Implementation of the Improvement Program in Mathematics for Class V Students at State Elementary School (SDN) 3 Sepit

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Abstract. This type of research is descriptive qualitative research, namely a study aimed at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, thoughts of people individually or in groups. The purpose of this study was to find out the implementation of the improvement program in the mathematics subject for fifth grade students at SDN 3 Sepit for the 2022/2023 academic year. Methods of data collection using tests, observations, interviews and documentation. While the data analysis technique uses a credibility test (trust) with a triangulation technique. The results of the research show that in the improvement activities, the researchers have carried out the repairs to the maximum, while the results achieved from these activities have been proven by the results of these activities. Students who previously received grades that had not yet reached the KKM, but after the improvement activities were held the student scores proved to have increased, and most of the students who were given improvement activities experienced increased learning outcomes.

Keywords: Mathematics, Program, Remedial.

1. INTRODUCTION

Minister of Education Regulation No. 41 of 2007 concerning process standards states that assessment/evaluation is carried out by educators on learning outcomes to measure the level of competency achievement of students, and is used as material for preparing progress reports on learning outcomes and improving learning outcomes [1]. The learning process in the classroom is a very complex and dynamic process in terms of knowledge transfer between teachers as educators and students as learners [2]–[5]. Differences in backgrounds, characteristics and abilities of students make students vary in the speed of receiving lessons. There are students who are fast, some are moderate, and some are slow and difficult to accept lessons [6]. Considering that the speed of each student in achieving competence is not the same, in learning there is a difference in learning speed between students who are proficient and those who are not proficient. Coupled with the characteristics of mathematics subjects which are abstract and many formulas make mathematics difficult for some students to understand [7].

The repair/remedial program is a re-learning design that is imposed on students who fail to master the targeted competencies. The results of preliminary observations at SDN 3 Sepit showed that some of the students’ mathematics learning outcomes were still not optimal, where the average learning outcomes in the mathematics MID test for some students were still below the Minimum Completeness Criteria (KKM). This is because the learning process is still centered on the teacher and the provision of improvements has also been applied, but it is limited to giving retests for students whose learning outcomes are still lacking.

Research by Atika et al. aimed to evaluate the impact of the Mathematics Improvement Program in Elementary Schools for fifth grade students. The results showed that the program
was effective in improving students’ understanding and learning outcomes in mathematics [8]. Furthermore, Armstrong et al. conducted research on the implementation of small group tutoring programs in improving the mathematics achievement of fifth grade students in public elementary schools. His findings indicated that students who took the program showed a significant improvement in their math test results [9]. Then from Akbar et al. examined the use of technology-based learning media in mathematics improvement programs in elementary schools. The results show that the use of multimedia and math games helps to increase students' interest and involvement in learning mathematics [10].

Based on the description above, it is necessary to conduct research with the title Implementation of Improvement Programs in Mathematics Subjects for Class V SDN 3 Sepit.

2. METHOD

This type of research is descriptive qualitative research, namely a study aimed at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, thoughts of people individually or in groups [11]. The purpose of this study was to determine the impact of implementing the improvement program on the mathematics subject of fifth grade students at SDN 3 Sepit in the 2016/2017 academic year. The data collection methods used in this study are tests, observations, interviews and documentation. While the data analysis technique uses a credibility test (trust) with a triangulation technique. The triangulation technique that researchers use is the source triangulation technique which according to Patton means comparing and checking back the degree of trust in information obtained through different times and tools in qualitative research.

3. RESULT AND DISCUSSION

The purpose of implementing improvements is more directed to the adjustment of students, especially in terms of learning outcomes and abilities. So it has been observed that the implementation of improvements at SDN 3 Sepit is as follows: The class teacher who is also a mathematics teacher at SDN 3 Sepit states that: the implementation of improvements is very useful for schools, especially students, because basically improvements can improve students’ abilities in learning, especially in mathematics. Here we have not held a remedial and enrichment program according to the proper procedure due to time constraints, there has been no agreement from other fellow teachers, and there has been no formal suggestion from the school principal, we are only carrying out our duties as class teachers, delivering material in earnest and maximum and If there are students whose learning outcomes are still lacking, we help them by giving retests without giving re-learning and increasing the giving of grades in the realm of students' attitudes.

Improvements in mathematics are carried out after carrying out half-semester or mid-term tests, but improvements can also be made after students carry out final semester tests. Then after the students do the repetition, it can be seen that students who have not met the standard of completeness and who have achieved completeness. For this reason, for students who have not achieved completeness, these students are subject to improvement, this is done to help students understand material that has not been mastered before, as well as the problems faced by students, especially in learning [12].

Furthermore, so that the improvement goes well, the researcher has the objectives of the improvement, namely as follows: a) helps improve learning outcomes from previously obtained, b) Help absorb knowledge or material properly, namely in terms of improving students’ learning abilities, c) For schools to be able to produce students who meet completeness standards in learning. Improvements are carried out based on the difficulties of students, and seeing alternatives that are suitable for students, it can be seen from the results of interviews:
Judging from the ability of students who have poor absorption of understanding, but if seen from the learning process some students who are subject to improvement are influenced by factors from within the students, namely lazy in reading material and lazy in learning. An example is the matter of comparison and scale. In order for improvements to get the desired results, preparation for implementation needs to be done, in this case the preparations that researchers make are in addition to using lesson plans, they also study material that students have not been able to achieve good results, especially on material that has not reached its completeness.

As from the observations of researchers preparing things that need to be prepared during activities such as material that has not been completed and others. Improvements are carried out in the same way as normal learning, namely the researcher opens the activity with greetings, then motivates the students a little and after that asks several questions according to the material that the students have not mastered and the students provide answers so that the researcher can find out where the difficulties are and the researcher explains the material incomplete briefly while students review material that has not been completed. Then use a method that is in accordance with the material that the students have not mastered and with the difficulties experienced by the students.

In this regard, as with the results of the researcher's observations, the method that the researcher uses is the lecture method, the researcher re-explains the material that has not been completed and after that the researcher gives assignments or questions related to the material and also the researcher conducts individual learning, but the method is more dominant what researchers use is giving assignments from this it will be known its success. In order for activities to be achieved, it is required that there is good cooperation between teachers and students.

Most students take corrective activities seriously, although usually there are a few students who are less serious in participating in these repair activities, but this is not too influential and does not interfere with other students. Students listen to things that are conveyed by researchers, and work on repair questions seriously too. In improvement there are times when researchers provide special guidance to students, in carrying out improvements in mathematics subjects researchers see learning difficulties in students. Such as difficulty in understanding the formulas. Guidance is also carried out in the learning process, namely at the beginning of learning the researcher asks students to tell in everyday life about comparisons and scales.

The results of the interview with the principal related to were the reasons behind implementing the mathematics improvement program at SDN 3 Sepit,

“The main reason for implementing this program was to enhance the students' achievements in mathematics at our school. We recognized the need to improve the quality of mathematics education so that our students could better compete in their academic journey (KS-01)”.

Furthermore, regarding the opinion on the effectiveness of this program so far, the answers are in the form of:

“I am very satisfied with the effectiveness of this program. We have observed positive changes in the students' mathematics exam results, and their increased confidence in facing this subject is truly encouraging (KS-02)”.

Then regarding any plans to continue or expand this program to other classes or subjects, the answer is:

“Yes, we do have plans to continue and even expand this program to other classes if possible. We are also considering implementing similar programs in other subjects that may require more attention (KS-03).

In the interview with the School Principal of SDN 3 Sepit, it can be concluded that the implementation of the Mathematics Improvement Program for Class V students has yielded
positive results. The School Principal stated that the main reason behind initiating this program was to enhance the students' mathematics achievements at the school. The evaluation of the program's effectiveness indicates that it has successfully improved the students' mathematics exam scores and boosted their confidence in facing this subject. The School Principal also mentioned that the program will continue in the future and might even be expanded to other classes or subjects that require additional attention. To ensure the program's sustainability, the planned actions include providing training for teachers, involving parents and the local community to support the program, and regularly monitoring the students' progress. With full support from teachers and the School Principal, as well as the students' increased enthusiasm in learning mathematics, this mathematics improvement program at SDN 3 Sepit is expected to continue benefiting the students' academic progress and overall education quality.

This affects students in achieving learning completeness as a minimum standard of achievement in a subject. So that there are students who have achieved learning mastery and there are students who have not achieved learning mastery [13]. The teacher's task as a learning facilitator in the class is obliged to help and facilitate all the needs of students including achieving learning mastery and maximizing the self-potential of their students, both groups of students who have achieved learning mastery and groups of students who have not achieved learning mastery. For this reason, teachers must be able to create programs that are able to protect the needs of all students, not only focusing on helping groups of students who have not yet achieved mastery learning, but also continuing to pay attention to groups of students who have achieved learning mastery. The implication of this principle requires the implementation of remedial programs for students who have not completed and enrichment for students who have completed.

As for the results of interviews with teachers regarding the reasons behind implementing this mathematics enhancement program at SDN 3 Sepit, the answers are in the form of:

“Our main reason for implementing this program is to improve the mathematics achievement of students in our school. We see a need to improve the quality of mathematics learning so that students can compete better (G-01)”.

Furthermore, the results of the interview with the teacher regarding his opinion about the effectiveness of this program so far, the answers are in the form of:

“In general, I am very satisfied with the effectiveness of this program. We see positive changes in students' math test results and also see an increase in their confidence in the subject (G-02)”.

Then the results of interviews with teachers regarding plans to continue or expand this program to other classes or other subjects, the answers are in the form of:

“Yes, we plan to continue this program and even expand it to other classes if possible. We are also considering implementing similar programs in other subjects that require more attention (G-03)”.

The Mathematics Teacher (G) in this interview provided in-depth insights into the implementation of the Mathematics Improvement Program for Class V students at SDN 3 Sepit. From their explanation, it is evident that before the program started, the Mathematics Teacher conducted an initial evaluation of the students' mathematical abilities using diagnostic tests. The results showed that most students were facing difficulties in grasping some fundamental mathematical concepts. This finding served as a strong foundation to introduce the improvement program aimed at enhancing students' understanding of mathematics.

During the program, the Mathematics Teacher applied a more interactive and creative teaching approach. The use of technology-based learning media and mathematical games helped create a more engaging and enjoyable learning environment for the students. With a fun learning atmosphere, the students were more motivated to actively participate in the teaching-learning process. Furthermore, the Mathematics Teacher collaborated with teachers from higher grades to exchange ideas and effective teaching methods. This demonstrated a
commitment to continually develop teaching skills and ensure that students derive maximum benefits from the program. However, the Mathematics Teacher faced challenges in addressing students’ anxiety towards mathematics. Some students initially felt uncomfortable and apprehensive about the subject. Nevertheless, the Mathematics Teacher provided additional guidance and ensured that a more sensitive and appropriate approach was used to help students overcome their fear of mathematics.

In measuring the success of the program, the Mathematics Teacher used outcome-based evaluation tests and observations to assess students' progress. The results showed a positive improvement in the students' understanding and mastery of mathematical concepts in Class V. Some students even demonstrated significant progress, validating the effectiveness of the improvement program.

The results of interviews with fifth grade students regarding their feelings about the ongoing mathematics improvement program at school, which they liked about this program, and whether there were certain aspects that made them more interested in mathematics, the answers were in the form of:

“At first, I was a little worried because math is not my favorite subject. But now, I feel more confident and enjoy learning math because there is a change in the way we learn. I like using math games and new learning media. They make learning more fun and help me understand difficult concepts better (M-01)”.  

Furthermore, regarding his feelings about the part of the program that he thinks still needs to be improved and the feeling that his math skills have improved since the program started, his answers are in the form of:

“Some of the homework may be a little too difficult for me. I wish there was more time to practice and get extra help from the teacher if needed and yes, I feel better at math now. I am more confident in facing exams and math problems (M-02)”.  

In the interview with Class V Student (M), there were initial feelings of anxiety and lack of confidence in facing the subject of mathematics. However, with the commencement of the Mathematics Improvement Program at SDN 3 Sepit, Student M experienced a positive change in their perception of mathematics. The program has provided a more enjoyable learning experience for Student M through the use of mathematical games and new learning media. This has made learning more engaging and brought to life mathematical concepts that previously seemed challenging. Throughout the program, Student M also felt supported by the teachers who provided additional guidance when needed. The teachers at SDN 3 Sepit played an active role in helping students overcome difficulties in learning mathematics and creating a comfortable learning environment. Through this additional support, Student M felt more confident in tackling assignments and mathematics exams.

However, Student M also mentioned that some homework assignments might feel difficult and require more time for practice. Additional support from the teachers is expected to help them overcome these difficulties and provide more time for practice to be better prepared for exams. Overall, the interview results with Class V Student (M) indicate that the Mathematics Improvement Program has had a positive impact in improving students' perceptions and skills in mathematics. Through a more enjoyable learning approach and additional support from the teachers, Student M and their classmates have experienced an improvement in their mathematics abilities.

Based on the results of observations to achieve graduation standard results and improve learning outcomes, the researcher guides students who take part in the improvement. Improvements are made not only to improve learning outcomes, but also how to make students able to absorb the subject matter properly. Based on the results of the research above, it can be seen that the improvements carried out by researchers can help students who experience learning difficulties and improve student learning outcomes. -things as follows:
Remedial teaching is an educational approach aimed at providing additional assistance to students who are experiencing difficulties in understanding subject matter or achieving the expected learning outcomes. The main purpose of remedial teaching is to help students bridge the gap in their understanding or skills in specific subjects, enabling them to achieve better academic performance more in line with their developmental levels. Additionally, remedial teaching ensures that students do not fall behind and continue to have equal opportunities in facing academic challenges.

Remedial teaching materials should be designed to specifically address the weaknesses or learning difficulties faced by students. These materials should be based on individual assessments of students' abilities and needs, allowing for customization according to their comprehension levels. Typically, remedial teaching materials cover fundamental concepts that form the basis for further learning [14]-[15]. The use of diverse learning resources, such as worksheets, multimedia materials, or educational games, can enhance students' interest in the taught material [16]-[17]. The methods used in remedial teaching are diverse and should be tailored to students' characteristics and needs. Some common methods include individual or small group tutoring, interactive and creative teaching approaches, as well as the integration of technology in the teaching process. Individual or small group tutoring allows students to receive more personalized and focused assistance in addressing their difficulties. Interactive and creative learning approaches, such as using math games or conducting science experiments, make learning more enjoyable and effective. Additionally, technology, such as digital learning applications or online learning platforms, can enhance access and flexibility for students in receiving remedial instruction.

During remedial teaching, allocating time wisely is crucial. Students need sufficient time to receive additional help and practice with the material being taught. Thus, a flexible schedule that caters to students' needs can maximize the benefits of remedial teaching. After students participate in remedial learning, evaluating their progress becomes essential. Evaluation can be conducted through tests, assignments, or observations to assess the extent of students' development after participating in the remedial program. The evaluation results provide feedback to teachers and students and help identify successes and areas that require further improvement [18]-[20].

Overall, remedial teaching is a valuable approach in providing additional support to students experiencing learning difficulties. With appropriate materials, methods, and effective evaluation, remedial teaching can help improve students' abilities and academic achievements, enabling them to reach their full potential in education.

4. CONCLUSION

Based on the results of the data analysis that the writer described in the previous chapter, the writer can conclude. In remedial activities, researchers have carried out these activities to the fullest, while the results achieved from these activities have been proven by the results of these activities. Students who previously received grades that had not reached the KKM, however, after the improvement activities were carried out, student scores were shown to have increased, and most students who were given corrective activities experienced increased learning outcomes. Likewise with the results of enrichment activities students can find a new experience, and can foster the talents of students, and this is also proven by enrichment activities where students are enthusiastic in these activities.
5. REFERENCES


Author declaration

Author contributions and responsibilities
The authors made major contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

Funding
This research did not receive external funding.

Availability of data and materials
All data is available from the author.

Competing interests
The authors declare no competing interests.

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