25 students who used the conventional method. The research instrument is a learning outcomes test consisting of a pre-test and a post-test. Data analysis was conducted using a t-test to determine the significant effect of the Make A Match learning model on student learning outcomes.

RESEARCH RESULTS

The research results show that the average pre-test score for the experimental class is 50.74 and the post-test score is 81.79, while the control class has an average pre-test score of 50.68 and a post-test score of

75.22. Based on the t-test results, $t_{\text{calculated}} = 3.813$ is greater than $t_{\text{table}} = 1.676551$, and the N-Gain value (g) is found to be 0.630, where $0.30 \leq g < 0.70$ indicates that the Make A Match learning model is quite effective in improving student learning outcomes. Therefore, there is a significant difference between the learning outcomes of the experimental class and the control class. Thus, it can be concluded that the application of the Make A Match learning model can improve student learning outcomes.

Table 1 Descriptive Statistics Pretest Results (Pre-Test)

	Experimental Class	Control Class
Number of sample	24	25
Mean	50,74	50,68
Highest score	65	65
Lowest score	40	40
Standar Deviasi	6,401	6,720
Modus	50	45

Table 2 Frequency Distribution of Pre-Test Results for the Experimental Class

No	Qualifications	Score Range	Frequency	Percentage (%)
1	(Very Good)	80 - 100	0	00,00
2	(Good)	66 - 79	0	00,00
3	(Fairly)	56 - 65	4	16,67
4	(Poor)	41 - 55	6	25,00
5	(Very Poor)	0 - 40	14	58,33
	Total		24	100

Table 3 Frequency Distribution of Pre-Test Results for the Control Class

No	Qualifications	Score Range	Frequency	Percentage (%)
1	(Very Good)	80 - 100	0	00,00
2	(Good)	66 - 79	0	00,00
3	(Fairly)	56 - 65	6	24,00
4	(Poor)	41 - 55	15	69,00
5	(Very Poor)	0 - 40	4	16,00
	Total		24	100

Table 4 Post-Test Results Data

Descriptive Statistics (<i>Post-test</i>)		
	Kelas Eksperiment	Kelas Kontrol
Number of sampels	24	25
Mean	81,79	75,22
Highest score	95	85
Lowest score	65	65
Standar Deviasi	8,075	6,303
Modus	80	75

Table 5 Frequency Distribution of Posttest Results for the Experimental Class

No	Qualifications	Score Range	Frequency	Percentage (%)
1	(Very Good)	80 - 100	18	75,00
2	(Good)	66 - 79	4	16,70
3	(Fairly)	56 - 65	2	8,30
4	(Poor)	41 - 55	0	00,00
5	(Very Poor)	0 - 40	0	00,00
	Total		24	100

Table 6 Frequency Distribution of Posttest Results for the Control Class

No	Qualifications	Score Range	Frequency	Percentage (%)
1	(Very Good)	80 - 100	11	44,00
2	(Good)	66 - 79	11	44,70
3	(Fairly)	56 - 65	3	12,00
4	(Poor)	41 - 55	0	00,00
5	(Very Poor)	0 - 40	0	00,00
	Total		25	100

Tabel 6 Independent Sample T-Test Result of Pre-Test Result

Data	t	df	Probability	Description
<i>Pre-Test</i> of the Experimental Class and Control Class	0,031	48	0,976	$0,976 > 0,05 =$ There is no difference

Tabel 7 Independent Sample T-Test Result of Post-Test Result

Data	t	df	Probabilitas	Description
Pre-Test of the Experimental Class and Control Class	3,813	48	0,003	$0,003 < 0,05 =$ There is difference

Table 8 Learning Outcomes Data for Experimental Class (*Make A Match*)

Testing	Average value (Score)	Description
Pre-Test	$X_{pre} = 50,74$	Students' initial abilities before the Make A Match model was implemented.
Post-Test	$X_{post} = 81,79$	Student learning outcomes after the make A Match model is implemented.
Idel Highest Score	$X_{max} = 100$	

Tabel 9 Learning Outcomes Data Using N-Gain Scores

Condition	Relevant Values	Description
Pre-treatment value	N-gain Nothing	N-Gain is an improvement index calculated after treatment. The only value available before treatment is the pre-test average of 50,74.
N-Gain value after treatment	0,630	The increase in learning outcomes from the pre-test to the post-test is due to the implementation of the Make a Match model.

DISCUSSION

The results of the study indicate that the use of the Make A Match learning model has a positive effect on student learning outcomes. This is because the Make A

Match model actively involves students in the learning process through a game of matching question and answer cards. This process makes students more focused, active, and socially interactive with their friends. These results are in line with the research by Malahayati et al. (2020) and Rita Ningsih (2018),

which shows that the Make A Match model can improve student learning outcomes and activity. In addition,

Triyadi (2018) also states that the application of the Make A Match learning model can increase the learning activity of grade XI TKR B students at SMK Muhammadiyah Prambanan in the competency of understanding gasoline fuel systems. Therefore, this learning model is suitable for application in practice-based learning, such as in the BAEP subject at SMKN 3 Bulukumba.

CONCLUSION

Based on the research conducted on the application of the Make A Match learning model to student learning outcomes in the Basic Automotive Engineering Practices (BAEP) subject at SMKN 3 Bulukumba, several important conclusions can be drawn as follows:

- a. The average pre-test score for the experimental class (X TKR I) was 50.74, with the highest score being 65 and the lowest being 40. This indicates that students' initial understanding of BAEP material was still considered low. The average pre-test score for the control class (X TKR II) was 50.68, with the highest score being 65 and the lowest being 40. The initial abilities of the students in this class are almost equivalent to those in the experimental class, and the majority of students have also not yet reached the minimum passing grade.
- b. The average post-test score for the experimental class (X TKR I) increased to 81.79, with the highest score being 95 and the lowest being

65. The average post-test score for the control class (X TKR II) increased to 75.22, with the highest score being 85 and the lowest being 65. Although there was an increase, it was not as significant as in the experimental group. Some students have still not reached the minimum passing grade, and learning is taking place more passively.

- c. Based on the statistical data analysis results, the t-test results for the post-test showed a significance value of $0.003 > 0.05$. Therefore, it can be concluded that the implementation of the Make A Match learning model is effective in improving student learning outcomes in the Basic Automotive Engineering Practices (BAEP) subject for class X TKR at SMKN 3 Bulukumba. The Make A Match learning model significantly impacts the improvement of learning outcomes because it can create an active, collaborative, and enjoyable learning atmosphere, thus optimally encouraging student motivation and participation in the learning process.

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