EDUMASPUL
JURNAL PENDIDIKAN
Vol. 7 – No. 1, year (2023), page 1413-1424
| ISSN 2548-8201 (Print) | 2580-0469) (Online) |

Demonstration Method: An Effective Alternative in Improving Student Mathematics Learning Outcomes in Elementary School

Wiwin Mariyanto[1], Yonarlianto Tembang[2], Martha Betaubun[3*], Any Niatun[4]

[1] *PPG, Universitas Musamus Merauke, Papua Selatan, Indonesia*
[2]*PGSD, Universitas Musamus Merauke, Papua Selatan, Indonesia*
[3]*Pendidikan Bahasa Inggris, Universitas Musamus Merauke, Papua Selatan, Indonesia*
[4]*SD Negeri 2 Merauke, Papua Selatan, Indonesia*
*Corresponding Author. E-mail: marthabetaubun@unmus.ac.id

Receive: 10/01/2023	Accepted: 10/02/2023	Published: 01/03/2023

Abstract

The demonstration method is a very effective method, because it helps students to find answers with their own efforts based on facts or correct data by demonstrating both directly and through the use of teaching media that are in accordance with the material presented. Talking about the effectiveness of the demonstration method, the importance of this method can be seen from the way it is applied in learning, one of which is in mathematics learning. Learning mathematics is one of the learning that is often a scary thing for every student. Therefore, to overcome this, a method that suits students during learning is needed. Take this into account. So, the purpose of this study is to see the effectiveness of the demonstration method on student learning outcomes in mathematics subjects. This research is a classroom action study, where this research was carried out on grade II students at SD Negeri 2 Merauke for the 2022/2023 school year. In this study, 24 students were the subjects of the study. By applying two cycles with two meetings each in each cycle, the study also used tests and observations as research data. As a result, there was a very significant improvement in student learning outcomes starting from cycle I to cycle II. Therefore, it is expected that the role of teachers is to advance in the achievements achieved by students, so teachers must be more creative and innovative to create learning that is fun, easy to understand and able to increase student interest so that learning objectives can be achieved.

Keywords**: **Demonstration Method, Basic Mathematics, Basic Level, Creative Method

Introduction

Wahyuningsih, (2019) stated that the implementation of education at the elementary school level aims to provide provisions for students to live in society and be able to continue their education to a higher level. Therefore, the purpose of learning mathematics in schools is intended so that students are not only skilled in using mathematics, but can provide provisions to students with the pressure of structuring reason in the application of mathematics in everyday life in the midst of the community in which they live.

Based on the 2013 Curriculum (K-13), mathematics is a subject taught at every level of education in Indonesia starting from elementary school to equip students with logical, analytical, systematic, critical and creative thinking skills as well as the ability to cooperate (Nurhasanah et al., 2022). These competencies are needed so that students can have the ability to obtain, manage, and utilize information to survive in ever-changing, uncertain, and competitive circumstances.

Aprima & Sari, (2022) said that mathematics is a universal science that underlies the development of modern technology, has an important role in various disciplines and advances human thinking. The term mathematics comes from the Greek "mathematikos" in exact science, or "mathesis" which means teaching, abstract and deductive knowledge, where conclusions are not drawn based on sensory experience, but on conclusions drawn from certain rules through deduction (Indonesian Encyclopedia). According to Nuraini, (2022) mathematics is the science of logic about the form of the arrangement of quantities and concepts that are interconnected with each other, Mathematics can be divided into three fields, namely algebra, analysis and geometry. Unaenah et al., (2020) stated that symbolic language whose practical function is to express quantitative and spatial relationships so that its theoretical function is to facilitate thinking. Mathematics is one field of study that exists at all levels of education, from elementary school to tertiary level. Even mathematics is taught in kindergarten informally.

Learning mathematics is a requirement to continue education to the next level (Sinaga &; Samosir, 2023). Because by learning mathematics, we will learn to reason critically, creatively and actively. Mathematics is abstract ideas that contain symbols, so mathematical concepts must be understood first before manipulating the symbols. In line with that, Nugraha &; Malawi, (2021) said that mathematics is one of the disciplines that can improve the ability to think and argue, contribute to solving everyday problems and in the world of work, fiber provides support in the development of science and technology. The need for current and future applications of mathematics is not only for daily purposes, but especially in the world of work, and to support the development of science (Muslimin et al., 2019). Therefore, mathematics as a basic science needs to be mastered well by students, especially from elementary school age.

At the age of elementary school students (7-8 years to 12-13 years) according to Piaget's cognitive theory including at the concrete operational stage (Fauzi et al., 2020). Based on this cognitive development, elementary school-age children generally have difficulty in understanding abstract mathematics. Because of its abstractness, mathematics is relatively not easy for ordinary elementary school students to understand. The field of mathematics is one of the components of basic education in the fields of teaching. This field of mathematics is needed for the calculation process and thinking process that people really need in solving various problems.

In addition, referring to the curriculum of the Ministry of National Education, it is stated that the standard of mathematics competence in elementary schools that students must have after carrying out learning activities is not mastery of mathematics, but what is needed is to be able to understand the world around them, be able to compete, and succeed in life. Sriastini, (2023) believes that the competency standards formulated in this curriculum include understanding mathematical concepts, mathematical communication, mathematical connections, reasoning and problem solving, as well as positive attitudes and interests towards mathematics.

But in today's reality, mastery of mathematics, both by elementary school students (SD) and middle school students (junior high and high school), has always been a big problem. This is evident from the results of national examinations (UN) held in neither the central nor regional areas (Muslimin et al., 2019); (Nugraha &; Malawi, 2021); (Unaenah et al., 2020); (Sinaga &; Samosir, 2023). In general, what causes students not to pass the national examination is the low ability of students in mathematics subject matter.

In line with the above problems, based on the results of observations, there are learning problems faced by students in grade II at SD Negeri 2 Merauke, namely the understanding of students is still very low, the level of knowledge and student achievement in mathematics subjects is lower than other subjects, the low interest of students in mathematics lessons is caused by less attractive learning methods, Teacher dominance is still high, the role of teachers in the learning process as facilitators has not been maximized. In the implementation of teacher learning still depends a lot on

textbooks, predominantly using lectures and taking notes, teachers do not optimize cooperation and in the evaluation process, students are considered to pass tests or can take tests without paying attention to other aspects such as honesty, self-control, respect for others, and the ability to work together.

In addition, based on the results of daily tests of mathematics subjects on the basic competency number material 1.4 "Adding and subtracting numbers to 500", shows a low level of mastery of the material. Of the 24 grade II students, only 8 students or 40% achieved a material mastery level of 70% ≥ with an average grade / classical completeness score of 46.50%. The learning process has an impact on student learning outcomes in mathematics learning. Student learning outcomes have not been achieved in accordance with the Minimum Completeness Criteria (KKM) that have been set, which is 70.

Reflecting on this problem, Salawati, (2021) stated that learning outcomes are a benchmark to see student success in mastering the subject matter delivered during the learning process. Moreover, Sriastini, (2023) stated that learning outcomes are the abilities possessed by students after they receive learning experiences. In other words, learning outcomes are achievements achieved by students after following the learning process. Faridah, (2023) explained that student learning outcomes can be reviewed from several cognitive outcomes, namely: students' abilities in knowledge (memory), understanding, application (application), analysis, synthesis, and evaluation. The learning process is said to be effective if students are actively involved directly in organizing and discovering information (knowledge), so that they do not only passively receive the knowledge provided by the teacher. In the teaching and learning process, the teacher's task is to develop and provide conditions so that students can develop their talents and potential.

One method that is appropriate and appropriate in improving students' memory skills is the demonstration method. The demonstration method is the presence of a teacher, a requested outsider, or a student showing a process to the whole class (Sukerti, 2021). The demonstration method is a very effective method, because it helps students to find answers with their own efforts based on facts or correct data by demonstrating both directly and through the use of teaching media that are in accordance with the material being presented. Safitri &; Nugroho, (2023) stated that the demonstration method is a teaching method that uses demonstrations to clarify an understanding or to show how to do something to students.

The demonstration method is a learning strategy carried out by demonstrating and proving the truth of concepts in learning. Demonstration method according to opinion (Sukerti, 2021); (Tini, 2020); (Rustiati, 2023) is a way of presenting lessons by varying or showing students a certain process, situation or object being studied, either actual or imitation, which is often accompanied by oral explanations. So the demonstration can be interpreted by demonstrating goods, events, rules and sequences of carrying out activities. Thus, this study aims to apply the demonstration method as one of the efforts to improve student learning outcomes in mathematics subjects in grade II SD Negeri 2 Merauke.

Method

This research is a Classroom Action Research (PTK). The subjects of the study were grade II students of SDN Negeri 2 Merauke, South Papua with a total number of students of 24 students. This research was conducted in January-February in the 2022/2023 academic year. In addition, this research is carried out through 4 stages in accordance with the rules of classroom action research (PTK), namely: planning, implementation, observation, and reflection. Data collection techniques in this study are by using techniques: observation, and tests. The instruments in the study are observation sheets to observe student learning activities and teacher teaching activities as well as evaluation sheets for student learning outcomes tests. Data analysis was carried out qualitatively and quantitatively. In addition, in this study, the classical completeness of students is said to be complete if 80% or more

of the number of students who take part in learning reach a minimum level of success.

Findings and Discussion

Findings

In accordance with the research rules that have been applied previously, where this research was carried out on grade II students of SD Negeri 2 Merauke in the 2022/2023 school year, by applying the classroom action research model, where the research acts as an observer and the pursuer is the subject teacher at the school. In addition, to obtain data that is in accordance with the purpose of the study, namely improving student learning outcomes, this research was carried out in 2 cycles, where each cycle consisted of 2 meetings and each of these meetings there was a test that would later measure student success in using the demonstration method. The success indicator of this study is determined by the number of students who graduate to reach an average of at least 80% with a score above 70. In its implementation, this research was carried out in four stages, thus:

In the planning stage, the activities carried out are Preparing a Learning Implementation Plan (RPP) which contains a series of learning activities using the demonstration method with ice stick learning media. The teacher prepares a number of ice sticks that will be used for demonstration and teaching materials for summation materials. In addition, teachers prepare observation sheets according to the results of discussions with colleagues on aspects of observation to be observed to observe student learning activities in the learning process through demonstration methods. Next, the teacher compiles evaluation questions that will be used to measure student learning outcomes.

In the initial activity, the teacher enters the classroom and greets and greets the students and conditions the class to be ready for learning. One of the students was asked to lead a prayer. Teachers provide motivation by relating the material to students' daily lives. The teacher asks questions that relate the learning material to everyday life. The teacher reminded the students of the previous lesson. The teacher reminds us about the deduction of two two-figure bars without borrowing and the teacher explains the steps of the activity to be carried out and the learning objectives that students will achieve.

In the core activity, students pay attention to the teacher's explanation of subtracting two numbers by borrowing. The teacher told me that Gandi had 50 ice sticks, then gave Rina 10 ice sticks. "How many Gandi ice sticks are there now?" asked Mrs. Guru. The teacher wrote the math sentence from the problem on the blackboard and proceeded to take 50 ice sticks. Then the teacher tied 10 ice sticks with rubber into 4 ties and let the remaining 10 ice sticks go. The teacher explained that the 50 consisted of the 60s. The teacher wrote it on the blackboard. Then, the teacher grouped the ice sticks according to the place value and explained that there were 1 bunch of ice sticks with 1 tens and 4 ice sticks with unit values. Then the teacher tied the ice stick and then explained how to complete the subtraction calculation operation by subtracting the tens ice stick and the unit ice stick until the result of the subtraction calculation operation was found.

Furthermore, to strengthen the concept of completing the operation of calculating the subtraction of two numbers to two numbers by borrowing in a long way, students with the guidance of the teacher conducted a quick competition game to determine the result of subtracting two numbers two numbers by borrowing in a long way in groups. The teacher mentioned the operation of calculating the subtraction of two two-number bars by borrowing a number. Students choose the number card as mentioned by the teacher and put it in place of the number. After that, each group must determine the right number in place of tens and in place of units.

The next activity, students complete a worksheet on subtracting two numbers by stacking long in pairs with deskmates. The teacher distributes worksheets to students and then explains the work steps to complete the LKS. Students work with their seatmates to complete assignments on student worksheets. Teachers guide students who have difficulty in completing LKS.

The next activity is the percentage of student work according to the learning material carried out by each group in the front of the class. Presentations are made by each group based on the results of each group's work and discussion. One student demonstrated and the other group member completed the operation of subtracting two numbers by borrowing in a long way on the board. The presentation of learning materials is responded to by other groups.

The teacher explained how to solve the operation of calculating the subtraction of two numbers to two numbers by borrowing in a short arranged way. Students and teachers do questions and answers about the teacher's explanation. The teacher asked several students to come forward in turn to complete the operation of calculating the subtraction of two numbers and two numbers by borrowing in a short stacked way. In the closing activity, the teacher reviewed the material they had learned. Students were asked to convey their difficulties. The teacher guides the students to conclude the learning material. Students do evaluations in the form of fill-in-the-blank questions with a total of 10 questions. The teacher gave a follow-up in the form of homework. One of the students led the closing prayer of the lesson.

After completing the research implementation starting from cycle I to cycle II, the average passing score of students has been obtained, the average score in each cycle can be seen in table 1 below:

Table 1. Students' Evaluation Score

Students' Achievement	Notes

Pre-Cycle	Cycle I	Cycle II	
8	10	20	**Passed Total of Students**
16	14	4	**Not Passed Total of Students**
40%	55%	90%	**Completeness Percentage**

Discussion

Talking about mathematics is not appropriate when separated from the development of science and technology that exists today. This is mainly due to the position of mathematics as a "basic science" that underpins the development of science and technology and develops along with it (Surani, 2022). This is also stated by (Rosidah &; Zulkarnain, 2022); (Sriastini, 2023); (Sukerti, 2021) which said that mathematics as one of the basic sciences, both the applied aspect and the reasoning aspect, has a very important role in mastering science and technology. Next (Magnatis et al., 2019); (Syafuddin, 2019) said that to some extent mathematics needs to be mastered by everyone. School mathematics is a part of mathematics that is chosen on the basis of the importance of developing the abilities and personalities of students and the development of science and technology, it needs to always be in line with the demands of students' interests in facing future lives.

Mathematics is one of the subjects taught at all levels of education starting from elementary school (SD), junior high school (SMP), high school (SMA), to college (Lailiyah & Setyawan, 2022a); (Jombang, 2021); (Surani, 2022); (Faridah, 2023); (Sriastini, 2023). Furthermore, according to Jombang, (2021) learning mathematics in elementary school is very important for children, because the knowledge they gain at this level will greatly affect the next level. This was also revealed by (Dhami, 2020) that the mathematics

learning process in elementary schools will discuss basic mathematical concepts and materials that will help students on their mathematics material at a further level. Therefore, it is very important for teachers to determine the right learning method to embed mathematics material since elementary school correctly.

Mailiarni, (2020) revealed that if students learn mathematics in the right way, then students' reasoning abilities will increase. However, student complaints against this subject are still very numerous. Most elementary students consider that mathematics is a difficult subject. Mathematics is also seen as one of the scary, uninteresting, and also boring subjects (Prabawanti et al., 2022). The statement that many students express is "Mathematics is difficult". For those who do not like mathematics must argue that this science is difficult, complicated, confusing, complicated and confusing. So finally they became lazy to learn mathematics.

Mathematics learning in elementary schools (SD) has many problems, both those that come from teachers in the field of study, students, and parents themselves. Lailiyah &; Setyawan, (2022b) suggest that students cannot think mathematically even though they have sat in high classes, students' ideas do not come out and become pent up, students who do not ask questions about the material explained by the teacher, the methods used by teachers are still old methods, and students' interests and abilities are less increased.

This is in line with (Nurhaini &; Sangkal, 2021), which explains that the problems experienced in learning mathematics in elementary schools, namely the difficulties experienced by most students in solving math story problems, students are afraid to ask questions about difficult things and they do not understand, students' assumptions that mathematics is a scary subject. And teachers still experience difficulties and obstacles in designing and selecting contextual problems. Students' inability to think abstractly and lack of reading comprehension are also problems in mathematics learning. Next (Chityadewi, 2019); (Ardila Keitimu et al., 2023); (Rohanah, 2022) revealed that one of the problems in learning mathematics is the low or lack of interest of students in mathematics lessons. Interest in learning mathematics can be interpreted as full self-involvement in carrying out mathematics learning activities both at home, at school, and in the community. Students who have an interest in learning mathematics mean having the effort and willingness to learn mathematics.

Our education system tends to determine everything from the "top". In this case the teacher is the main source of information and students are considered as empty vessels that will be filled with various knowledge. The learning process is still teacher-centered and has not centered or paid attention to student development (Ermida, 2021). The teacher must change his role, no longer as the holder of the highest scientific authority (the main source of information), but as a facilitator who guides students towards the formation of knowledge by themselves. Through this paradigm, students are expected to be more active in learning, actively discussing, daring to convey ideas and accept ideas and others, and have high self-confidence.

The grading system in schools tends to only assess the final results of student work and not assess the student's work process (Bayuni, 2020). For example, the National Exam is in the form of multiple choice. Multiple choice questions cannot judge the process of solving the questions. As a result, students who have tried hard, if the results are wrong, will get bad grades. If students are asked what is the same "3x4" and "4x3"? Choirically they will answer the same. Another disadvantage is if the student's answer is not the same as the teacher's answer, it is considered wrong without exploring the cause,

even though the student's answer is correct for the question they wrote.

The teacher is the main component in the educational process because the teacher is the executor of the process. The methods teachers use in teaching mathematics sometimes do not match the way students think, and do not match the development of students. According to (Hartono, 2020), from various studies, this teacher factor is often considered to be the most important cause why there are many students who feel afraid or have low interest in mathematics. The mathematics learning process tends to achieve material targets according to the curriculum and is oriented towards meeting graduation targets. As a consequence, the learning process does not emphasize the understanding of the material studied. Students do not build their own knowledge of mathematical concepts, but tend to memorize mathematical concepts without knowing the meaning contained in those concepts.

The presence of attention is also an indicator of interest in learning. Attention is the concentration or activity of our soul on observation, understanding, and so on to the exclusion of anything else than that. Someone who has an interest in learning about a particular object will naturally pay attention to the object. For example, a student is interested in learning about science lessons, so he tries to pay attention to the explanation from his teacher.

Often found several students who respond and react to what the teacher says during the teaching and learning process in class. The response given showed that what the teacher said attracted his attention, so there was great curiosity. The absence of interest in a subject is the root cause why students do not flinch to record what has been conveyed by the teacher (Satria Kurniawan et al., 2020). That is a sign that students do not have the motivation to learn. Therefore, teachers must be able to arouse the interest of students. So that students who at first have no desire to learn, but because there is something sought after comes their interest in learning.

In addition, some findings from (Wahyuningsih, 2019); (Aprima &; Sari, 2022); (Sinaga &; Samosir, 2023); (Nugraha &; Malawi, 2021) Giving reasons why mathematics is one of the difficult subjects for students: Mathematics is the rote science of many formulas. This myth makes students lazy to study mathematics and end up not understanding anything about mathematics. In fact, mathematics is not the science of memorizing formulas, because without understanding concepts, formulas that have been memorized will not be useful. Mathematics is always related to the speed of counting. Indeed, counting is an indispensable part of mathematics, especially at the elementary level (Muslimin et al., 2019). However, the ability to calculate quickly is not the most important thing in mathematics. The most important thing is the understanding of the concept. Through understanding concepts, we will be able to analyze (reason) problems (problems) to then transform into models and forms of mathematical equations.

Mathematics is a boring, rigid, and non-recreative science. This assumption is clearly erroneous. Although the answer (solution) of mathematics feels exact because the solution is single, it does not mean that mathematics is rigid and boring. Although the answer (solution) is only one (single), the way or method of solving math problems can actually vary.

According to (Salawati, 2021); (Faridah, 2023); (Rustiati, 2023); (Safitri &; Nugroho, 2023) It is necessary to provide new insights to both students and teachers about the view of mathematics education by utilizing physical objects around children. When viewed from a logical point of view, the first step in implementing changes in mathematics education is to change the perception of teachers, students and all individuals related to mathematics and learning mathematics From a practical point of view, acceptance of this view

will increase once students, teachers, and other individuals involved in mathematics education begin to see the results of some of these changes.

In accordance with the explanation in table 1 above, it is understandable that in the pre-cycle or early observation stage there were 8 students who graduated at this observation stage, where this result was still below the expected graduation standard. In addition, in the first cycle, the evaluation results showed that only a few students completed with a total score above KKM, which was as many as 10 students or with a total classical graduation of only 55% of the total students totaling 24 students. Meanwhile, there are 14 students or a total of 45% percent of the total grade II students of SD Negeri 2 Merauke which incidentally have not been completed. Therefore, from the acquisition of the average score obtained by each of these students, further actions are needed that are expected to improve or improve the learning outcomes of these students. Reflecting on the unsatisfactory results of cycle I, learning using the demonstration method is increasingly improved in cycle II, where its implementation is based on every deficiency in cycle I. Furthermore, in cycle II, the evaluation results show that there are 20 students who obtain scores above 70 with total class completeness or classical completeness of 90% of the total students totaling 24. The evaluation results in cycle II show that there is a very significant improvement in student learning outcomes starting from cycle I to cycle II. In addition, there are still 4 students or 10% of the total students in grade II SD Negeri 2 Merauke who have not completed their scores based on KKM or set completeness criteria. Thus. So the total completeness obtained by students in grade II SD Negeri 2 Merauke in mathematics subjects with the material of adding stacked numbers with the demonstration method was declared successful with a total classical / class passing score of 90%, where the criteria for completeness in research to be said to be successful was the completeness or completeness of classical classes reaching 80% or more. Therefore, this research was said to be successful and the research was dismissed until cycle II.

Learning mathematics in elementary school is one of the less desirable subjects by students. Many elementary school students find math lessons to be scary, uninteresting, boring, and difficult. There are several factors that cause this to happen, namely cultural factors, education systems, grading systems, parents, the nature of the field of study, and teacher factors.

In addition, there are several causes of low demand for learning mathematics students which can be seen from a sense of pleasure, attention to learning and also interest in the material and teachers. This teacher factor is often considered the most important cause of why there are many students who feel afraid or have a low interest in mathematics (Fauzi et al., 2020); (Wahyuningsih, 2019); (Aprima &; Sari, 2022). Therefore, teachers need to develop math teaching skills, so that students become more interested and do not consider mathematics lessons difficult. Abstract mathematics material in elementary schools must be taught concretely so that students will more easily understand the mathematical concepts.

From the results of observations of learning situations in cycles I and II, researchers can find learning weaknesses: a. Suboptimal use of time during demonstrations. b. The courage of some students to ask and answer questions in discussions with group mates is still lacking. c. Students still experience confusion during demonstrations. d. In learning there are still some students who are less active in game activities and only choose to see their friends.

Before the implementation of research, teachers carry out learning with methods that do not vary and rarely use media so that lessons are monotonous and less interesting for students. This is one of the factors for the lack of student activity in learning. Therefore, learning innovations

are needed that can increase student activeness so that learning achievement can increase. In this case, researchers try to do actions in cycles I and II using the demonstration method.

The results of the Classroom Action Research (PTK) conducted by researchers showed that student learning achievement increased from before the action was implemented. These results include the acquisition of scores on the post-test and the results of observations of student learning activities. It is obtained by students after the implementation of actions using the demonstration method. The implementation of mathematics learning through the demonstration method has succeeded in increasing the learning activities of grade II students of SD Negeri 2 Merauke, this has an impact on significantly improving student learning outcomes. This is in accordance with the opinion of Sinaga & Samosir, (2023) which states that activities in the learning process are a series of activities that include student activity in following lessons, thinking, reading, and all activities carried out that can support learning outcomes. It can be concluded that mathematics learning through demonstration methods can improve the learning outcomes of grade II students of SD Negeri 2 Merauke.

Conclusion

Based on the results of research conducted in grade II SD Negeri 2 Merauke, it can be concluded that learning mathematics through demonstration methods can improve the learning outcomes of grade II students of SD Negeri 2 Merauke. Therefore, it is expected that the role of teachers is to progress in the achievements achieved by students, so teachers must be more creative and innovative to create learning that is fun, easy to understand and able to increase student interest so that learning objectives can be achieved. It is necessary to involve students actively in the learning process by using appropriate methods, strategies and media, one of which is the demonstration method.

References

Aprima, D., & Sari, S. (2022). Analisis Penerapan Pembelajaran Berdiferensiasi Dalam Implementasi Kurikulum Merdeka Pada Pelajaran Matematika Sd. *Cendikia : Media Jurnal Ilmiah Pendidikan*, *13*(1), 95–101. Https://Doi.Org/10.35335/Cendikia.V13i1.2960

Ardila Keitimu, T., Bera, L., Angelina Fransiska Mbari, M., Nusa Nipa, U., Kesehatan No, J., Alok Timur, K., Sikka, K., & Tenggara Timur, N. (2023). Meningkatkan Hasil Belajar Matematika Materi Penjumlahan Dengan Mengunakan Media Pohon Pintar Pada Siswa Kelas 1 Sdk Wegoknatar. *Journal On Education*, *5*(3), 6688–6696. Https://Doi.Org/10.31004/Joe.V5i3.1449

Bayuni, K. H. (2020). Peningkatan Hasil Belajar Pemecahan Masalah Penjumlahan Dan Pengurangan Pecahan Melalui Pendekatan Matematika Realistik Pada Siswa. *Mimbar Pendidikan Indonesia*, *1*(3). Https://Doi.Org/10.23887/Mpi.V1i3.30952

Chityadewi, K. (2019). Meningkatkan Hasil Belajar Matematika Pada Materi Operasi Hitung Penjumlahan Pecahan Dengan Pendekatan Ctl (Contextual Teaching And Learning). *Journal Of Education Technology*, *3*(3), 196–202. Https://Doi.Org/10.23887/Jet.V3i3.21746

Dhami, D. (2020). Penerapan Metode Demonstrasi Dengan Menggunakan Kartu Untuk Meningkatkan Prestasi Belajar Operasi Penjumlahan Dan

Pengurangan Pada Peserta Didik Kelas I Di Sdn 2 Sobo Kecamatan Munjungan Kabupaten Trenggalek. *Jurnal Pendidikan : Riset Dan Konseptual*, *4*(1), 127–133. Https://Doi.Org/10.28926/Riset_Konseptual.V4i1.189

Ermida, Y. (2021). Meningkatkan Hasil Belajar Matematika Siswa Kelas I Sd Negeri 04 Limbanang Pada Materi Pokok Penjumlahan Dan Pengurangan Bilangan Cacah Dengan Metode Demonstrasi. *Jurnal Pendidikan Tambusai*, *5*(3), 6924–6930. Https://Jptam.Org/Index.Php/Jptam/Article/View/2068

Faridah, S. (2023). Peningkatan Prestasi Belajar Pai Melalui Metode Demonstrasi Pada Siswa Kelas Ia Sd Negeri 025 Cikutra. *Jurnal Syntax Admiration*, *4*(5), 581–593. Https://Doi.Org/10.46799/Jsa.V4i5.593

Fauzi, A., Sawitri, D., & Syahrir, S. (2020). Kesulitan Guru Pada Pembelajaran Matematika Di Sekolah Dasar. *Jurnal Ilmiah Mandala Education*, *6*(1). Https://Doi.Org/10.58258/Jime.V6i1.1119

Hartono, Y. (2020). Upaya Peningkatan Hasil Belajar Matematika Penjumlahan Bilangan Bulat Dengan Menggunakan Media Gambar Garis Bilangan Pada Siswa Kelas Iv Sd Negeri 57 Palembang. *Social, Humanities, And Educational Studies (Shes): Conference Series*, *3*(3), 2381–2384. Https://Doi.Org/10.20961/Shes.V3i3.57156

Jombang, J. (2021). Penerapan Metode Demonstrasi Untuk Meningkatkan Hasil Belajar Mapel Matematika Pada Siswa Kelas 2 Sdn Alang-Alang Caruban 1 Tahun Pembelajaran 2019/2020. *Educational Technology Journal*, *1*(1), 31–40. Https://Doi.Org/10.26740/Etj.V1n1.P31-40

Lailiyah, R., & Setyawan, A. (2022a). Peningkatan Hasil Belajar Matematika Menggunakan Metode Demonstrasi Di Kelas Ii Sdn Karanganyar 1 Kabupaten Pasuruan. *Educenter : Jurnal Ilmiah Pendidikan*, *1*(6), 695–700. Https://Doi.Org/10.55904/Educenter.V1i6.253

Lailiyah, R., & Setyawan, A. (2022b). Peningkatan Hasil Belajar Matematika Menggunakan Metode Demonstrasi Di Kelas Ii Sdn Karanganyar I Kabupaten Pasuruan. *Educenter : Jurnal Ilmiah Pendidikan*, *1*(7), 714–718. Https://Doi.Org/10.55904/Educenter.V1i7.261

Magnatis, U., Muhammadiyah Bangka Belitung, S., Artikel, I., Kunci, K., Demonstrasi, M., Belajar, P., & Hitung Campur, O. (2019). Upaya Meningkatkan Prestasi Belajar Siswa Kelas Iv Sd Negeri 7 Sungailiat Mata Pelajaran Matematika Tentang Operasi Hitung Campuran Melalui Metode Demonstrasi. *Cendekiawan*, *1*(1), 20–28. Https://Doi.Org/10.35438/Cendekiawan.V1i1.155

Mailiarni, M. (2020). Meningkatkan Hasil Belajar Matematika Materi Pokok Penjumlahan Dan Pengurangan Dengan Penggunaan Metode Demonstrasi Pada Siswa Kelas I Sd Negeri 08 Salimpaung. *Jurnal Review Pendidikan Dan Pengajaran (Jrpp)*, *3*(2), 426–430. Https://Doi.Org/10.31004/Jrpp.V3i2.1537

Muslimin, M., Sunardi, S., & Shaumi, S. (2019). Pengaruh Media Kartu Terhadap Hasil Belajar Matematika Siswa Di Kelas Vii Smp Negeri 10

Palembang. *Edumatica : Jurnal Pendidikan Matematika*, *9*(1), 15–22. Https://Doi.Org/10.22437/Edumatica.V9i1.5783

Nugraha, E., & Malawi, A. (2021). Peningkatan Hasil Belajar Dan Aktivitas Belajar Siswa Melalui Penggunaan Metode Demonstrasi Pada Mata Pelajaran Matematika Di Sd Negeri 2 Neglasari Tasikmalaya. *Jiees : Journal Of Islamic Education At Elementary School*, *2*(1), 12–21. Https://Doi.Org/10.47400/Jiees.V2i1.25

Nuraini, L. (2022). Integrasi Nilai Kearifan Lokal Dalam Pembelajaran Matematika Sd/Mi Kurikulum 2013. *Jurnal Pendidikan Matematika (Kudus)*, *1*(2). Https://Doi.Org/10.21043/Jmtk.V1i2.4143

Nurhaini, & Sangkal, S. (2021). Meningkatkan Hasil Belajar Matematika Dengan Menggunakan Metode Demonstrasi Dan Media Potongan Lidi. *Jurnal Global Edukasi*, *4*(4), 247–252. Https://Jurnal.Goretanpena.Com/Index.Php/Jge/Article/View/595

Nurhasanah, A., Syafari, R., & Nurfaidah, A. R. (2022). Kesesuaian Buku Teks Matematika Berdasarkan Kurikulum 2013. *Mosharafa: Jurnal Pendidikan Matematika*, *11*(2), 227–236. Https://Doi.Org/10.31980/Mosharafa.V11i2.1327

Prabawanti, E. T., Nurhidayah, S., Tambakromo, S., Mis, I., & Muhammadiyah, W. (2022). Peningkatan Prestasi Siswa Dalam Mengoperasionalkan Penjumlahan Dan Pengurangan Menggunakan Metode Demonstrasi Dengan Media Benda Konkrit. *Education And Learning Of Elementary School*, *2*(02), 16–26. Https://Ejournal.Stkipmodernngawi.Ac.Id/Index.Php/Eles/Article/View/689

Rohanah, Y. (2022). Penerapan Model Pembelajaran Example Non Example Untuk Meningkatkan Hasil Belajar Matematika Topik Penjumlahan Dan Pengurangan Dua Pecahan. *Pedagogia: Jurnal Ilmiah Pendidikan*, *14*(2), 77–81. Https://Doi.Org/10.55215/Pedagogia.V14i2.6614

Rosidah, A., & Zulkarnain, Z. (2022). Penggunaan Metode Demonstrasi Pada Pembelajaran Matematika Di Sekolah Dasar. *Jurnal Pendidikan Dan Konseling (Jpdk)*, *4*(6), 13186–13192. Https://Doi.Org/10.31004/Jpdk.V4i6.10734

Rustiati, T. (2023). Upaya Meningkatkan Hasil Belajar Siswa Kelas Vi Sd Pada Konsep Operasi Hitung Pecahan Pada Mata Pelajaran Matematika Melalui Metode Demostrasi. *Jurnal Pendidikan Abad Ke-21*, *1*(1), 17–29. Https://Doi.Org/10.53889/Jpak.V1i1.204

Safitri, M. D., & Nugroho, A. S. (2023). Penerapan Metode Demonstrasi Berbantu Media Jarimatika Dan Paper Untuk Meningkatkan Hasil Belajar Siswa Kelas 2 Sekolah Dasar. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, *8*(1), 3102–3115. Https://Doi.Org/10.23969/Jp.V8i1.8111

Salawati, S. (2021). Meningkatkan Motivasi Belajar Siswa Kelas Iv Dengan Menggunakan Metode Demonstrasi Pada Mata Pelajaran Matematika Di Sdn 14 Senapit. *Jurnal Pendidikan Informatika Dan Sains*, *10*(2), 144–151. Https://Doi.Org/10.31571/Saintek.V10i2.3461

Satria Kurniawan, M., Wijayanti, O., & Hawanti, S. (2020). Problematika Dan Strategi Dalam Pembelajaran Bahasa Indonesia Di Kelas Rendah Sekolah Dasar. *Jurnal Riset Pendidikan Dasar (Jrpd)*, *1*(1), 65–73. Https://Doi.Org/10.30595/.V1i1.7933

Sinaga, S., & Samosir, A. (2023). Meningkatkan Kemampuan Memahami Perkalian Cara Susun Dengan Metode Demonstrasi. *Jurnal Global Edukasi*, *5*(5), 271–276. Https://Jurnal.Goretanpena.Com/Index.Php/Jge/Article/View/1132

Sriastini, N. L. (2023). Metode Demonstrasi Dan Pemberian Tugas Berbantuan Media Sederhana Untuk Meningkatkan Hasil Belajar Tematik (Muatan Matematika) Siswa Kelas I. *Indonesian Journal Of Instruction*, *4*(2), 57–65. Https://Doi.Org/10.23887/Iji.V4i2.60858

Sukerti, N. N. (2021). Penerapan Metode Demontrasi Berbantuan Media Sederhana Untuk Meningkatkan Hasil Belajar Tematik (Muatan Matematika). *Journal Of Education Action Research*, *5*(2), 232–238. Https://Doi.Org/10.23887/Jear.V5i2.33311

Surani, S. (2022). Peningkatan Hasil Belajar Operasi Hitung Penjumlahan Dan Pengurangan,Melalui Metode Demonstrasi Menggunakan Peraga Permainan Ular Tangga Pada Siswa Kelas 1 Sd Negeri Kedungbocok Tarik Sidoarjo. *Jurnal Pembelajaran Dan Riset Pendidikan (Jprp)*, *2*(2), 15–20. Https://Doi.Org/10.28926/Jprp.V2i2.35

Syafuddin, S. (2019). Meningkatkan Prestasi Belajar Terhadap Pelajaran Matematika Melalui Metode Demonstrasi Dan Alat Peraga Kongkrit Pada Siswa Kelas Iii Sd N Batursari 4 Kecamatan Mranggen Kabupaten Demak. *Orbith: Majalah Ilmiah Pengembangan Rekayasa Dan Sosial*, *15*(2), 64–74. Https://Doi.Org/10.32497/Orbith.V15i2.1704

Tini, T. (2020). Penerapan Metode Pembelajaran Demonstrasi Untuk Meningkatkan Motivasi Dan Hasil Belajar Operasi Hitung Penjumlahan Dan Pengurangan Pada Siswa Kelas 1 Semester 1 Sd Negeri 2 Kerjo Kidul Tahun Pelajaran 2017/2018. *Jurnal Ilmiah Guru Indonesia*, *1*(2), 185–194. Http://Www.Journalindonesia.Org/Index.Php/Jigi/Article/View/66

Unaenah, E., Khofifaturrahmah, M., Nurbaiti, L., Oktaviani, N. M., Zahrotun, S. N., & Muhammadiyah Tangerang, U. (2020). Pembelajaran Matematika Operasi Hitung Bilangan Bulat Dengan Alat Peraga. *Pensa*, *2*(1), 117–124. Https://Www.Ejournal.Stitpn.Ac.Id/Index.Php/Pensa/Article/View/832

Wahyuningsih, E. (2019). Pembelajaran Matematika Dengan Pendekatan Problem Based Learning Dalam Implementasi Kurikulum 2013. *Jurnal Pengembangan Pembelajaran Matematika*, *1*(2), 69–87. Https://Doi.Org/10.14421/Jppm.2019.12.69-87