

APPLICATION OF ACTIVE DEBATE METHODS IN IMPROVING STUDENT LEARNING OUTCOMES

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Abstract. This research is backgrounded because of the lack of mathematics teachers in applying learning methods that are by the characteristics of students and the material to be taught so that it affects the quality of learning and learning outcomes in the classroom. This study aims to determine the application of active debate methods in improving student learning outcomes. The type of research used is class action research which consists of four stages, namely action planning, action implementation, observation, and reflection, with a total of 26 subjects. Data collection techniques are observation and tests. Observation is carried out to observe learning activities. The test is used to determine student learning outcomes after participating in learning activities with the application of the active method of debate. The results of data analysis on learning outcomes before the action was 11.53%, and after the action was carried out in the first cycle increased to 57.69% and again increased in cycle II, which was 96.15%. The average increase from procyclical to cycle I was 46.16%, and from the cycle I to cycle II was 49.99%. Meanwhile, the average score obtained by students in the pre-test was 50.09. After action in the cycle, I increased to 67.69 and again in cycle II to 76.92. The average value of the increase from pre-cycle to cycle I was 17.6, and from cycle I to cycle II increased by 9.23.

Keywords: Active Debate Methods, Learning Outcomes, Square and Rectangular, Action Research

Abstrak. Penelitian ini dilatar belakangi karena minimnya guru matematika dalam menerapkan metode pembelajaran yang sesuai dengan karakteristik siswa dan materi yang akan diajarkan sehingga berpengaruh pada kualitas pembelajaran dan hasil belajar di kelas. Penelitian ini bertujuan untuk mengetahui penerapan metode aktif debat dalam meningkatkan hasil belajar siswa. Jenis penelitian yang digunakan adalah penelitian tindakan kelas yang terdiri dari empat tahapan yaitu perencanaan tindakan, pelaksanaan tindakan, observasi dan refleksi dengan subjek berjumlah 26 orang. Teknik pengumpulan data yaitu observasi dan tes. Observasi dilakukan untuk mengamati kegiatan pembelajaran. Tes digunakan untuk mengetahui hasil belajar siswa setelah mengikuti kegiatan pembelajaran dengan penerapan metode aktif debat. Hasil analisis data pada hasil belajar, sebelum dilakukan tindakan adalah 11,53% dan setelah dilakukan tindakan pada siklus I meningkat menjadi 57,69% dan kembali meningkat pada siklus II yaitu sebesar 96,15%. Rata-rata peningkatan dari prasiklus ke siklus I yaitu sebesar 46,16% dan dari siklus I ke siklus II sebesar 49,99%. Sementara nilai rata-rata yang diperoleh siswa pada tes awal yakni sebesar 50,09, setelah dilakukan tindakan pada siklus I meningkat menjadi 67,69 dan kembali meningkat pada siklus II menjadi 76,92. Nilai rata-rata peningkatan dari pra siklus ke siklus I sebesar 17,6 dan dari siklus I ke siklus II meningkat sebesar 9,23.

Kata Kunci: Metode Debat Aktif, Hasil Belajar, Persegi dan Persegi Panjang, Penelitian Tindakan

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INTRODUCTION

In efforts to improve the quality of education in a formal educational institution, teachers play an essential role in their duties as administrators and motivators in teaching, planning, and delivering material properly and correctly to students, so that the achievement of the quality of institutional education can be realized and achieved optimally (Abidin, 2015). One of the problems facing our world of education is the problem of weak learning processes (Farib et al., 2019). In the learning process, children are less encouraged to develop thinking skills. The learning process in the classroom is directed to the child's ability to memorize information. The child's brain is forced to remember and hoard various information without being required to understand the information he remembers to relate it to daily life. As a result, when our protégés graduate from school, they are theoretically competent, but they are poor in applications (Munawaroh, 2018; Şahin & Doğantay, 2018).

Learning is a process by which a person's environment is deliberately managed to allow him to participate in certain behaviors under particular conditions or generate a response to specific situations (Sagala, 2003). Learning has two characteristics, namely. First, the learning process involves a thinking process. Secondly, the learning process builds a dialogical atmosphere and a continuous Q&A process directed at improving and improving students' thinking ability. In turn, thinking can help students acquire the knowledge they construct themselves (Rachmantika, 2019). In the content standards for primary and secondary education units of mathematics subjects, it has been stated that mathematics subjects need to be given to all students starting from elementary school to equip students with the ability to think logically, analytically, systematically, critically, and creatively, as well as the ability to cooperate. Developing the ability to think logically, analytically, systematically, critically, and cooperate has long been the focus and attention of mathematics educators in the classroom because it is related to mathematics's nature and scientific characteristics (Suardana et al., 2018). However, focus and attention on efforts to improve creative thinking skills in mathematics are rarely or never developed. That ability is vital so that students can have the ability to obtain, manage, and utilize information to survive in ever-changing, uncertain, and comprehensive circumstances (Kennedy-Clark, 2015).

So far, mathematics learning only focuses on the teacher, and students are only used as objects in their learning activities (Alkhateeb & Al-Duwairi, 2019; Hidayah et al., 2018). Students only learn when the teacher delivers the material in the classroom, and students sit and listen and take notes on what the teacher conveys and writes. So that in the end, the material that should be understood and applied by students in everyday life becomes a right

that is very difficult for students to do (Jatisunda, 2017). In addition, a crucial problem in schools in remote areas is the lack of guidebooks and teaching materials that can help students learn independently at and outside of school (Afthina et al., 2017). This greatly affects students' comprehension ability and learning outcomes, especially in mathematics subjects. While it has been cited, the purpose of national education, in this case, the learning process in the classroom must be able to be oriented and cheerful for the student so that the student can learn actively to improve his abilities in the learning process.

SMP Negeri 14 Halmahera Selatan is one of the schools located in the eastern Seram Regency. As a new expansion area, education is one of the crucial sectors that is an essential point of concern for the government. Based on the results of preliminary observations made by researchers, mathematics learning at the school tends to be dull and very uns motivating for students. The teacher in his learning conveys only the material he teaches without paying attention to the students' level of understanding. The learning that occurs is not very student-oriented, even though learning must be able to emphasize the activity of students and the teacher only acts as a facilitator. The active debate method is one of the learning methods that are good enough to be used in learning mathematics (Utama & Nugroho, 2018). Because by using this method in the learning process, all students will be directly involved because all of them get assignments and act out their roles in the classroom so that all students prepare themselves before learning (Wijaya, 2019). This study aims to improve student learning outcomes on square and rectangular material using the active debate method of class VII SMP Negeri 14 Halmahera Selatan.

METHOD

The type of research used in this study is class action research which is a form of research that is reflective by the perpetrator of the actions carried out to improve the rational ability of the actions carried out. Classroom Action Research includes four stages, namely the planning stage, action implementation, observation, and reflection. The subjects in this study were all grade VII students of SMP Negeri 14 Halmahera Selatan, eastern Seram Regency, totaling 26 people consisting of 18 women and 11 men. The instruments in this study consist of (1) tests carried out to determine student learning outcomes and (2) observation sheets carried out to determine learning conditions objectively at the research site. This study was declared successful if student learning outcomes had reached the Minimum Completion Criteria, namely 65 individually and classically, the completion reached 75% of the total number of students who were the subjects in this study.

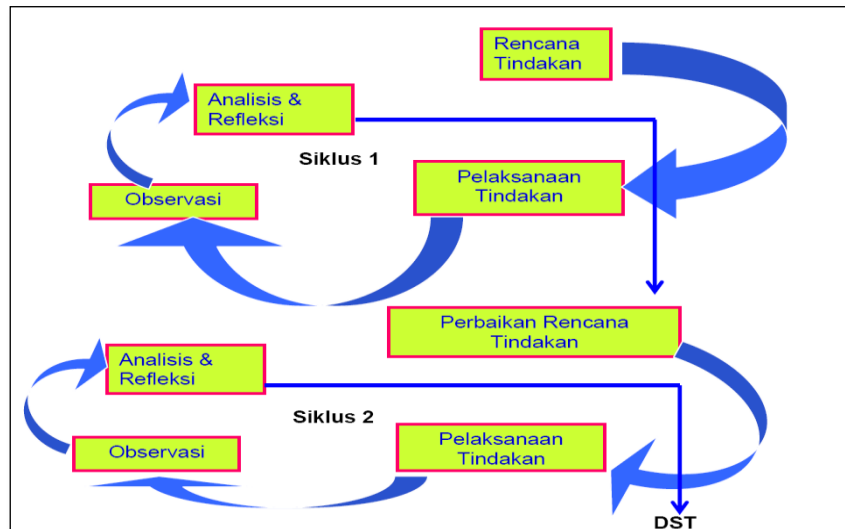


Figure 1. Spiral Classroom Action Research (adaptation of Hopkins, 1993)

The data from this study were analyzed descriptively, explaining the facts, phenomena, and symptoms found in the field with collaboration partners (teachers and peers) and then interpreted based on existing theories. The analysis results on one of the cycles are used as material for preparing action planning in the next cycle. The cycle ends when the aspects of student learning outcomes are revealed to have met the minimum standard of classical teaching completion, which is 75%. To calculate the ideal maximum value that must be achieved, the formula used is as follows:

$$NP = \frac{R}{SM} \times 100$$

Information:

- NP = Searched or expected acquisition value
- R = Raw score obtained by the student
- SM = Ideal maximum score of the test
- 100 = Fixed number (Purwanto, 2012).

RESULTS

The research process carried out on grade VII students of SMP Negeri 14 Halmahera Selatan showed that researchers conducted a pre-test before taking action in the study. The pre-test results obtained the initial ability, or student learning outcomes are still low, and the scores obtained by most students do not reach > 65 or do not reach the minimum completion criteria.

Table 1. Student learning completion in the pre-test

Value Minimal Completeness	Mastery Level	Frequency	Average Value	Persentase
≥ 65	achieved	3		11,53
< 65	not achieved	23	50,09	88,47

Based on the table above, it can be seen that the level of completion of learning in the pre-test was only achieved by three students who were the subject of a panel of students from the total number of students, namely 26 people with a percentage of completion of 11.53% and the number of students who had not reached the completion of learning, namely 23 people with a percentage of 88.47% with the average score of the class obtained in the pre-test of 50.09 and categorized as failing (unsuccessful). This result shows that grade VII students of SMP Negeri 14 Halmahera Selatan did not understand the square and rectangular material before learning the active debate method.

Implementation of Learning in Cycle I

Action Planning in Cycle I

The researcher's first step in carrying out learning using the active debate method, the researcher carries out action planning, namely (a) preparing research instruments that will be used in the learning process using active debate methods, namely the Syllabus, RPP, and observation guidelines, (b) consulting instruments with mathematics teachers at SMP Negeri 14 Halmahera Selatan, (c) preparing test questions that will be used to measure student learning outcomes, (d) request the subject teacher to be an observer in order to be aware of the activities and learning process that takes place using the active debate method, and (e) research as scheduled.

Implementation of Actions in Cycle I

The implementation of actions in the first cycle begins with an explanation to students about the learning that will be carried out by the method of active debate. After explaining the learning process, researchers divide students into groups and immediately carry out learning by applying active debate methods. After the learning is completed, the researcher tests all students. The test results obtained at the time of the test after the data have been analyzed are as follows.

Table 2. Student learning completion on the first cycle test

Value Minimal Completeness	Mastery Level	Frequency	Average Value	Persentase
≥ 65	achieved	15		57,69
< 65	not achieved	11	67,69	42,31

Source: Cycle I test results

Based on the results of table 4.2 above, it can be seen that the number of students who achieved a > score of 65 was 15 students (57.69%) while the < score of 65 was 11 students (42.31%); thus, the percentage of students who had achieved minimum completion was 57.69%, and the percentage of students who had not achieved minimum completion was 42.31% with an average score of 67.69. Based on the results obtained above, it can be seen the difference between the results of the cycle I test and the pre-test, namely, the results of the first cycle test have increased compared to the pre-test in terms of the number of students who completed individual learning, namely three students or 11.53%, and the average student learning outcome score from 50.09 increased to 57.69% which showed an increase of 46.16%. However, the number of completed students, in general, has not reached the classical minimum Completion Criteria of 75%, so it still needs to be continued to the next cycle.

Results of Observations on the Implementation of Cycle I

The observation process is carried out by observers who have been determined in the planning stage. The observation process is focused on the activities of researchers and students according to the observation sheets that have been compiled. Researchers' observations focus on mastering the material, using learning methods for classroom management, and using time in the learning process. While observations on students are focused on aspects of student learning interests, student attention, student activity, student interaction with teachers, the interaction between students and students, and the process of asking students in debates.

The conclusions of the observation process carried out by the observer on the teacher are (1) the learning tools prepared by the researcher are very good, (2) the researcher masters the material well in the learning process, (3) the use of active debate methods is not very effective in the learning process, (4) The researcher does not reinforce students in the learning process, (5) the use of time is not effective by the Learning Implementation Plan that has been prepared, (6) Researchers lack opportunities for students to submit or ask questions, (7) class management carried out by researchers is not optimal, because there are still many students who seize or tell stories with their friends during the learning process, (8)

researchers do not use learning media that can help students, (9) the debate process that takes place is not optimal, and (10) researchers do not provide motivation to students.

The conclusions of the observation results in students are (1) students do not prepare themselves to take part in learning activities, (2) most students do not know the material to be studied, and (3) learning that takes place with the active debate method has not taken place optimally, (4) students have not interacted too much when studying in groups, (5) students still do not dare to express their opinions during the debate process, (6) students have not been able to present the results of their group work properly, (7) the presentation process carried out is not optimal, because the debate process that takes place is not optimal, (8) the material provided by the researcher is not completed correctly by the students, (9) students still do not dare to ask questions if there are things that are not understood, and (10) the group that carries out the debate, has not been able to defend his argument well.

Reflections on the Implementation of Cycle I

The reflection process is carried out through small discussions between researchers and subject teachers who act as observers. The reflection evaluates student learning outcomes and the results of observations made by observers in implementing cycle I. The results of the evaluation are (1) teachers must further optimize classroom management, especially making students more conducive to the learning process, (2) teachers must streamline the use of time in learning in accordance with the learning implementation plan that has been prepared, (3) provide reinforcement to students about the importance of the learning process, (4) teachers must be more active in students so that interaction between students and students occurs, especially in the debate process, (5) the teacher informs the students in asking questions, formulating questions, and finding answers to their questions should be discussed, so that students cooperate with each other and give input to each other, (6) the teacher emphasizes back to the students that every answer to the questions given should be understood so that when asked for sharing they are no longer confused and the percentage does not stop halfway, and (7) the teacher reminds the students, when the theme finds the answer to the question they should pay attention because there is a possibility that the question will come out during the test.

Implementation of Learning in Cycle II

Action Planning in Cycle II

The action planning process in cycle II relies on the reflection results of the cycle I. At this stage, the researcher corrects the deficiencies contained in cycle I. As for what is planned, namely (1) carrying out learning by the learning steps contained in the learning implementation plan, (2) the teacher reinforcing students to be more motivated in the learning process, (3) the teacher preparing an observation sheet in cycle II, and (4) prepares a test instrument that will be used in cycle II.

Implementation of Actions in Cycle II

The implementation of actions in cycle II begins with the teacher explaining the reflection results in cycle I. This is done with the aim that students can understand and know the results obtained in learning in cycle II so that the learning process in cycle II can run optimally. After that, researchers learn using active debate methods on square and rectangular materials. After the learning process is completed, the final test process is carried out in cycle II to know the learning results obtained. The test results obtained in cycle II are seen in table 3 below.

Table 3. Completion of student learning on the second cycle test

Value Minimal Completeness	Mastery Level	Frequency	Average Value	Persentase
≥ 65	achieved	25		96,15
< 65	not achieved	1	76,92	3,85

Source: Cycle II test result data

Based on the results of table 4.3 above, it can be seen that the number of students who obtained a score of > 65 was 25 students (96.15 %), and the number of students who obtained a score of < 65 was one student (3.85 %). Thus the percentage of students who have reached the minimum completion criteria individually is 96.15%, and students who have not reached the minimum completion criteria are one student or 3.85%. The average score of the class of student learning outcomes in the first cycle was from 67.69 to 76.92, which showed an increase in learning outcomes of 9.23. Based on the above results, it can be seen that there is an increase in the completion of student learning classically from cycle I to cycle II, which is 49.99%, and an increase in the average score of learning outcomes of 9.23. Thus, class action research through active debate methods is declared complete and has increased. In general, student learning outcomes on square and rectangular materials by applying the active debate method can be seen in the following figure.

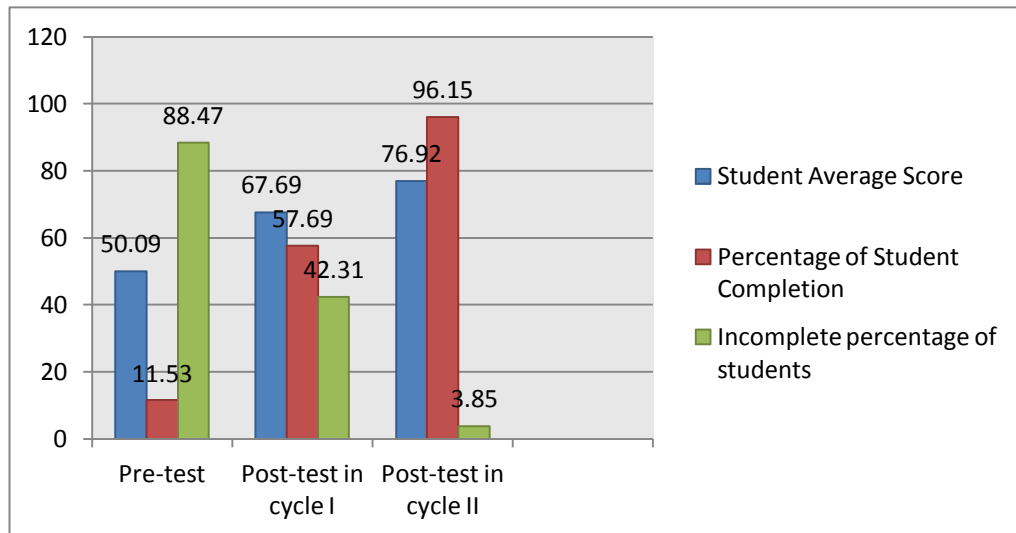


Figure 2. Graph of student learning outcomes

Figure 2 generally shows that the average score of students in learning using the active debate method has increased, namely the average student learning outcomes in the pre-test, namely 47.14, and increased in the final test of the cycle I to 69.28 and in cycle II, which is 86.07. The same thing happened in the completion of student learning outcomes increased. Namely, in the pre-test, the percentage of student completion was 11.53% and increased in the final test of cycle I to 57.69% and cycle II to 96.15%. Meanwhile, students who did not complete it decreased, namely in the pre-test, the percentage of students who were not complete it was 88.47% and decreased in the final test of a cycle I to 42.31% and decreased again in the final test of cycle II, which was 3.85%.

Observation Results in Cycle II

The conclusions of the observation process in the teacher are (1) the learning tools prepared by the researcher are very good, (2) the researcher masters the material very well in the learning process, (3) the use of active debate methods is not effective in the learning process, (4) the researcher provides reinforcement to students in the learning process, (5) the use of effective time in accordance with the Learning Implementation Plan that has been prepared, (6) the researcher gives the student the opportunity to submit or ask questions, (7) The management of the class carried out by the researcher is very optimal, all students are very serious and the intention of following the learning process, (8) the researcher has used learning media that can help students to understand square and rectangular material, (9) the debate process that takes place is very optimal because all students are involved in the debate

process, and (10) the motivation given by the researcher is very helpful for students to learn square and rectangular material.

The results of observations in students concluded that (1) students prepare themselves to take part in learning activities, (2) most students already know the material to be studied, and (3) the learning process that takes place with the active debate method takes place very well, (4) students feel guided when carrying out debates in the learning process, (5) the interaction of students in their groups is very optimal, (6) the presentation process is carried out optimally, (7) students have been able to present the results of their work well during the debate process, (8) students dare to ask questions if there are things that are not yet understood, (9) students' understanding of the material studied is still in the good category, and (10) the group that carries out the debate can maintain their arguments well.

Reflection Results in Cycle II

After finishing the final test of cycle II and finishing checking the test results, the student then reflects. The results of cycle II are (1) researchers have paid attention and guided students to focus more on the teacher's explanation so that the scores obtained are satisfactory and during the learning process in class have become calm compared to the previous cycle, and (2) the final test results show a > score of 65 as many as 25 students (96.15 %) while the < score of 65 as many as one student (3.85 %) thus the percentage of students who have passed the minimum completion criteria is 75% so that in the cycle completeness has been achieved. By the results obtained, it is fixed that learning is not continued in the next cycle.

DISCUSSION

In the learning process, by applying the active debate method, students look active and very motivated to follow learning activities (Nurdin, 2016). Students seem so enthusiastic to participate in learning activities and feel responsible because in their learning, each student is directly involved in learning, and each student is given the responsibility to complete their respective tasks (Marsono, 2019). Based on the results of tests carried out at the time of learning by applying the active debate method, students' test results were quite good and slightly improved. This can be seen in the first cycle test results in the student test results. If in the pre-test process only three students achieved a minimum completion, there was an increase in the results of the first cycle test, namely 15 students who had achieved minimum completion with a percentage of completion of 57.69%, which had been set by the school and 11 people who had not reached the minimum completion with a percentage of 42.31%, while

the average grade point obtained in the results of the first cycle test was 67.69. Because in the first cycle, students who graduated and the minimum completion classically has not reached 75% of the total number of subjects, research is carried out in cycle II by correcting deficiencies in cycle I.

The shortcomings in the first cycle, after reflection with the subject teacher, are that students are not very familiar with the learning methods used by researchers during the learning process. Because so far, students have not been familiar with the learning methods researchers have applied. On this basis, researchers make improvements during the learning process. After knowing the various shortcomings contained in learning activities using the active debate method in cycle I, researchers began to correct these various shortcomings. The learning improvement process is more focused on the learning process because, based on the observer's recognition, the process of implementing the active debate method in the first cycle has not been effective and optimal, so researchers need to improve and provide sufficient understanding to students before carrying out the learning process (Utama & Nugroho, 2018; Yetim Karaca & Özkaya, 2017).

Based on the results obtained in the implementation of cycle II, it is known that the learning outcomes achieved by students in a classless manner have not met the completion criteria, namely 75% of completed students. Because in the implementation of the first cycle, the number of completed students only reached 57.69%. Therefore, the learning process using active debate continued in the process of implementing cycle II, so it is expected to obtain more learning outcomes by correcting various shortcomings contained in the implementation of cycle I from the results of the reflection. After carrying out learning and conducting tests, it was obtained that the results obtained with the learning process in cycle II occurred a significant increase when compared to the previous learning process. In the second learning cycle, all students seem to be very active and motivated in learning. This can be seen from the debate process carried out in their respective groups and the debate process. In the debate process, students are so enthusiastic about submitting questions and answering questions to the group that conducts the debate (Wijaya, 2019).

Judging from the learning outcomes obtained by grade VII students of SMP Negeri 14 Halmahera Selatan, there was a very significant increase. In the second cycle test process, students who have reached completion are at least 25 with a percentage of completion of 96.158%, while students who have not completed are one person with a percentage of 3.85%. This is because the student is a student who is lazy to enter school, so almost all the material learned at the time of learning is not well understood by them. However, in general, the

learning process by applying the active debate method obtains quite good learning outcomes because it can improve student learning outcomes.

CONCLUSION

Based on the results of data analysis, it can be concluded that the application of active debate methods on the square and rectangular materials can improve the learning outcomes of grade VII students of SMP Negeri 14 Halmahera Selatan. The percentage of student learning completion using the active debate method on square and rectangular meters in class VII of SMP Negeri 14 Halmahera Selatan before the action was taken. Many students had not reached the minimum completion criteria, namely 23 students. In the implementation of the first cycle test, there was an increase, namely, among students who did not complete the learning as many as 16 people and students who were completed as many as ten people, because the number of students who were not complete had not reached the criteria for student completion, the learning process using the active debate method continued in cycle II. In the results obtained in the implementation of cycle II, the number of students who obtained learning completion increased, namely students who obtained learning completion reached 25 people and students who did not complete only one person. These results show that the learning process using the active debate method in studying square and rectangular material can improve student learning outcomes.

RECOMMENDATIONS

Based on the conclusions above, there are several has that can be recommended, namely (1) the school should be able to provide training to teachers, especially mathematics teachers, on various learning methods and strategies so that teachers in the learning process can apply it, (2) considering that learning by applying active debate methods can improve student learning outcomes, it is hoped that teachers will be able to apply similar learning methods, (3) teachers should provide reinforcement when providing material, so that students understand the material being taught, and (4) this research is only limited to square and square material so that it is expected that advanced researchers will be able to research other materials and subjects.

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