

## THE EFFECT OF PROBLEM-BASED LEARNING MODEL ON THE SOCIOLINGUISTICS LEARNING OUTCOMES OF PRIVATE UNIVERSITY STUDENTS IN ACEH

**Budi Rizka<sup>\*1</sup> and Lismalinda<sup>2</sup>**

<sup>1,2</sup>Universitas Iskandar Muda

### **Abstract**

This study aims to analyze the effect of the application of the problem based learning model in sociolinguistic learning on student learning outcomes of English Education at private universities in Aceh. This study used an experimental method with a research form that is pre-experimental design and one-group pretest-posttest design experimental design. The population in this study were 40 students from private universities in Aceh. The sample in this study was the entire population of 40 students who were divided into two experimental groups, where Experiment Group A 20 people and Experiment Group B 20 people. The research instrument used was the learning outcome in the form of a multiple choice test of 20 questions. The data collection technique in this study is a measurement technique. Hypothesis test results using t-stat which is obtained in Experiment group A  $t_{stat} (-18.6) < t_{Critical \ two-tail} (2.093)$  with an average value of pre-test 59.75 and posttest 78 and Experiment group B  $t_{stat} (-27, 5) < t_{Critical \ two-tail} (2.093)$  with an average score of 58 pre-test and 78 post-test. From the results of these calculations it can be concluded that there is an effect of using problem based learning models on learning outcomes in sociolinguistic learning of private university students in Aceh.

**Keywords:** Problem Based Learning, Learning Outcomes, Sociolinguistics Learning

### **INTRODUCTION**

Linguistics is a field of study that studies or discusses language, especially the elements of language (phonemes, morphemes, words, sentences) and the relationship between these elements, including the nature and formation of these elements. One of the branches in the field of linguistics is sociolinguistics, which etymologically is a combination of the word of socio and linguistics. The socio element is in line with the social, which is related to society, community groups, and social functions. So, sociolinguistics is the study or discussion of language in relation to speakers of that language as members of society. It can also be said that sociolinguistics studies and discusses social aspects of language, especially the differences (variations) that exist in language related to social (social) factors. Sociolinguistics is one of the compulsory subjects for students who are pursuing linguistics, one of which is English Language Education. Problem Based Learning is one of the learning

---

\*correspondence Address  
E-mail: budirizka91@gmail.com

approaches offered to improve students' abilities in understanding the sociolinguistics field. However, this method is only used by a small proportion of lecturers in Indonesia. The Problem Based Learning approach is a learning approach by exposing students to practical problems as a foothold in learning. In other words, the student problem-based learning approach is faced with existing problems to find solutions. Thus, students are active in attending lectures and no longer see sociolinguistics as a boring subject but on the contrary it will be fun.

The lecture process is a process of developing student potential to become students in a comprehensive and integrated manner. Therefore, Lecturers are required to be able to understand various professional abilities in their fields. Furthermore, the delivery of lecture material must go through a learning approach that is appropriate for the purpose.

As the world of education develops, the implementation of lectures always changes because they are adjusted to the goals and needs of the course itself. In practice, each student has varying abilities during the lecture process. One of the courses that is able to equip students in capturing problems, thinking critically, creatively, and innovatively is Sociolinguistics. Sociolinguistics is one of the compulsory courses in the English Education Department. Through this course, students are expected to be able to understand and conduct literature studies in the scientific field of Sociolinguistics.

Thus, students are required to develop themselves continuously in honing their abilities. The demands of high ability and hard work have not been accompanied by a good learning process. Based on observations so far, Sociolinguistics lectures have not been running optimally. This is because the learning approach has not provided the flexibility for students to carry out activities in exploring ideas / ideas optimally, students tend to be less active and think minimally. This is due to the absence of a special approach for students to collect and conduct literature reviews in understanding a problem, so the lecture process is less in-depth.

Learning effectiveness is the learning result obtained after implementing the learning process. According to Riyanto (2003), the effectiveness of learning is defined as being effective or effective, or achieving goals or achieving learning objectives. Based on the opinion about the effectiveness of learning, it can be concluded that the effectiveness of learning is the learning result obtained through appropriate learning procedures. However, the effectiveness of learning is not automatically determined by momentary observation. According to Sinambela (2006), learning is said to be effective if it achieves the desired goals, both in terms of learning objectives and maximum student achievement. Several indicators

of learning effectiveness, namely: (a) Achievement of learning completeness, (b) Achievement of the effectiveness of student activities (namely the achievement of the ideal time students use to carry out each activity contained in the learning plan), (c) Achievement of the effectiveness of the ability of educators to manage learning, and student responses to positive learning. Not much different from the explanation of Wotruba and Wright (in Miarso, 2004), where indicators that can be used to determine effectiveness in the learning process are (a) good material organization, (b) effective communication, (c) mastery and enthusiasm for the material lessons, (d) a positive attitude towards students, (e) giving fair marks, (f) flexibility in the learning approach, and (g) good student learning outcomes.

The effectiveness of learning is a measure related to the level of success of a learning process. The indicator of effectiveness in this study is an increase in student learning outcomes which statistically shows a significant difference between before and after the application of the learning approach.

Based on the observation, the students of private universities in Aceh said that sociolinguistics is not an interesting subject for them. In other words, they cannot tell what they have learnt about. They couldn't correlate Sociolinguistics with their daily life. Besides, their skill and understanding in using Sociolinguistics is low. They study Sociolinguistics only from the lecturer without any further discussion with their friends. So that, they didn't learn Sociolinguistics as critical because the learning process based on teacher-centered so the students feel uncomfortable to ask questions. Consequently, their understanding is just partial and they couldn't apply Sociolinguistics in their research well.

In other hand, the researcher offers a new approach to sociolinguistics learning by using Problem-Based Learning. Some researchers have used Problem-Based Learning in improving student learning outcomes in accordance with their respective goals, such as Yuliana & Firmansah (2018), Shofiyah & Wulandari (2018), Jailani, et al (2017), Narmaditya, et al (2017), and Ratnaningsih, et al (2018).

Yuliana & Firmansah (2018), in their research, investigate the effectiveness of Problem-Based Learning with social media assistance to improve students' understanding toward statistics. They used 39 students of mathematics program, where 21 students as the control group and 18 students as experimental group. Furthermore, they found that Problem Based Learning with social media assistance is more effective to teach statistics than conventional method and the learning method also got positive response from the students based on the result of questionnaire.

In another study, Shofiyah & Wulandari (2018) analyze Problem-Based Learning model in training scientific reasoning students by using the literature study method. In this case, they said that scientific reasoning skills should be trained on all students who are at the concrete operational thinking and formal operational stages. These skills can be trained by teachers by applying inquiry-based learning, one of which is Problem-Based Learning. Because of it given a problem and then students are required to solve it, students' scientific reasoning will develop.

Jailani, et al (2017) did investigation in implementing the Problem-Based Learning in order to improve the students' HOTS and characters deal with 648 students from Junior High School of six provinces in Indonesia. The results, they found that the Problem-Based Learning implementation is more effective than the expository learning in terms of improving the students' HOTS but it has not been more effective in improving students' characters. According to them, the Problem-Based Learning can be more effective in improving students' HOTS because each phase in the Problem-Based Learning turns the students to be more active of analyzing, evaluating and creating ideas through the problem-solving activities, and implementing activate the students in the discovery and investigation analysis. However, the factors of Problem-Based Learning not more effective in terms of improving students' characters are caused by the lack of Problem-Based Learning trained such as (1) ineffectiveness group collaboration to be more responsibility, care, and cooperation; (2) the students have been lack self-confidence in problem-solving; and (3) the teachers still gift interventions within the learning process. In other studies, Narmaditya, et al (2017), in their research with titled Impact of Problem-Based Learning on Students Achievement in Economics Course, concluded that the use of Problem-Based Learning model on the learning can improve students' achievement. And, Ratnaningsih, et al (2018) investigated the effect of Problem-Based Learning methods and Self-Confidence to English learning outcomes in Elementary School, where they concluded that the overall learning outcomes of English between groups of students taught using the Problem-Based Learning method is higher than the group of the students given the expository method. In several researches above, we can assume that Problem-Based Learning models have various positive values for both teachers and students, such as in terms of improving student learning outcomes in various subjects.

In Addition, Problem Based Learning is a learning approach by exposing students to practical problems as a basis for learning (Wena, 2009). In sociolinguistic lectures using the Problem Based Learning approach, students are required to be faced with problems that

must be solved. In the learning process, the situation or problem becomes the starting point for learning to understand concepts, principles, and develop problem-solving skills. According to Wina (2007), problem-based learning does not expect students to only listen, take notes and then memorize the subject matter, but students must actively think, communicate, search and process data, and finally conclude. Thus, the Problem Based Learning Approach can be interpreted as a way of presenting teaching materials by making the problem a starting point for discussion in an effort to find solutions or answers by students so that they are actively involved in following the learning process.

The Problem-Based Learning model have the goal to foster more student-centered and experiential learning, encourage research, provide scaffolding, and allow for the presentation of a final product completed by students. In other word, Problem-Based Learning make the student more be active (student-centered) than teachers in learning process (teacher-centered) (Maxwell, 2020; Savin-Baden, 2020; Khoiriyah & Husamah, 2018). In details, Rubiah (2016) explained that the Problem-Based Learning as the method that involves to solve the problem through: (1) appearing a problem; (2) organizing the subject toward the problem; (3) giving the students responsibility to conduct the learning process; (4) making students group; and (5) asking the students to present what they have learnt.

Furthermore, based on the findings and theories of experts as well as the results of previous observations that have been stated above, the authors feel the need for further research to be carried out regarding the effects of using Problem-Based Learning model in Sociolinguistics learning on student learning outcomes in private universities in Aceh.

## **RESEARCH METHOD**

This research is a type of quantitative research with the aim of describing the effect of the Problem Based Learning approach on sociolinguistic learning outcomes in English Department students. This research was conducted on students of the English Department at Almuslim Bireun University and Abulyatama University, Aceh Besar. The approach used in this research is a quantitative approach. According to Sugiyono (2007) research data is in a quantitative approach, namely in the form of numbers and the researcher must analyze the data using statistics.

Meanwhile, the method applied in this research is the pre-experimental method with one group pretest-posttest design. Ary (2010) said that this pre-experimental study used one group as the sample, namely the experimental group that was given treatment, while the control group was not used. Hartas (2010) defines population as a group of individuals or

organizations that have the same characteristics that are of interest to research. In other words, the population is the group to which the researcher wants to generalize the findings obtained to the research sample. Thus, the population in this study were all students of the English Department at Almuslim Bireun University and Abulyatama Aceh Besar University. This study uses a type of pre-experimental method called the One-Group Pretest-Posttest Design. According to (Ary et al, 2010), there are three steps in applying the One-Group Pretest-Posttest Design: (1) giving a pretest to measure the dependent variable, (2) applying experimental X to the subject, (3) giving a posttest to re-measuring the dependent variable .

After the population is determined, the study sample is selected. Hartas (2010) also defines the research sample as a part or subgroup of the population that the researcher wants to study. How the research sample is selected is very important for the validity of a study. In this study, the researcher chose the research subject using one of the sampling procedures, namely purposive sampling. Johnson and Christensen (2014) concluded that in purposive sampling, researchers determine the characteristics of the population of interest and then try to find individuals who have these characteristics. In short, purposive sampling is a sampling technique with a purpose. Thus, the sample of this study were students of the fourth semester of the English Department at Almuslim Bireun University and Abulyatama Aceh Besar University who took Sociolinguistics courses in the English Department according to the curriculum at the college.

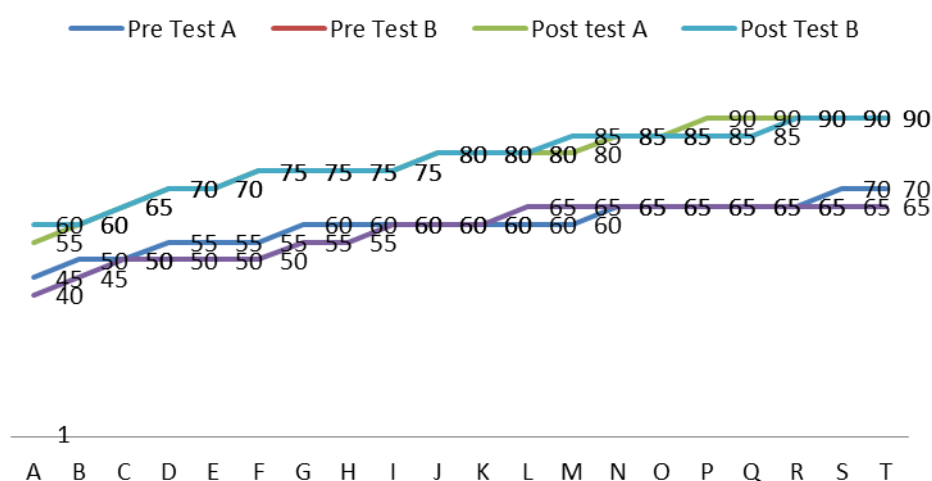
In this study, data collection was carried out in six meetings. In this study, data collection during the learning process was carried out by means of a test as a data collection technique. In using the test as a measure of the achievement of student learning outcomes in the Sociolinguistics subject. Researchers compile pre-test and post-test questions. The questions are adjusted to the syllabus at the college in the Sociolinguistics course. The pre-test and post-test questions are in the form of essay questions that are validated by giving pre-test questions to the subject of the validation of the questions, namely students of the English Department at Serambi Mekkah University in Banda Aceh. Furthermore, the validation results are processed using the validity and reliability formulas. After seeing the reality and validity of the questions, these questions can already be given to the research subjects, namely students of the Department of English at Almuslim Bireun University and Abulyatama University, Aceh Besar.

The Data analyzing of the effect of applying the type of Problem-Based Learning on student learning outcomes, researchers used the *t-test* with the pooled variance formula (Sugiyono, 2014: 138).

## RESULT OF RESEARCH

This research was conducted on students of the English Education Department at Almuslim University and Abulyatama University as an experimental group, where students of the Department of English Education at Almuslim University as Experiment A group and students of the English Education Department at Abulyatama University are called Experiment B groups. The experimental group, both groups A and B, used Problem Base Learning in the context of students' daily language according to the learning material. Before being given material being taught, the experimental group was first given a pre-test with the same questions between Groups A and B. The purpose of the pre-test was to determine the level of ability of students in both groups. After the treatment with Problem Base Learning is carried out, a post test is carried out to determine the learning outcomes after the treatment is carried out. The pre-test and post-test scores in Experiment groups A and B can be seen in graph 1 below:

**Graph 1.** Test Results Experiment Group A and B



The data from the pre-test and post-test results of Experiment group A were then analyzed and can be seen in table 1 below:

**Table 1.** Experiment Class A Frequency Distribution.

| No     | Hasil <i>Pre-test</i> Kelompok Eksperimen A |           | Hasil <i>Post-test</i> Kelompok Eksperimen A |           |
|--------|---|-----------|--|-----------|
|        | Nilai                                       | Frekuensi | Nilai  | Frekuensi |
| 1      | 45-49                                       | 1         | 55-61  | 2         |
| 2      | 50-54                                       | 2         | 62-68  | 1         |
| 3      | 55-59                                       | 3         | 69-75  | 6         |
| 4      | 60-64                                       | 7         | 76-82  | 4         |
| 5      | 65-69                                       | 5         | 83-89  | 2         |
| 6      | 70-74                                       | 2         | 90-96  | 5         |
| Jumlah |   | 20        | Jumlah                                       | 20        |

|                  |              |                  |           |
|------------------|--------------|------------------|-----------|
| <b>Rata-rata</b> | <b>59.75</b> | <b>Rata-rata</b> | <b>78</b> |
|------------------|--------------|------------------|-----------|

| <i>t-Test: Paired Two Sample for Means Group A</i> |                 |                  |  |
|--|-----------------|------------------|--|
|  | <i>Pre-Test</i> | <i>Post-Test</i> |  |
| Mean   | 59.75           | 78               |  |
| Variance   | 43.3552632      | 106.31579        |  |
| Observations                                       | 20              | 20               |  |
| Pearson Correlation                                | 0.96127641      |                  |  |
| Hypothesized Mean Difference                       | 0               |                  |  |
| Df   | 19              |                  |  |
| t Stat   | -18.653192      |                  |  |
| P(T<=t) one-tail                                   | 5.6329E-14      |                  |  |
| t Critical one-tail                                | 1.72913281      |                  |  |
| P(T<=t) two-tail                                   | 1.1266E-13      |                  |  |
| t Critical two-tail                                | 2.09302405      |                  |  |

The data from the pre-test and post-test results of Experiment group B were then analyzed and can be seen in table 2 below:

**Table 2.** Experiment Class B Frequency Distribution.

| No               | Hasil <i>Pre-test</i> Kelompok Eksperimen B |           | Hasil <i>Post-test</i> Kelompok Eksperimen B |           |
|------------------|---|-----------|--|-----------|
|                  | Nilai                                       | Frekuensi | Nilai  | Frekuensi |
| 1                | 40-44                                       | 1         | 60-65  | 3         |
| 2                | 45-49                                       | 1         | 66-71  | 2         |
| 3                | 50-54                                       | 4         | 72-77  | 4         |
| 4                | 55-59                                       | 2         | 78-83  | 3         |
| 5                | 60-64                                       | 3         | 84-89  | 5         |
| 6                | 65-69                                       | 9         | 90-95  | 3         |
| <b>Jumlah</b>    |   | <b>20</b> | <b>Jumlah</b>                                | <b>20</b> |
| <b>Rata-rata</b> |   | <b>58</b> | <b>Rata-rata</b>                             | <b>78</b> |

| <i>t-Test: Paired Two Sample for Means Group B</i> |                 |                  |
|--|-----------------|------------------|
|  | <i>Pre-Test</i> | <i>Post-Test</i> |
| Mean   | 58              | 78               |
| Variance   | 64.21052632     | 87.89473684      |
| Observations                                       | 20              | 20               |
| Pearson Correlation                                | 0.942289026     |                  |
| Hypothesized Mean Difference                       | 0               |                  |
| df   | 19              |                  |
| t Stat   | -27.5680975     |                  |
| P(T<=t) one-tail                                   | 4.35734E-17     |                  |
| t Critical one-tail                                | 1.729132812     |                  |
| P(T<=t) two-tail                                   | 8.71467E-17     |                  |



Based on tables 1 and 2, the results of the pre-test and post-test calculations in both Experiment A and Experiment B groups show a significant difference between before and after being treated in the class where the Post-test average in the two experimental groups is higher than the Pre-test. It can be seen that the T-stat in the two experimental groups is smaller than the T-critical two tiles, so it can be concluded that H1 is acceptable, meaning that the Problem Base Learning model is able to improve student learning outcomes in sociolinguistic learning.

## **DISCUSSION**

Based on the results of quantitative data analysis, the researcher found that Problem-Based Learning implementation had been effective in terms of improving the students' learning outcomes in Sociolinguistics. The results showed that from the process side, the use of Problem-Based Learning was more effective than the conventional use shown in Experimental group A  $t\text{-stat} (-18.6) < t \text{ Critical two-tail } (2.093)$  with an average value of pre-test 59.75 and posttest 78 and Experiment group B  $t\text{stat } (-27, 5) < t \text{ Critical two-tail } (2,093)$  with an average score of 58 pre-test and 78 post-test.

This finding supports previous research, namely Narmaditya, et al (2017), in their research with titled Impact of Problem-Based Learning on Students Achievement in Economics Course, concluded that the use of Problem-Based Learning model on the learning can improve students' achievement. And, Ratnaningsih, et al (2018) investigated the effect of Problem-Based Learning methods and Self-Confidence to English learning outcomes in Elementary School, where they concluded that the overall learning outcomes of English between groups of students taught using the Problem-Based Learning method is higher than the group of the students given the expository method.

In addition, this research is also in line with Knapp's research (in Slavin, 2009), that learning with the Constructivism approach in which PBL has a correlational relationship with increased achievement in schools. Likewise, Langer's findings (in Slavin, 2009) also state that junior high schools that use the constructivist approach have better performance. Apart from student learning outcomes as part of an academic perspective, these findings can also be seen from a character perspective. Viewed from a social perspective, this Problem-Based Learning model puts forward the development of thinking skills, problem solving, and intellectual skills. For this reason, it stands to reason that the use of Problem-Based

Learning in learning can significantly improve learning outcomes. Furthermore, students also feel involved in learning, there is good cooperation between students, there is an attitude of mutual respect for opinions, and the formation of egalitarianism between each other. The implication is that maturity from both emotional and social aspects is increasing. It is different if learning is more educator-centered or the students are less involved in learning. This finding supports previous research such as Yuliana & Firmansah (2018), Shofiyah & Wulandari (2018), and Jailani, et al (2017) because this learning is possible to form the personality of students who are individualistic and exclusive.

## **CONCLUSION**

Based on data exposure and discussion of research results, the following conclusions can be made: (1) Student learning outcomes of class V in the experimental class Based on the t test analysis or hypothesis testing, it was obtained Experiment group A  $t_{stat} (-18.6) < t_{Critical \ two-tail} (2.093)$  with an average value of pre-test 59.75 and posttest 78 and Experiment group B  $t_{stat} (-27, 5) < t_{Critical \ two-tail} (2,093)$  with an average score of 58 pre-test and 78 post-test. means significant, so it can be concluded that  $H_a$  is accepted or approved and  $H_o$  is rejected. This means that there is an effect of the application of the problem based learning model on student learning outcomes in sociolinguistic learning in English language education students from private universities in Aceh (2) Learning by applying the problem based learning model contributes a significant effect on learning outcome.

## REFERENCES

- Ary, D., Jacobs, L. C., Sorensen, C., & Razavieh, A. (2010). *Introduction to Research in Education* (8th Ed.). California: Wardworth.
- Hartas, D. (2010). *Educational Research and Inquiry*. London: Continuum International Publishing Group.
- Jailani., Sugiman., & Apino, E. (2017). Implementing the Problem-Based Learning in Order to Improve the Students' HOTS and Characters. *Jurnal Riset Pendidikan Matematika*. 4(2). 247-259. <https://doi.org/10.21831/jrpm.v4i2.17674>
- Johnson, R. B., & Christensen, L. (2014). *Educational Research: Quantitative, Qualitative and Mixed Approaches*. Thousand Oaks: SAGE.
- Khoiriyah, A. J., & Husamah. (2018). Problem-Based Learning: Creative Thinking Skills, Problem-Solving Skills, and Learning Outcome of Seventh Grade Students. *Jurnal Pendidikan Biologi Indonesia*. 4(2). 151-160. <https://doi.org/10.22219/jpbi.v4i2.5804>
- Maxwell, B. R. (2020). Problem-Based Learning (PBL) in a Grade 11 World History Class: Trials, Tribulations, and Triumphs. *Journal of Problem-Based Learning*. 7(1). 11-20. <https://doi.org/10.24313/jpbl.2020.00248>
- Miarso, Y. (2004). *Menyemai Benih Teknologi Pendidikan*. Jakarta: Prenada Media.
- Narmaditya, B. S., Winarning., & Wulandari, D. (2017). Impact of Problem-Based Learning on Student Achievement in Economic Course. *Classroom Action Research Journal*. 1(1). 1-11. <https://10.17977/um013v1i12017p001>
- Ratnaningsih, S., Nahartini, D., & Yuliayani, A. (2018). The Effect of Problem-Based Learning Methods and Self Confidence to English Learning Outcomes in The Elementary School. *Tarbiya: Journal of Education in Muslim Society*. 5(2). 135-144. <https://doi.org/10.15408/tjems.v5i2.10640>
- Riyanto, A. (2003). *Proses Belajar Mengajar Efektif di Perguruan Tinggi*. Bandung: Yapemdo.
- Rubiah, M. (2016) Implemetation of Problem-Based Learning Model in Concept Learning Mushroom as a Result of Student Learning Improvement Efforts Guidelines for Teachers. *Journal of Education and Practice*. 7(22). 26-30. <https://files.eric.ed.gov/fulltext/EJ1112940.pdf>
- Rusman. (2010). *Model Model Pembelajaran*. Bandung: Rajawali Pers.
- Savin-Baden, M. (2020). What are Problem-Based Pedagogies?. *Journal of Problem-Based Learning*. 7(1). 3-10. <https://doi.org/10.24313/jpbl.2020.00199>
- Setia, R. F. (2014). Penerapan Pembelajaran Berbasis Masalah Dalam Membaca Ekstensif Teks Nonsastra Pada Siswa Kelas X SMA. *Bahtera Bahasa: Antologi Pendidikan Bahasa dan Sastra Indonesia*. Pembelajaran Kebahasaan: No. 12. <https://ejournal.upi.edu/index.php/PSPBSI/article/view/478>

- Shofiyah, N., & Wulandari, F. E. (2018). Model Problem-Based Learning (PBL) Dalam Melatih Scientific Reasoning Siswa. *Jurnal Penelitian Pendidikan IPA*. 3(1). 33-38. <http://dx.doi.org/10.26740/jppipa.v3n1.p33-38>
- Sinambela, N.J.M.P. 2006. Keefektifan Model Pembelajaran Berdasarkan Masalah (Problem-Based Instruction) Dalam Pembelajaran Matematika untuk Pokok Bahasan Sistem Linear dan Kuadrat di Kelas X SMA Negeri 2 Rantau Selatan Sumatera Utara. Surabaya : Program Pasca Sarjana Universitas Negeri Surabaya.
- Slavin, R. E. (2009). *Educational Psychology: Theory and Practice*. Terjemahan oleh Marianto Samosir. Jakarta: PT Indeks.
- Sugiyono. (2007). *Metodologi Penelitian*. Bandung: Alfabeta.
- Sugiyono. (2014). *Statistik untuk Penelitian*. Bandung: Alfabeta
- Trianto. (2010). *Mendesain Model Pembelajaran Inovatif-Progresif*. Jakarta: Kencana Prenada Media Grup.
- Wena, M. (2009). *Strategi Pembelajaran Inovatif: Suatu Tinjauan Konseptual Operasional*. Jakarta: Bumi Aksara.
- Wina, S. (2007). *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*. Jakarta: Kencana Prenada Media Group.
- Yuliana., & Firmansah, F. (2018). The Effectiveness of Problem-Based Learning with Social Media Assistance to Improve Students' Understanding Toward Statistics. *Infinity: Journal of Mathematics Education*. 7(2). 97-108. <https://doi.org/10.22460/infinity.v7i2.p97-108>