Application of Problem Based Learning and Learning Motivation in Improving Student Learning Outcomes in Economics Subjects: A Quasi-Experimental Research

Andi Hasniati[1], Muhammad Rakib[1*], Rahmatullah[1], Najamuddin[2], Dian Anugrah Sanusi[2]

[1]Universitas Negeri Makassar, Indonesia

[2]Universitas Satya Wiyata Mandala, Indonesia

[*]Corresponding Author

DOI: https://dx.doi.org/10.47772/IJRISS.2024.803080

Received: 27 February 2024; Accepted: 07 March 2024; Published: 07 April 2024

ABSTRACT

The research aims to find out: (1) the influence of the *Problem Based Learning* model on the learning outcome of the pupil; (2) the impact of the motivation on the learners' learning outcomes; (3) the influences of the interaction of the Problem Based Learning models with the motivations on the learner's learning output. The study uses a quantitative approach of a quasi-experimental type with a *post-test* only-of-non-equivalent control group design. Sample on this study, namely students of class XI IIS 1 as an experimental class and students of Class XI II 3 as a control class. The research instrument uses motivation assessment and a double-choice test that already meets the quality of the instrument. Data analysis in this study uses N-Gain and the Two-Way Anova test. The results of the study show that (1) the *Problem Based Learning* model has an influence on the learning outcome of the student, this has been demonstrated by comparing the average value of the experimental class higher than the control class, (2) the learning motivation has an impact on the student's learning outcomes, and (3) there is an impact of the interaction of the problem-based learning model with the motivation on the learners' learning output. So, if you want to improve the student's learning outcomes, then teachers can use the *Problem Based Learning* model as an alternative and strengthen the motivation of the student during the learning process.

Keywords: Problem Based Learning Model, Learning Motivation, Learning Outcomes

INTRODUCTION

Lack of engagement and enthusiasm during the learning process is one of the biggest issues high school students' experiences, as it eventually compromises their comprehension of the subject matter and learning objectives. Even with continuous efforts to raise the standard of high school education, student grasp of the subject matter and academic performance are frequently not up to par. Based on the results of the pre-survey, it shows that the daily test results of students in the Economics subject at SMA Negeri 18 Bone were obtained, namely from 82 students and only 9 students completed it or around 7%, while 74 students or around 93% did not complete it.

The criteria for completion and incompleteness are based on indicators for determining Minimum Completion Criteria (MCC), and the MCC value in economics subjects at SMA Negeri 18 Bone is 75. The complete category indicates that students have obtained a score that has reached the MMC. Meanwhile, the incomplete category shows that there are still students who have not yet received a score reaching the MCC. From data from daily test study results in economics subjects.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VIII Issue III March 2024

The findings of a pre-survey carried out by researchers who were also economics teachers revealed a number of issues that contributed to low learning outcomes, such as students' lack of courage to voice their opinions and their lack of interest in actively pursuing questions about the material being taught, as evidenced by the fact that many of them did not complete the assigned work. According to teachers, some students engage in self-talk while they are studying, which reduces their retention of the content and leads to less-than-ideal learning outcomes. If economics courses are taught conventionally without incorporating the right learning models, students will still view them as challenging subjects Because of the lack of variation in the teaching strategies employed and the teachers' failure to equip pupils with problem-solving skills, students become disinterested and frustrated during the learning process.

However, the above can be minimized by learning meaningful concepts by implementing Problem Based Learning where this learning model can train students' thinking abilities. Students who play an active role in a group to discover knowledge, namely discovering learning concepts and solving problems. As stated by Heidjrachman et al., (2000), Problem Based Learning is an innovation in learning because in PBM students' thinking abilities are truly optimized through a systematic group or teamwork process, so that students can empower, hone, test and develop their abilities. think continuously.

Motivation is the most important thing for someone to do something they want to achieve the goals they want to achieve. Alimbudiono et al., (2022) stated that motivation is energy from within humans, this energy is characterized by a feeling of desire. In the learning process, motivation is very influential so that students are motivated to carry out the learning process with joy and enthusiasm so that new knowledge can be easily accepted and understood. According to Vereijken et al., (2018), learning motivation has a big influence on what one wants to achieve, if students have high motivation, then the development of mindset and learning achievement will also be high. In contrast, if students have learning motivation, it will be more difficult to improve learning achievement.

Motivation arises from within humans based on their own will, without coercion from others. For example, a student likes to read, without being told to read he does it every day. According to him, things like this are not an activity he enjoys, but a daily need. According to Orosco (2016), Orosco (2016) what is included in intrinsic motivation is as follows: (a) Extensive knowledge caused by a high level of curiosity about something. (b) Creative and positive so that you have a sense of wanting to develop. (c) Have the desire to achieve an achievement, so that you get support from parents, family and friends. (d) Mastering knowledge is a necessity.

According to Hamzah and Sofyan (2015), the following are indicators of children who have motivation, namely: (1) Perseverance in facing tasks, willingness and ability to work seriously, focused and non-stop in completing a task or job. (2) Resilient in facing difficulties, the nature of being persistent and persistent in facing challenges or difficulties, with the perseverance to continue trying to find solutions despite experiencing obstacles. (3) Showing interest in various problems, openness and interest in various problems or topics, showing broad curiosity and willingness to learn.

Every learning process will definitely produce learning outcomes in the form of behavior, knowledge and skills. Learning outcomes are results obtained by students after the learning process over a certain period of time. Evidence that someone has learned is a change in behavior in that person, for example from not knowing to knowing, from not understanding to understanding (Dimino et al., 2022). Behavior has a subjective element, and the motor element is a spiritual element, while the motor element is a physical element.

Learning outcomes are the result of an interaction of learning actions and teaching actions. From the teacher's side, the act of teaching ends with the process of evaluating learning outcomes, while from the student's side, learning outcomes are the end of the experience from the peak of the teaching and learning process. Human behavior consists of a number of aspects (Li et al., 2020). Learning outcomes will appear in

any changes to these aspects. These aspects are: Knowledge, Understanding, Habits, Skills, Appreciation, Emotional, Social relationships, Physical, Ethics or character, and Attitude.

Problem Based Learning is a learning activity in which students as learning subjects are required to actively search, discover, analyze, formulate, solve problems, and conclude an existing problem. According to Rismayanti et al. (2021), the goal to be achieved by PBL is students' ability to think creatively, analytically, systematically and logically to find alternative problem solutions through empirical data exploration in order to foster a scientific attitude. With this learning model, students from the start are faced with various life problems that they may encounter later when they graduate from school.

Based on the opinion of Raharjo et al., (2018), in essence problem-based learning is a learning model that is based on constructivism and accommodates student involvement in learning and being involved in contextual problem solving based on the many problems that require authentic investigation, namely inquiry that requires real solutions to real problems.

The issue in this study is how students' learning results in economics classes are impacted by the use of problem-based learning and learning motivation. In the meantime, the purpose of this study is to examine how applying problem-based learning and learning motivation affects students' economics learning results.

METHOD

The approach used in this research is a quantitative approach. A quantitative approach is research that uses data in the form of statistical data or uses numbers as a tool for information related to the research being conducted. Quantitative research is a type of research activity whose specifications are systematic, planned and clearly structured from the beginning to the creation of the research design, both regarding research objectives, research subjects, research objects, data samples, data sources and methodology (from data collection to data analysis).

This type of research was conducted to determine the impact of Problem Based Learning and motivation on the learning outcomes of SMA Negeri 18 Bone students. The approach used in this research is a quasi-experimental quantitative approach. According to Sugiyono (2017), this type of research does not function fully in controlling external variables that can influence the implementation of the experiment. In this research, the experimental class was given treatment using the Problem Based Learning model and given a posttest, while the control class was only given a posttest without treatment, but both used the same learning material.

The location of the research was carried out at SMA Negeri 18 Bone which is in Cina District, Bone Regency and the time of implementation was November-December 2023. There are two variables in this research, namely the independent variable, the independent variable in this research is the application of Problem Based Learning and motivation. The dependent variable in this research is the learning outcomes of students.

The operational definition of a variable is the drawing of boundaries that better explain the specific, more substantive characteristics of a concept. The explanation of the operational definition of each latent variable used is: PBL is a learning approach that focuses on problem solving where students work together to solve real problems or case studies in their learning context. A learning model that is based on constructivism and accommodates student involvement in learning and being involved in contextual problem solving is based on the many problems that require authentic investigation, namely investigations that require real solutions to real problems (Raharjo et al., 2018). Motivation is an internal or external drive that encourages individuals to learn or pursue a goal. Motivation is the most important thing for someone to do something they want to achieve the goals they want to achieve (Alimbudiono et al., 2022). Learning outcomes include

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VIII Issue III March 2024

knowledge, skills and attitudes obtained by students as a result of the learning process. Proof that someone has learned is a change in behavior in that person, for example from not knowing to knowing, from not understanding to understanding (Dimino et al., 2022).

The population in this study determined the total number of students in class XI IIS at SMA Negeri 18 Bone consisting of XI IIS 1, XI IPS 2 and the sample was determined using a probability sampling technique in the form of random sampling after matching the classes and class XI IIS 1 was selected as the experimental class and class XI IIS 3 as the control class. Furthermore, the data collection techniques in this research are tests, observation, questionnaires and documentation. Then the instrument in this research was made in the form of a closed questionnaire, meaning that respondents answered statements based on the scenarios provided. The scenarios and indicator statements in this questionnaire are adjusted to the operational definitions of variables previously explained.

The data analysis techniques in this research are instrument testing, prerequisite testing, N-Gain testing, and hypothesis testing.

Gain is the difference between the post-test and pretest scores. The N-Gain analysis aims to determine the magnitude of the increase in students' problem-solving abilities in the experimental class using the Problem Based Learning method and the control class using the conventional method. This increase was obtained from the pretest and post test scores obtained from experimental class and control class students. The formula used to calculate N-Gain as proposed by Hake (1999) is:

$$Gain = \frac{Post\ test\ Score - Pretes}{Ideal\ Score - Pretes}$$

The calculation results can be interpreted based on the N-Gain Score Interpretation as proposed by (Hake, 1999) in the form of the following table.

Table 1. N-Gain Score Interpretation

N-Gain (g)	Category	*N-Gain* (g)	Category
g ≥ 0,7	High	>76	Effective
0,7 > g ≥ 0,3	Medium	40 – 55	Quite Effective
g < 0,3	Low	< 40	Not Effective

RESULTS AND DISCUSSION

This research uses quasi-experimental research with a "Non-equivalent Control Design" design. Researchers used the experimental class, namely XI IIS 1 and the control class, namely XI IIS 3. The experimental class had 27 students and the control class had 27 students. The experimental class was given treatment using the Problem Based Learning model, while the control class was not treated like the experimental class but used a conventional learning model.

Based on the research that has been carried out, research data is obtained which will then be analysed to obtain conclusions from the research results. Data analysis for the results of this research includes:

The first prerequisite test is the normality test. The normality test is used to test whether the data is normally distributed or not. To test normality, researchers used calculations using the Kolmogorov-Smirnov formula. A distribution is said to be normal if the significance level is > 0.05, whereas if the significance

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VIII Issue III March 2024

level is < 0.05 then the distribution is not normal.

The basis for decision making is if the significance value of Asymp. Sig. (2-tailed) is greater than 0.05 (>0.05) then the data is normally distributed, whereas if Asymp. Sig. (2-tailed) is smaller than 0.05 (< 0.05) then the data is not normally distributed. The data used in the normality test can be seen in the following table:

Table 2. Results of Student Motivation Normality Test

		Experimental Class Questionnaire	Control Class Questionnaire
N		20	20
Normal Parameters[a,b]	Mean	,0000000	,0000000
	Std. Deviation	8,01106660	9,32817969
Most Extreme Differences	Absolute	,151	,162
	Positive	,073	,107
	Negative	-,151	-,162
Test Statistic		,151	,162
Asymp. Sig. (2-tailed)[c]		,200	,180
a. Test distribution is Normal.			

Source: Primary Data, processed 2024.

The table above shows that the significant value of the motivation normality test is 0.200 in the experimental class and 0.180 in the control class. Based on the predetermined criteria, it shows that the experimental class is 0.200 > 0.05 and the control class is 0.180 > 0.05. So, it can be concluded that the data is normally distributed.

The second data that will be tested for normality is test data from class XI IIS 3 as the control class and class XI IIS 1 as the experimental class. The basis for decision making is if the significance value of Asymp. Sig. (2-tailed) is greater than 0.05 (>0.05) then the data is normally distributed, whereas if Asymp. Sig. (2-tailed) is smaller than 0.05 (< 0.05) then the data is not normally distributed. The test data that will be tested for normality can be seen in Table 2. The normality test results obtained are as follows:

Table 3. Normality Test Results of Learning Results

		Experimental Class Questionnaire	Control Class Questionnaire
N		54	54
Normal Parameters[a,b]	Mean	1,50	76,56
	Std. Deviation	,505	15,062
Most Extreme Differences	Absolute	,339	,294
	Positive	,339	,150
	Negative	-,339	-,294
Test Statistic		,339	,294
Asymp. Sig. (2-tailed) [c]		,111	,101
a. Test distribution is Normal.			

Source: Primary Data, processed 2024.

Based on the table above, it shows that the significant value of the normality test for learning outcomes in

the experimental class is 0.111 and the control class is 0.101. Based on predetermined criteria, it shows that the experimental class is 0.111 > 0.05 and the control class is 0.101 > 0.05. So, it can be concluded that the data is normally distributed.

Homogeneity test with Mann Whitney. The homogeneity test is used to test whether the data is homogeneous or not. Data is said to be homogeneous if the asymp. sig value is < 0.05, whereas if the asymp. sig value is > 0.05 then the data is not homogeneous.

Table 4. Homogeneity Test Results

	Results
Mann-Whitney U	190,000
Wilcoxon W	568,000
Z	-3,032
Asymp. Sig. (2-tailed)	,002
a. Grouping Variable: Class	

Source: Primary Data, processed 2024.

Based on the output of "test statistics" it is known that the value of Asymp.Sig. (2-tailed) of 0.002 < 0.05. then it can be concluded that the data is homogeneous. Thus, it can be said that there are differences in learning outcomes between the experimental class (PBL) and the control class (conventional).

Experimental Class N-Gain Analysis

The average N-Gain value of the experimental class in this research can be seen in the following table, namely as follows.

Table 5. Average Value of N-Gain for Experimental Class

No.	Component	Average	Information
1.	Pretest Score	37,19	–
2.	Post test Score	83,07	–
3.	Post test – Pretest Score	44,78	–
4.	Ideal Score – Pretest	62,81	–
	N-Gain Score	0,71	High
	N-Gain Score (%)	71,29	Effective

Source: Processed using SPSS 25, 2024.

Control Class N-Gain Analysis

The average N-Gain value of the control class in this research can be seen in the following table, namely as follows.

Table 6. Average Value of N-Gain for Control Class

No.	Component	Average	Information
1.	Pretest Score	34,81	–

2.	Post test Score	70,04	–
3.	Post test – Pretest Score	35,22	–
4.	Ideal Score – Pretest	65,19	–
	N-Gain Score	0,54	Medium
	N-Gain Score (%)	54,03	Quite Effective

Source: Processed using SPSS 25, 2024.

The table above shows that the results of the N-Gain experimental class have an average of 0.71 or the high category. Meanwhile, the table above shows that the N-Gain results for the control class have an average of 0.54 or the medium category. It can be seen that the average N-Gain results for the experimental class and control class are different, and the categories are also different. Also looking at its effectiveness, the experimental class is in the effective category, while the control class is in the less effective category. The score gain analysis can be seen from the table, where from this analysis the average value of the pretest and post test scores between the experimental class and the control class is obtained. In accordance with the data obtained, the average pretest score for economic learning of students in the experimental class and control class had the same conditions. The average pretest score for economic learning in the experimental class was 37.19, while the control class was 34.81. Furthermore, the average post test score on economic learning for experimental class students was 83.07 while for the control class was 70.04.

DISCUSSION

The Effect of Implementing Problem Based Learning on Learning Outcomes

The technique used in this research is the N-Gain analysis technique, where in this analysis the researcher can determine the difference in average scores between the pretest and post test scores in the experimental and control classes. Before analyzing the N-Gain scores for the experimental class and control class, first look at the average pretest and post test scores for the two classes. The average pretest score for economic learning in the experimental class was 37.19, while the control class was 34.81. In accordance with the data obtained, the average pretest score on economic learning for experimental class and control class students had the same conditions, where the average pretest score for the experimental class was not much different from the control class. This happens because there has not been a learning model implemented either in the experimental class with the Problem Based Learning model and in the control class with the conventional learning model.

This is also in line with research by Fikriyyah (2016) which stated that the pretest results of experimental class and control class students showed that there were no differences in learning outcomes, this happened because the learning model had not been implemented in the two classes. Furthermore, after being given treatment in the experimental class and without any treatment in the control class, a post test was given. The average post test score for economic learning for experimental class students was 83.07, while the average post test score for the control class was 70.04. Judging from the average post test scores of the experimental class and control class, it shows that there has been an increase in the average score in both classes. According to research by Abdurrozak (2016), it showed the same results where when given treatment (Problem Based Learning model) in the experimental class and without treatment in the control class (conventional model), the average post test score for both classes increased compared to before the implementation of the learning model.

Judging from the N-Gain analysis, the average N-Gain economic learning score for experimental classstudents is 0.72 so it is in the high category. According to Hayati (2016) that if the average N-Gain value is higher than 0.7 then it is in the high category. Meanwhile, the control class has an average N-Gain value of

0.55 so it is in the medium category. According to Hayati (2016) that if 0.7 is greater, the average N-Gain value is greater than 0.3 then it is in the medium category. It can be seen that there is a difference in the average N-Gain value of the experimental class and the control class, where the experimental class has a higher average N-Gain value for students compared to the average N-Gain value of the control class. This happens because the result of Problem Based Learning is that students have skills in investigating a problem and have skills in overcoming problems or finding solutions.

In line with research which explains that the Problem Based Learning model is where the teacher explains the material briefly then students have discussions about the problems given by the teacher supported by practical activities to prove the results of problem solving (Rakib, Muhammad & Prawiranegara, 2016). Meanwhile, in the control class, the teacher provides more material to students and provides an understanding of problem solving so that students only listen to examples of cases explained by the teacher without any direct involvement of students to investigate the problem. Furthermore, the average N-Gain score % in economic learning for experimental class students is 72.27 and is in the quite effective category. According to (Hake, 1999) states that if the N-Gain is between the values 56-75 then the learning is said to be quite effective. Meanwhile, the average value of N-Gain% for the control class is 54.62, so it is included in the less effective category. According to (Hake, 1999) states that if the N-Gain is between the values 40-55 then the learning is said to be less effective. Obtained from a significant value that is smaller than 0.05, namely 0.001 < 0.05, it can be concluded that the Problem Based Learning model has a significant effect on the learning outcomes of class XI students at SMA Negeri 18 Bone.

In line with research which explains that the Problem Based Learning model is where the teacher explains the material briefly then students have discussions about the problems given by the teacher supported by practical activities to prove the results of problem solving. Meanwhile, in the control class, the teacher provides more material to students and provides an understanding of problem solving so that students only listen to examples of cases explained by the teacher without any direct involvement of students to investigate the problem. Furthermore, the average N-Gain score % in economic learning for experimental class students is 72.27 and is in the quite effective category. According to (Hake, 1999) states that if the N-Gain is between the values 56-75 then the learning is said to be quite effective. Meanwhile, the average value of N-Gain% for the control class is 54.62, so it is included in the less effective category. According to Hake (1999) states that if the N-Gain is between the values 40-55 then the learning is said to be less effective. Obtained from a significant value that is smaller than 0.05, namely 0.001 < 0.05, it can be concluded that the Problem Based Learning model has a significant effect on the learning outcomes of class XI students at SMA Negeri 18 Bone.

Judging from the level of effectiveness, the Problem Based Learning model is quite effective for determining problem-solving abilities in economics learning, while conventional learning models are less effective in economics learning. So, it can be concluded that there is an influence of the application of the Problem Based Learning model on students' economic learning outcomes.

The Influence of Learning Motivation on Learning Outcomes

The effect of applying motivation on learning outcomes in economics subjects for class XI students at UPT SMA Negeri 18 Bone is a variable in this research. To find out how motivation influences learning outcomes in economics subjects for class XI students at UPT SMA Negeri 18 Bone. The technique used in this research is the Two-Way Anova analysis technique, where in this analysis the researcher can analyze the data and student learning outcomes with the decision to find out the effect of the hypothesis if Sig. ≤ 0.05, then Ho is rejected and vice versa. Before analyzing data and student learning outcomes with the decision to find out the influence of the hypothesis. The significance value from the Two-Way Anova test shows that the motivation value is 0.003, this value is smaller than 0.05 (0.003 < 0.05). So, it can be concluded that motivation influences student learning outcomes.

In line with Bekti (2013) research, it is explained that motivation has a very important role in influencing students' learning outcomes in subjects. The influence of motivation on learning outcomes can be seen from various aspects, including intrinsic and extrinsic motivation.

The Influence of Implementing Problem Based Learning and Learning Motivation on Learning Outcomes

The influence of implementing Problem Based Learning with motivation on student learning outcomes is a variable in this research. To find out how the application of Problem Based Learning with motivation affects student learning outcomes. The technique used in this research is the Two-Way Anova analysis technique, where in this analysis the researcher can analyze the data and student learning outcomes with the decision to find out the effect of the hypothesis if Sig. $\geq$ 0.05 then Ho is rejected and vice versa. Before analyzing data and student learning outcomes with the decision to find out the influence of the hypothesis. The significance value from the Two-Way Anova test shows that the Problem Based Learning and motivation value is 0.007, this value is smaller than 0.05 (0.003 < 0.05). So, it can be concluded that Problem Based Learning and motivation have an influence on student learning outcomes.

In line with research conducted by Fitriani (2020) that the application of Problem Based Learning (PBL) and student motivation are interrelated in shaping learning outcomes. Problem-Based Learning is a learning approach that emphasizes problem solving through presenting real cases or challenges.

Thus, good implementation of PBL, together with student motivation, can provide better learning outcomes. According to Wijaya and Fikri (2019) PBL creates a dynamic learning environment, builds necessary skills, and increases students' intrinsic motivation to continue learning and participate actively in the learning process. Through the application of PBL with motivation, students not only learn academic concepts, but also develop critical thinking, collaboration and problem-solving skills. By increasing students' motivation, PBL can be an effective learning method to prepare them to face challenges in the real world.

CONCLUSIONS AND SUGGESTIONS

The Problem Based Learning (PBL) model influences student learning outcomes in economics subjects. This is proven by the average N-Gain value of the experimental class being greater than the average N-Gain value of the control class, namely the experimental class using the Problem Based Learning model. The average N-Gain value category is in the high category. Meanwhile, the post-test average of students in the control class using the conventional model was in the medium category. and obtained from a significant value that is smaller than 0.05, namely 0.001 < 0.05, it can be concluded that the Problem Based Learning model has a significant effect on student learning outcomes. Motivation has a significant effect on student learning outcomes and is proven by a significant value that is smaller than 0.05, namely 0.003 < 0.05. The Problem Based Learning (PBL) model and motivation on student learning outcomes are proven by a significant value that is smaller than 0.05, namely 0.007 < 0.05.

Based on the research results, the suggestions given are for educators, it is hoped that the application of the Problem Based Learning model can become an alternative learning method that can be applied to improve student learning outcomes.

REFERENCES

1. Abdurrozak. (2016). Pengaruh Model Problem Based Learning Terhadap Kemampuan Berpikir Kreatif. *Jurnal Pena Ilmiah*, *1*(1), 876–878.
2. Alimbudiono, R. S., Selline, A., H., C. M., & Can, J. D. (2022). Student's Motivation, Learning Style and Performance during Study from Home. *Journal of Educational and Social Research*, *12*(5), 125.

3. Bekti, W. (2013). Pengaruh Problem-Based Learning terhadap hasil belajar ditinjau dari motivasi belajar PLC di SMK. *Jurnal Pendidikan Vokasi*, *3*(2).
4. Dimino, K., Vargas, P., & Banks, J. M. (2022). Student Learning Outcomes of Dedicated Education Units (DEU): A Systematic Review. *Journal of Doctoral Nursing Practice*, *JDNP–2021-*.
5. Fikriyyah. (2016). *Hakikat Keterampilan Menulis*. Universitas Islam Negeri Surabaya.
6. Fitriani, M. (2020). *Analisis Teks Eksplanasi Berdasarkan Struktur dan Kaidah Kebahasaan pada Surat Kabar Galamedia Edisi April 2020 sebagai Alternatif Bahan Ajar Kelas XI Sekolah Menengah Atas*. Universitas Pasundan.
7. Hake, R. R. (1999). Analyzing change/gain scores. *[Online] URL: Http://Www.Physics.Indiana.Edu/ \~Sdi/AnalyzingChange-Gain. Pdf*, *16*(7), 1073–1080. http://www.ncbi.nlm.nih.gov/pubmed/22025883%5Cnhttp://scholar.google.com/scholar≥hl=en&btnG=Search&q=intitle:ANALYZING+CHANGE/GAIN+SCORES#0%5Cn http://scholar.google.com/scholar≥hl=en&btnG=Search&q=in title:Analyzing+change/gain+scores#0
8. Hamzah, M., & Sofyan, N. (2015). Meningkatkan Motivasi Membaca. *Jurnal Iqra'*, *9*(2), 1–11.
9. Hayati, N. (2016). Improvement students' activities and cognitive learning outcomes of Hasyim Asy'ari University through guided discovery learning. *Jurnal Pendidikan Biologi Indonesia*, *2*(3), 206–214.
10. Heidjrachman, Ranupandojo, & Husnan, S. (2000). *Manajemen Personalia*. BPFE UGM.
11. Li, H., Peng, M. Y.-P., Yang, M., & Chen, C.-C. (2020). Exploring the Influence of Learning Motivation and Socioeconomic Status on College Students' Learning Outcomes Using Self-Determination Theory. *Frontiers in Psychology*, *11*, 849.
12. Orosco, M. J. (2016). Measuring Elementary Student's Mathematics Motivation: A Validity Study. *Journal of Science and Mathematics Education*, *14*(5), 945–958.
13. Raharjo, H., Khairudin, M., & Baser, J. A. (2018). The Influence of Problem-Based Learning and Direct Teaching on Students' Learning Outcomes. *Jurnal Pendidikan Teknologi Dan Kejuruan*, *24*(1), 62–71.
14. Rakib, M. & Prawiranegara, I. (2016). Penerapan Model Pembelajaran Berbasis Masalah Berorientasi Karakter dalam Kaitannya dengan Peningkatan Hasil Belajar Peserta Didik pada Mata Pelajaran Ekonnomi. *Prosiding Seminar Nasional Dan Call For Papers Pendidikan Karakter Dalam Pembelajaran Bisnis Dan Manajemen*, 161–171. lib.um.ac.id/…/download-prosiding-seminar-nasional-dan-call-for-papers-pendidikan-
15. Rismayanti, R., Rahmatullah, R., Inanna, I., Rakib, M., & Hasan, M. (2021). Pengaruh Penerapan Model Pembelajaran Problem Based Learning Terhadap Kemampuan Memecahkan Masalah Pada Pembelajaran Ekonomi Peserta Didik Kelas XI Lintas Minat Ekonomi di SMA Negeri 16 Makassar. *Economic Education and Entrepreneurship Journal*, *4*(1), 78–91. https://doi.org/10.23960/e3j/v4i1.78-91
16. Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (27th ed.). Alfabeta.
17. Vereijken, M. W. C., Van Der Rijst, R. M., Van Driel, J. H., & Dekker, F. W. (2018). Student learning outcomes, perceptions and beliefs in the context of strengthening research integration into the first year of medical school. *Advances in Health Sciences Education*, *23*(2), 371–385.
18. Wijaya, H., & Fikri, Z. (2019). Pengaruh Problem Based Learning (PBL) Terhadap Kemampuan Menulis Puisi Siswa Kelas VII MTS. Hizbul Wathan Semaya. *Bahasa: Jurnal Keilmuan Pendidikan Bahasa Dan Sastra Indonesia*, *1*(3), 149–158.