



# IMPROVING IPAS LEARNING OUTCOMES THROUGH THE SCRAMBLE METHOD FOR FOURTH GRADE STUDENTS OF SD NEGERI 3 SENTUL

Ardia Khusnul Afifah, Diva Ayu Puspa Sari\*, Surayanah

State University of Malang, Jl. Semarang No. 5 Malang, East Java, Indonesia

\*Author of correspondence, Email: surayanah.fip@um.ac.id

## Abstract

This research focuses on developing learning methods that can increase students' active involvement and deepen their understanding of concepts in IPAS subjects. The low learning outcomes of students in IPAS subjects, especially in elementary schools, are still not achieving optimal results, prompting this research. Learner activeness is considered an important factor that influences the improvement of learning outcomes. The purpose of this study was to improve student activeness and learning outcomes through the application of the Scramble method which prioritizes group interaction and creativity in compiling answers logically. The method used is the Classroom Action Research (PTK) method to obtain the results of the research. The research was conducted at SDN 3 Sentul in the 2024/2025 academic year. Data analysis was carried out using average scores and inter-cycle tests to measure the improvement of learning outcomes. The results showed that the Scramble method was effective in improving students' understanding of IPAS and learning outcomes, characterized by an increase in the average score and the percentage of students who reached the Minimum Completion Criteria (KKM). In addition, this method also succeeded in increasing student activeness during the learning process, so that it can be used as an alternative solution to overcome low learning outcomes on IPAS material in elementary schools.

**Keywords:** *scramble* method; class action research; IPAS lesson

## 1. Introduction

Education is a very important thing in the life of the nation and state because it can be one way for humans to “survive” and adapt to the rapidly changing times. According to Indonesian Law number 20 of 2003 concerning the National Education System Chapter 1 article 1 paragraph 1 states that “Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state”.

Sujana (2019) states that the purpose of education is to form individuals who are characterized, responsible, rational, and able to treat others well. Learning is the process of obtaining information from various sources, or activities carried out to understand something with the aim of achieving certain results based on the experience gained, resulting in changes in behavior. Thus, learning is a process of changing behavior in an individual towards a better direction.

The teaching method applied by the teacher in the teaching and learning process is one of the factors that influence learning outcomes because it is directly related to the learning process (Parwati et al., 2018, p. 45). Teachers are expected to have skills in teaching and guiding students. Indah Hari Utami (2019) argues that a sign of a teacher's professionalism is reflected in his active participation in teaching, for example by applying various teaching methods during the learning process. The utilization of various methods is crucial in the teaching and learning process because learning methods are one of the effective ways to

prevent students from feeling bored and bored while learning and have an impact on improving student learning outcomes.

Learning outcomes refer to what students or other individuals gain from undergoing the learning process. Student learning outcomes, defined by Sudjana (2010, p. 3-4), are basically behavioral transformations caused by learning regarding mental, emotional, and psychomotor aspects from a broader perspective. Afandi et al (2013: 6) explain that learning outcomes are changes that occur in students' intellectual abilities (cognitive), interests or emotions (affective), and fine and gross motor skills (psychomotor). Changes in students' learning abilities during the educational process, especially at the basic education level, are expected to be in accordance with their developmental stage, namely in the concrete operational phase. Efforts to improve student learning outcomes are highly dependent on the level of activity and quality of student engagement during learning activities. The significance of learning outcomes is to understand students' abilities and change behavior in the learning process. Therefore, teachers need to be able to create a comfortable and dynamic learning atmosphere in order to foster students' interest in learning.

In order to achieve effective learning that meets expectations, it is necessary to apply methods in the learning process to help convey material and influence learning outcomes. There are several ways that can be utilized and used to optimize student self-relations, especially in IPAS lessons. Learning IPAS in elementary school, there is an emphasis on Salingtemas learning (Science, environment, technology, and society) which is directed at a more meaningful learning experience Depdiknas (in Citrasmidkk, 2016). According to the Ministry of Education and Culture (2022) through the independent curriculum pocket book states that science and social studies subjects are combined into natural and social science subjects (IPAS). IPAS subjects require students to remember and understand the material. Remembering so much material makes students feel bored to learn. In general, teachers use the lecture method to deliver the material, and have not implemented specific learning methods. This is what causes students to be less interested in paying attention to the teacher when delivering the material. The lack of students' attention affects their lack of concentration during the learning process. As a result, the explanation from the teacher is difficult to understand properly, which has an impact on the low value of student learning. The high or low student learning outcomes are influenced by various factors, both from within the student (internal) and from the external environment (external). Supriyono states in Siti Anisatun Nafi'ah's book that learning methods are plans that are applied to structure the curriculum, organize materials, and provide guidance to teachers in the classroom. Teaching methods are patterns used as a reference in designing classroom learning and guidance. In fact, learning methods are patterns used by teachers as a reference in designing learning to achieve learning objectives in the classroom.

In the world of education, the subject of Natural and Social Sciences (NSP) has an important role in helping students understand various natural and social phenomena that exist around them. At the primary school level, this subject is designed to equip students with a basic understanding of nature, the environment, and social interactions that are very important for their future lives. However, the reality in the field shows that student learning achievement in IPAS subjects, especially in class IV of SD Negeri 3 Sentul, is still not achieving optimal results, thus indicating a problem that needs to be addressed immediately.

Based on initial observations, there are several factors that cause low student achievement. First, the learning methods used in the classroom still tend to be traditional, where the learning process is more teacher-centered and involves less active participation from students. This condition makes students less motivated to learn independently and less active in participating in lessons. As a result, their understanding of the basic concepts of IPAS is limited, making it difficult for them to apply this knowledge in their daily lives. This problem became clearer after an evaluation through a pretest in Natural Science (IPA) subjects. The

pretest results showed that many students had difficulty in understanding the science material, especially on concepts that require critical thinking skills and in-depth understanding, such as changes in the shape of objects. The data shows that out of 24 students, only 4 students (16.6%) have reached the Minimum Completion Criteria (KKM), while the other 20 students (83.4%) have not met the KKM. This low level of student achievement towards the KKM shows that science learning can still be said to have failed, because the number of students who have not met the expected competency standards is greater. Another thing that contributes to low student learning outcomes is the limited utilization of interesting and appropriate learning media. Teachers tend to use the method of lecture. Teachers tend to use the lecture method with monotonous learning media, so students feel bored and less motivated to explore the subject matter. The lack of variety in the use of learning media and methods also hinders students' full involvement in the learning process. As a result, students' learning motivation decreases, and they become less active in seeking information or solving problems that arise in the lesson. This situation is worsened by the low implementation of learning methods that encourage students to think critically and independently. Students do not get enough opportunities to participate in the process of discovering and solving problems related to their lives. In fact, the ability to solve problems independently is a crucial skill that needs to be honed from the start, especially in science subjects that are closely related to natural phenomena and daily life.

To overcome these problems, innovation is needed in learning approaches that can increase students' active participation while deepening their understanding of IPAS materials, especially science lessons. One method that is considered effective in facing this challenge is the scramble learning method. According to Suyatno (in Lestari et al, 2016), the Scramble method is a form of learning that uses cards containing questions and answers that are arranged randomly to be matched. Meanwhile, Komalasari (in Lestari et al, 2016) explained that the Scramble method encourages students to creatively find answers by arranging letters arranged randomly. Based on this explanation, it can be concluded that the Scramble learning method is a group learning technique that trains students' creativity in arranging random words into logical and appropriate answers to a question or problem.

Therefore, this study aims to use the Scramble learning method in IPAS learning, especially science material in class IV SD Negeri 3 Sentul in the 2024/2025 academic year. The purpose of using this method is to change the learning pattern that was previously only teacher-centered to a student-centered learning pattern, where students interact with each other in small groups. Thus, SISW learning outcomes will be improved in this way. Thus, this method is expected to be an alternative to overcome the problem of students' poor learning outcomes on IPAS material. In addition, this method is expected to help students strengthen their problem-solving skills, critical thinking skills, and literacy skills early on.

## 2. Method

The research design used in this study is Classroom Action Research (PTK) and experimental research. The method applied was quantitative with Classroom Action Research technique, which is a research approach that involves collaboration between researchers, teachers, students, and school staff to improve school performance. The research design followed the PTK flow developed by Arikunto, which was implemented in two cycles. Each cycle consisted of four stages, namely planning, action, observation and reflection.

The process of research stages carried out as follows (Rustiyarso & Wijaya, 2020)

1. Action planning  
At this stage the researcher identifies students regarding what students need in

learning and prepares all teaching tools such as teaching modules, teaching media, evaluation sheets, and observation sheets that will be used.

2. Implementation of action  
At this stage, all preparations that have been made previously are applied directly, namely the implementation of the learning process.
3. Observation  
This observation stage aims to find out whether the learning process is going according to expectations and progressing. In this stage, the class teacher and researcher act as observers who monitor the course of learning.
4. Reflection  
Reflection in learning aims to evaluate and draw conclusions from the learning process that has been carried out, so that the weaknesses found can be corrected in the next cycle so that the results obtained are better.

According to Trianto (in Hafizah, 2014), the purpose of Classroom Action Research (PTK) in general is to make improvements or improvements (improvement and therapy) in various aspects, including: (1) Increase or improve student learning performance at school; (2) Improve the quality of learning in the classroom; (3) Improve the quality of media utilization, teaching aids, and other learning resources; (4) Improve evaluation procedures and tools used to measure student learning processes and outcomes; (5) Overcome various educational problems faced by children at school; and (6) Improve the quality of curriculum implementation and student competency development at school. The subjects of this study were fourth grade students of SD Negeri 3 Sentul, totaling 24 students and carried out on December 10, 2024.

### 3. Results and Discussion

#### 3.1 Result

Classroom Action Research (PTK) carried out in two cycles to measure the improvement of student learning outcomes after the application of the Scramble learning method. This research was conducted at SD Negeri 3 Sentul in the 2024/2025 academic year on December 10, 2024, with a total of 24 students consisting of 15 male students and 9 female students. The focus of this research is on science subjects, especially the material of Changes in the Form of Objects.

This research consists of three main stages, namely the pre-cycle stage, cycle (first treatment with Scramble learning method), and cycle 2 (second treatment as well as post-test).

##### 1. Pre-Cycle

The pre-cycle stage aims to determine the initial ability of students on the material of Changes in the Form of Objects before the application of the Scramble learning method. It was carried out with an interactive method to keep the learning atmosphere fun and avoid pressure on students. Students are given multiple choice questions with two answer options, namely A and B. To add to the dynamics of learning, students answer multiple choice questions with two answer options. To add to the dynamics of learning, students answer the questions in a fun way, namely by jumping forward if they choose answer A, and jumping back if they choose answer B.

The results of this pre-cycle showed that the majority of students had a low understanding of the material. The following is a recapitulation of the results during the pre cycle.

**Table 1. Recapitulation of Pre-cycle Results**

Number	Value	Category	Frequency
1	0-20	Very Low	8
2	21-40	Low	9
3	41-60	Medium	3
4	61-80	High	2
5	81-100	Very High	2

Based on the table, it can be seen that only 4 students reached the KKM score ( $\geq 70$ ), while the other 20 students were still not complete. The average class score at the pre-cycle stage was 45.8, which showed that students' understanding of the material was still low. Therefore, treatment through the Scramble learning method is needed to improve student understanding.

## 2. Cycle 1

Cycle 1 was conducted after the pre-cycle to provide the first treatment using the Scramble learning method. At this stage, the researcher started the learning by giving a brief explanation of the material on Changes in the Form of Objects, including examples and basic explanations of changes in the form of objects. After that, students were divided into four groups. Each group was given a question that contained a scrambled answer. Their task was to compile the correct answers through group discussions.

The group discussion process went well, and students began to be actively involved in arranging the scrambled words with the help of their friends. This encouraged students to work together, think creatively, and better understand the material presented. Each group was given the opportunity to present their answers in front of the class. The researcher then provided direct feedback on students' understanding and clarification on incorrect or inaccurate answers. After the discussion activities were completed, students were given a cycle 1 test to measure their understanding of the material that had been learned.

The cycle 1 test results showed a significant improvement compared to the pre-cycle. The following is a recapitulation of the cycle 1 test results:

**Table 2. Recapitulation of Cycle 1 Results**

Number	Value	Category	Frequency
1	0-20	Very Low	2
2	21-40	Low	4
3	41-60	Medium	6
4	61-80	High	8
5	81-100	Very High	4

From the table, it can be seen that 12 students have reached the KKM score ( $\geq 70$ ), while the other 12 students are still not complete. The average score in cycle 1 was 58.3, showing a significant improvement compared to the pre-cycle (45.8). Despite the progress, some students still needed further assistance to improve their understanding. Therefore, the researcher planned further treatment in cycle 2.

### 3. Cycle 2

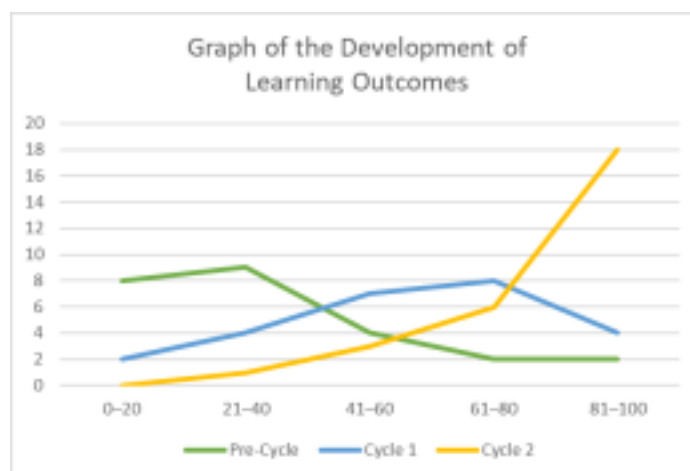
Cycle 2 was the last stage of this study, where the researcher provided further treatment to strengthen students' understanding. At this stage, the researcher provided more individual exercises to help students master the material better. Students are given the opportunity to practice more problems in a more independent way, so that they are more stable in understanding the material on changes in the form of objects.

The test in cycle 2 was carried out with 10 multiple choice questions, each with four answer choices. After providing individual exercises, students took the post-test to measure the extent to which their learning outcomes had improved. The following is a recapitulation of the post-test results:

**Table 3. Recapitulation of Final Test Results (Post-Test)**

Number	Value	Category	Frequency
1	0-20	Very Low	0
2	21-40	Low	1
3	41-60	Medium	1
4	61-80	High	4
5	81-100	Very High	18

The post-test results showed a very significant improvement, where 22 students managed to reach the KKM score ( $\geq 70$ ), while only 2 students were still incomplete. The class average score in the post-test reached 87.91, which reflected remarkable progress compared to the results in the pre-test (45.8) and cycle 1 (58.3).



**Figure 1. Learning Outcome Progress Chart**

### 3.2 Discussion

In the research conducted at SD Negeri 3 Sentul on December 10, 2024, researchers applied the Scramble learning method in order to improve student learning outcomes in science subjects, especially the material on Changes in the Form of Objects. This study used a Classroom Action Research (PTK) approach which was carried out in two cycles, namely cycle 1 for the first treatment and cycle 2 for the second treatment which ended with a post-test.

#### 1. Pre-Cycle

The pre-cycle stage was carried out to determine the initial ability of students to the material to be taught. The pre-cycle was carried out in an interactive and fun way so that students felt more relaxed and involved. The questions given were in the form of multiple choice with two answer options, namely A and B. To make the atmosphere more dynamic, students answered the questions in the form of multiple choice with two answer options. To make the atmosphere more dynamic, students answered the questions by jumping forward if they chose answer A, and jumping backward if they chose answer B. The results of the pre-test showed that the majority of students were not able to answer the questions. The results of the pre-test showed that the majority of students still had a low understanding of the material on Changes in the Form of Objects. With an average class score of only 45.8, many students have not reached the Minimum Completion Criteria (KKM) set. Therefore, further treatment is needed through the application of the Scramble learning method.

#### 2. Cycle 1

After carrying out the pre-cycle, the researcher carried out cycle 1 with the application of the Scramble learning method. At this stage, the researcher started the learning with a brief explanation of the material on Changes in the Form of Objects. Then, students were divided into four groups and given questions containing scrambled answers. The students' task is to compile the correct answers based on group discussions. This process not only encourages students to work together but also trains them to think creatively in arranging the scrambled words. Once the discussion was complete, each group presented their answers, and the researcher provided feedback to correct any misconceptions. The cycle 1 test showed a significant improvement compared to the pre-cycle, with the class average score reaching 58.3. However, despite the progress, some students still needed further assistance to reach the KKM.

#### 3. Cycle 2

Cycle 2 is the final stage of this research. At this stage, the researcher provided additional exercises to strengthen students' understanding through more practice questions. After the practice session, students took the post-test to measure their achievement after the application of the Scramble method. The post-test results showed remarkable improvement. Most of the students, 22 out of 24 students, successfully achieved the KKM score, with the class average score reaching 87.91. This significant improvement shows that the Scramble learning method is very effective in improving student learning outcomes, especially in understanding the material of Changes in the Form of Objects.

The researcher's statement is supported by previous research conducted by (Nasem, 2021) in a study entitled "Improving Learning Outcomes on Energy Source Materials through the Scramble Method for Class IV Students of Mi Taufiqurrahman I Depok With student learning outcomes in cycle I, there were 17 students who completed learning with a percentage of 58.62% and 12 students who did not complete learning with a percentage of 41.38%, while the average value of cycle I was 70.96. These results have not met the standard classical completeness criteria that have been determined. So the research continued in cycle II with a different topic and time. Learning results in cycle II, there were 26 students who achieved learning completeness with a percentage of 89.65% and 3 students who had not completed

learning with a percentage of 10.35%, while the average score obtained in cycle II was 78.31. Based on these results, it can be seen that student learning outcomes from cycle I to cycle II increased by 31.03%. The implementation of learning in cycle II has met the requirements of the learning completeness criteria set, namely  $\geq 85\%$  of the total number of students have completed learning.

Overall, as well as support from previous articles, this research shows that the application of the Scramble learning method can improve student learning outcomes, both in the aspect of understanding the material and in student involvement in the learning process. The results obtained in cycle 2 illustrate that students have mastered the material well after receiving treatment through a fun and creative learning model.

#### 4. Conclusion

Based on the discussion above, it can be seen that SDN 3 Sentul's science learning after applying the Scramble method is significantly complete. This can be seen in the implementation of the initial test results (pre-test) and the final test results (post-test) where in the initial test results (pre-test) there is an average value of 45.8 and in the final test results (post-test) there is a value of 87.91.

This scramble method not only has an impact on students' academic scores, but in reality students are much more able to explore with friends through a group discussion system. But besides these advantages, students have difficulty in understanding the scramble method. Children's language skills must be further improved in order to further improve students' academic abilities.

#### References

- Abdullah, M. (2021). Penerapan Model Pembelajaran Scramble Untuk Meningkatkan Aktivitas Belajar Biologi. *Normalita (Jurnal Pendidikan)*, 9(1).
- Anggraini, N. M. D. (2024). Implementasi Model Pembelajaran Kooperatif Tipe Scramble untuk Meningkatkan Hasil Belajar Siswa Kelas VI SD Negeri 1 Padangkerta Tahun Pelajaran 2023/2024. *Rasividya: Jurnal Pendidikan*, 1(1), 341-349.
- Ariyanto, M. (2016). Peningkatan hasil belajar IPA materi kenampakan rupa bumi menggunakan model scramble. *Profesi Pendidikan Dasar*, 3(2), 134-140.
- Astriani, L. W., & Sudarma, I. K. (2019). Pengaruh Model Pembelajaran Scramble Berbantuan Media Gambar terhadap Hasil Belajar IPA. *Jurnal Pedagogi Dan Pembelajaran*, 2(2), 186-194.
- Harahap, F. H., & Tambunan, H. P. (2024). Pengaruh Model Pembelajaran Kooperatif Scramble terhadap Hasil Belajar IPAS Siswa Kelas V SD Negeri 104607 Sei Rotan. *Innovative: Journal Of Social Science Research*, 4(4), 12823-12839.
- Hastiwi, F., Khasanah, U., & Wahyuningsih, S. (2023). Peningkatan Keaktifan dan Hasil Belajar IPAS Menggunakan Model Problem Based Learning Kelas IV SD Muhammadiyah Kleco 2 Tahun Ajaran 2022/2023. *Kalam Cendekia: Jurnal Ilmiah Kependidikan*, 11(2).
- Huda, M. (2013). Model-model pengajaran dan pembelajaran: Isu-isu metodis dan paradigmatis. *Pustaka pelajar*.
- Jongu, A., & Bano, V. O. (2023). Pengaruh Model Pembelajaran Scramble Berbantuan Media Poster Terhadap Hasil Belajar Siswa Kelas VIII SMP Katolik Anda Luri Waingapu. *Jurnal Biologi dan Pembelajarannya (JB&P)*, 10(1), 25-36.
- Kusumawati, N. (2019). Pengaruh model pembelajaran scramble dengan media question card terhadap hasil belajar IPA siswa kelas IV SDN Kertosari II Kabupaten Madiun. *Jurnal Ibriez: Jurnal Kependidikan Dasar Islam Berbasis Sains*, 4(1), 87-100.
- Laia, S., & Waruwu, T. (2023). Penerapan Model Pembelajaran Kooperatif Tipe Scramble Untuk Meningkatkan Hasil Belajar Peserta Didik Kelas XI-MIPA Di SMA Negeri 2 Gunungsitoli Tahun Pelajaran 2022/2023. *Jurnal Review Pendidikan dan Pengajaran (JRPP)*, 6(3).

- Lestari, T. Y., & Ngazizah, N. (2023). PENERAPAN MODEL PEMBELAJARAN SCRAMBLE SEBAGAI UPAYA MENINGKATKAN KEAKTIFAN DAN BERPIKIR KRITIS SISWA. *Jurnal Pendidikan Dasar*, 4(2), 1-18.
- Nasem, N., Rudiyan, R., & Wulandari, Y. (2021). Peningkatan Hasil Belajar Ipa Materi Sumber Energi Melalui Metode Scramble Pada Siswa Kelas IV MI Taufiqurrahman I Depok. *Jurnal Tahsinia*, 2(1), 66-73.
- Negeri, S., & Agung, K. (2022). Application of direct instruction model to improve students' independence and learning achievement. *DIADIK: Jurnal Ilmiah Teknologi Pendidikan*, 12(1), 2022.
- Putra, I. G. D., Widiana, I. W., & Wibawa, I. M. C. (2020). Peran model pembelajaran scramble dalam meningkatkan hasil belajar IPA. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 4(3), 409-416.
- Putri, N. P. S., Yensy, N. A., & Maulidiya, D. (2019). Penerapan Model Pembelajaran Scramble Untuk Meningkatkan Hasil Belajar Siswa Kelas Vii Smp N 13 Kota Bengkulu. *Jurnal Penelitian Pembelajaran Matematika Sekolah (JP2MS)*, 3(2), 172-179.
- Rustam, A., & Ekadayanti, W. (2023). Meta Analisis Pengaruh Model Pembelajaran Scramble Dalam Meningkatkan Hasil Belajar Peserta Didik Sekolah Dasar. *Arus Jurnal Pendidikan*, 3(3), 172-180.
- Safitri, A., & Reinita, R. (2020). Pengaruh Model Kooperatif Tipe Scramble terhadap Hasil Belajar Tematik Terpadu Kelas IV Sekolah Dasar. *Jurnal Pendidikan Tambusai*, 4(3), 2130-2138.
- Saidah, N. (2022). Penerapan Model Scramble Berbasis Saintifik dalam Meningkatkan Keaktifan dan Hasil Belajar Matematika Siswa Kelas V SD 3 Puyoh. *JEID: Journal of Educational Integration and Development*, 2(4), 226-242.
- Sari, D. N. (2021). Pengaruh penggunaan discovery learning dengan scramble terhadap keaktifan belajar dan hasil belajar matematika siswa kelas X SMA N 1 klego kabupaten boyolali semester II tahun pelajaran 2020/2021. *SECONDARY: Jurnal Inovasi Pendidikan Menengah*, 1(3), 136-149.
- Sipayung, C. A., Purba, N., & Simanjuntak, T. A. (2024). Pengaruh Model Pembelajaran Scramble Terhadap Hasil Belajar IPA Siswa Kelas IV di SD Negeri 095551 Jl. Asahan. *Innovative: Journal Of Social Science Research*, 4(1), 2686-2699.
- Suprihati, S. (2021). MENINGKATKAN AKTIVITAS DAN HASIL BELAJAR MATEMATIKA MATERI OPERASI HITUNG BILANGAN MELALUI MODEL PEMBELAJARAN SCRAMBLE PADA SISWA KELAS III SD 1 JURANG GEBOG KUDUS TAHUN PELAJARAN 2019/2020. *Jurnal Bhakti Pendidikan Indonesia*, 3(2).
- Waruwu, S., & Tafonao, A. (2023). Penerapan Model Pembelajaran Scramble Dalam Meningkatkan Hasil Belajar Siswa. *Curve Elasticity: Jurnal Pendidikan Ekonomi*, 4(2), 123-130.
- Wibowo, S., Anggraini, S. P., Sunaryo, S., Sugevin, W., Nirwana, R. C., & Yuniawatika, Y. (2022). Program Mathematics Ethnic Learning untuk Meningkatkan Minat Belajar Matematika Siswa SDN 1 Kauman. *Jurnal ABDINUS: Jurnal Pengabdian Nusantara*, 6(2), 520-530.