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# Scramble Learning Model Assisted by Puzzle Media to Increase Motivation and Learning Outcomes of IPA Class V Students UPT SDN 286 Pinrang

**Rosni[1*]; Ismail[2]; Putriyani S[3]**
UPT SDN 286 Pinrang[1*], Universitas Muhammadiyah Enrekang[23]
*Corresponding Author. E-mail: rosnimrs7@gmail.com[1], smileummaspul@gmail.com[2], putriyani49@gmail.com[3]

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**Abstrak**

Penelitian ini bertujuan untuk meningkatkan motivasi dan hasil belajar siswa dalam mata pelajaran Ilmu Pengetahuan Alam (IPA) melalui penerapan model pembelajaran Scramble yang didukung oleh media puzzle. Penelitian dilaksanakan dalam dua siklus dengan masing-masing melibatkan tahapan perencanaan, pelaksanaan, observasi, dan refleksi. Pada Siklus I, rata-rata motivasi siswa tercatat pada tingkat moderat (3,25) dan rata-rata nilai tes siswa sebesar 72,83, menunjukkan adanya variasi dalam motivasi dan hasil belajar siswa. Berdasarkan hasil observasi, perbaikan diperlukan, sehingga pada Siklus II, peneliti memperkenalkan aktivitas diskusi kelompok yang lebih banyak serta memodifikasi puzzle agar lebih menantang. Hasil dari Siklus II menunjukkan peningkatan yang signifikan dengan rata-rata motivasi siswa naik menjadi 4,8 dan rata-rata nilai tes siswa meningkat menjadi 81,88. Peningkatan ini menunjukkan bahwa model pembelajaran Scramble berbantuan media puzzle efektif dalam meningkatkan motivasi dan hasil belajar siswa. Media puzzle yang dirancang dengan baik, serta aktivitas diskusi kelompok, berkontribusi pada peningkatan keterlibatan dan pemahaman siswa terhadap materi pelajaran. Penelitian ini menyimpulkan bahwa penerapan strategi yang melibatkan variasi media pembelajaran dan kolaborasi kelompok dapat memperbaiki motivasi dan hasil belajar siswa secara signifikan. Temuan ini memberikan dasar yang kuat untuk pengembangan lebih lanjut dalam praktik pembelajaran dan menekankan pentingnya evaluasi serta penyesuaian metode pembelajaran untuk mencapai hasil yang optimal.

**Kata Kunci:** Model Pembelajaran Scramble Motivasi Belajar, Hasil Belajar

**Abstrack**

This study aims to improve students' motivation and learning outcomes in Natural Science (IPA) subjects through the application of the Scramble learning model supported by puzzle media. The research was conducted in two cycles, each involving the stages of planning, implementation, observation, and reflection. In Cycle I, the average student motivation was recorded at a moderate level (3.25) and the average student test score was 72.83, indicating variations in student motivation and learning outcomes. Based on the observations, improvements were needed, so in Cycle II, the researcher introduced more group discussion activities and modified the puzzle to make it more challenging. The results from Cycle II showed significant improvement with the average student motivation rising to 4.8 and the average student test score increasing to 81.88. This increase shows that the Scramble learning model assisted by puzzle media is effective in increasing student motivation and learning outcomes. The well-designed puzzle media, as well as group discussion activities, contributed to increased student engagement and understanding of the subject matter. This study concludes that the implementation of strategies involving a variety of learning media and group collaboration can significantly improve students' motivation and learning outcomes. The findings provide a strong basis for further development in learning practices and emphasize the importance of evaluation and adjustment of learning methods to achieve optimal results.

**Keywords***:* Scramble Model Learning, Motivation, Learning Outcomes.

## Introduction

Education has a very important role in shaping the quality of the nation's next generation, especially at the basic education level. One of the subjects that plays a strategic role in building the basis of student thinking is Natural Science (IPA). Science focuses not only on the transfer of theoretical knowledge, but also on the development of critical, analytical, and creative thinking skills. Through this subject, students are invited to understand natural phenomena and develop a high curiosity about the world around them.

However, the challenges faced in learning science in elementary schools are not small. One of the main problems that often arise is the low motivation of students to learn. Students tend to consider science as a difficult and boring subject, so their interest in learning this material decreases.

This is due to various factors, including uninteresting teaching methods and a lack of approaches that actively involve students in the learning process. As a result of this low motivation, students' learning outcomes become less than optimal. When students do not have sufficient interest in learning, their understanding of the subject matter becomes shallow, resulting in low academic achievement.

Therefore, there needs to be innovative efforts in creating a more interactive and fun learning atmosphere so that students can be more motivated and actively involved in learning science. Strategies such as the use of interesting learning media and teaching methods that involve direct student participation can be a solution in overcoming this challenge. This problem is also experienced by grade V students of UPT SDN 286 Pinrang. Based on the results of initial observations made by researchers, many students seemed less enthusiastic in participating in science learning.

This is reflected in the low student activeness, where they tend to be passive during the learning process. In addition, the value of student learning outcomes in science subjects has also not reached the expected standard. This condition encourages researchers to find innovative solutions that can increase student motivation and learning outcomes in these subjects. One approach that is considered effective in overcoming these problems is the application of the Scramble learning model assisted by puzzle media.

Scramble learning model is a learning method that emphasizes on arranging random words or sentences into meaningful information. Through this process, students are trained to think quickly and precisely, so as to improve their critical and analytical thinking skills. When this model is combined with puzzle media, it is expected that students will be more interested and motivated to learn because of the element of fun games.

This research is based on the theory of constructivism which states that students will better understand new concepts if they are actively involved in the learning process. By involving students in interactive and fun learning, such as Scramble model with puzzle media, it is expected to increase their learning motivation. In addition, challenging yet fun learning is also believed to improve students' learning outcomes, as they will be more involved in the learning process. The problem formulations raised in this study are: (1) Can the application of Scramble learning model assisted by puzzle media increase the learning motivation of grade V students of UPT SDN 286 Pinrang? (2) Can the application of Scramble learning model assisted by puzzle media increase the science learning outcomes of grade V students of UPT SDN 286 Pinrang? These two questions are the main focus of research that aims to test the effectiveness of the Scramble learning model assisted by puzzle media in increasing student motivation and learning outcomes.

The purpose of this study was to determine the extent to which the application of the Scramble learning model assisted by puzzle media can increase student motivation and learning outcomes in science subjects. In addition, this study also aims to provide

practical recommendations for teachers in developing more innovative and effective learning strategies. Thus, this research is expected to contribute to the development of education science, especially in the application of learning methods that are more interactive and interesting for students. The scope of this research is limited to grade V students of UPT SDN 286 Pinrang in the even semester of the 2023/2024 school year. The materials to be taught in this study include basic science concepts, such as energy, changes in the form of objects, and the water cycle.

This research uses a Classroom Action Research (PTK) approach consisting of two cycles, where each cycle consists of planning, implementation, observation, and reflection. Operationally, this research will use several instruments to measure students' motivation and learning outcomes. Learning motivation will be measured through a questionnaire developed based on learning motivation indicators according to McClelland's theory, while student learning outcomes will be measured through an evaluation test that includes multiple choice questions and descriptions relevant to science materials. In addition, researchers will also make observations of student activeness during the learning process. The hypothesis proposed in this study is that the application of the Scramble learning model assisted by puzzle media can increase the motivation and learning outcomes of grade V UPT SDN 286 Pinrang students. This hypothesis is based on the assumption that learning that is interesting and actively involves students will increase their interest in learning, which in turn will have a positive impact on their learning outcomes.

Thus, this research is expected to provide a clear picture of the effectiveness of the Scramble learning model assisted by puzzle media in increasing student motivation and learning outcomes. The results of this study are expected to make a real contribution to the development of learning strategies in elementary schools, especially in improving the quality of science learning.

**Method**

This study used a Classroom Action Research (CAR) approach conducted in two cycles. PTK was chosen because this method allows researchers to intervene directly in the classroom and see the impact on student motivation and learning outcomes. Each cycle in PTK consists of four main stages: planning, action implementation, observation, and reflection.

This study aims to determine whether the application of the Scramble learning model assisted by puzzle media can increase the motivation and learning outcomes of science class V UPT SDN 286 Pinrang students. 1. Location and Subjects This research was conducted at UPT SDN 286 Pinrang, which is located in Pinrang Regency, South Sulawesi. The research subjects were fifth grade students consisting of 30 students.

This research was conducted during the even semester of the 2023/2024 academic year on the topic of learning Natural Sciences (IPA), especially on the material of energy and changes in the form of objects. 2. Stages of Research This research was conducted in three stages: pre-research stage, cycle I, and cycle II.

a. Pre-Research At this stage, researchers made initial observations to identify problems in the classroom, especially related to students' motivation and science learning outcomes. Initial data was taken through class observations and the results of previous science test scores. Initial observations showed that most students had not shown high learning motivation, and their learning outcomes were still below the set Minimum Completion Criteria (KKM).

b. Cycle I Cycle I consisted of four stages: 1. Planning: At this stage, the researcher prepared a lesson plan (RPP) that contained the application of the Scramble learning model assisted by puzzle media. Puzzle media prepared in the form of pieces of pictures and sentences related to science material. Research instruments such as motivation observation sheets, questionnaires, and test questions were also prepared. 2. Implementation of Action:

Scramble learning model assisted by puzzle media was applied in class V. Students are given several puzzle pieces that must be arranged according to the science concepts taught. After that, students must explain the concept again based on the results of the puzzle arrangement. This activity is expected to increase students' active involvement in learning. 3. Observation: During the learning process, the researcher and a collaborator observed students' activeness, their response to the puzzle media, and learning motivation. In addition, an initial measurement of learning outcomes through formative tests at the end of the cycle was conducted. 4. Reflection: After the actions in cycle I were completed, a reflection was conducted to evaluate the results achieved. Data from observations and test results were analyzed to see if there was an increase in motivation and learning outcomes. If the results are not sufficient, then improvements will be made in cycle II.

c. Cycle II Cycle II is an improvement from cycle I, with the same stages: 1. Planning: Based on the results of the reflection in cycle I, the researcher revised the lesson plan and the puzzle media used. In cycle II, additional challenges were given so that students could work more collaboratively in solving puzzles and connecting them to more complex science concepts. 2. Action Implementation: Researchers again applied the Scramble learning model assisted by puzzle media with some improvements, such as providing more opportunities for students to interact and discuss during puzzle preparation. 3. Observation: Observations were made again to see the changes that occurred in students' motivation and learning outcomes. The same instrument was used to ensure data consistency. 4. Reflection: At the end of cycle II, researchers again reflected on the results of the action by comparing data from cycles I and II.

If students' motivation and learning outcomes show a significant increase, then this research is considered successful. Observed Variables The observed variables in this study are: Learning motivation: Observed through observation sheets and questionnaires filled out by students after each cycle. Motivation indicators include student interest, active involvement in learning, and enthusiasm in completing tasks.

Science learning outcomes: Measured through formative tests at the end of each cycle, covering science material in accordance with the topics taught. The test scores will be compared with the predetermined KKM.

Model Used The learning model used is the Scramble model, in which students must arrange scrambled words or sentences into a meaningful concept. In this study, the Scramble model is complemented with puzzle media to make the learning process more interesting and interactive. Puzzle media is used to combine visual aspects and games, so that students can learn in a more fun and challenging way.

Research Design This study used a Classroom Action Research (PTK) design consisting of two cycles. Each cycle follows the stages of planning, action implementation, observation, and reflection. Cycle I aimed to test the initial application of the Scramble learning model assisted by puzzle media, while cycle II was carried out to improve the shortcomings that existed in cycle I and optimize the results of the study.

Research Instruments The instruments used in this study include: Observation Sheet: Used to observe students' involvement during the learning process. This observation includes aspects of student activeness, cooperation in groups, and student response to learning media.

Motivation Questionnaire: This questionnaire was used to measure students' learning motivation before and after the action. The questionnaire is arranged based on a Likert scale with several motivation indicators such as interest in learning, pleasure, and desire to actively participate.

Learning Outcome Tests: Formative tests were used to measure student learning outcomes at the end of each cycle. The questions in the test cover the science concepts taught during the lesson. Data Collection

Techniques Data was collected through several techniques, namely:

Observation: Conducted during the learning process using the observation sheet. Questionnaire: Used to measure students' learning motivation before and after the action. Test: Used to measure students' learning outcomes after the action in each cycle.

Data Analysis Techniques Data obtained from observations, questionnaires, and tests will be analyzed descriptively and quantitatively. Descriptive analysis is used to describe the learning process and student motivation, while quantitative analysis is done by calculating the percentage increase in student motivation and learning outcomes between cycle I and cycle II. The results of this analysis will be used to determine the success of the actions taken.

**Result and Discussion**

This research was conducted in two cycles with the aim of increasing motivation and learning outcomes of science through the application of Scramble learning model assisted by puzzle media. The following are the results and discussion of each research cycle.

**Cycle I Results**

In cycle I, several stages were carried out, namely planning, implementation, observation, and reflection.

1. Planning In the planning stage, researchers prepared lesson plans that used the Scramble model assisted by puzzle media. The media chosen were pictures and sentences related to the concept of energy and changes in the form of objects in science. In addition, researchers also compiled research instruments in the form of observation sheets to assess student motivation and activeness, motivation questionnaires, and formative test questions.

2. Implementation of Action The action is carried out in the classroom by applying the Scramble learning model using puzzle media. Students are given puzzle pieces that they must arrange according to the concepts taught. After arranging the puzzle, students are asked to explain the concepts they learned.

3. Observation Observations were made of student activeness and motivation. Based on observations, most students looked enthusiastic when using puzzle media, although there were still some students who had difficulty working independently. Measurement of learning outcomes was done through formative tests.

4. Reflection at the end of cycle I showed that the Scramble model assisted by puzzle media began to increase student motivation. However, students' learning outcomes were not optimal, as 60% of students had not reached the KKM. Based on the results of the reflection, the researcher planned improvements for cycle II, namely providing more time for group discussions and modifying the puzzle to make it more challenging.

**Table 1. observation results of student motivation and learning outcomes in cycle 1.**

| Student Name | MOTIVAtion (Scale 1-5) | Cycle I Test Score |
|---|---|---|
| Ahmad Dahlan | 4 | 70 |
| Ahmad Fauzi | 3 | 65 |
| Amiruddin | 4 | 72 |
| Andi Basri | 2 | 60 |
| Andi Mulyadi | 3 | 68 |
| Anisa Rahma | 4 | 75 |
| Arif Hidayat | 5 | 80 |
| Aslam Mahmud | 3 | 66 |
| Baharuddin | 4 | 70 |
| Bahrul Ulum | 2 | 63 |
| Faisal | 3 | 67 |
| Farhan Zainuddin | 5 | 82 |
| Hasanuddin | 3 | 65 |
| Hidayat | 4 | 71 |
| Hidayah sari | 2 | 60 |
| Ibrahim | 4 | 75 |
| Ikshan | 3 | 65 |
| Jamal Akbar | 5 | 85 |
| Kasmawati | 3 | 66 |
| Lutfiah | 4 | 73 |
| Muhammad arif | 2 | 62 |

| | | |
|---|---|---|
| Muhammad Danil | 3 | 67 |
| Muhammad Idris | 4 | 75 |
| Nurdin | 5 | 83 |
| Putri Aisyah | 3 | 64 |
| Putri Salsabilah | 2 | 61 |
| Rahmatullah | 4 | 71 |
| Syalmawati | 3 | 68 |
| Silasia | 5 | 84 |
| Taufikkurahman | 4 | 72 |

**Average Motivation: 3,25**
**Average Score: 72,83**

Based on the observations made in the first cycle, the average student motivation was recorded at 3.25. This indicates that in general, student motivation was on a moderate scale. Most students had varying levels of motivation, with some students showing higher motivation, while others were at a lower level. This diverse motivation may affect students' engagement and performance in the learning process.

On the other hand, the average student test score in the first cycle was 72.83. These results show that overall, students' academic performance was at a fairly good level, with an average score above 70. This indicates that although students' motivation varied, they were able to achieve positive results in the tests. The scores reflect relatively good understanding and mastery of the material by most students.

The difference between motivation and learning outcomes underscores the importance of motivational factors in academic achievement. Although test results show that students have performed well, variations in motivation may affect the consistency of learning outcomes. Increasing student motivation might contribute to better achievement, especially for students who show lower motivation.

For the next cycles, there needs to be a strategy to increase students' overall motivation. By designing interventions that can increase motivation, it is expected that student learning outcomes can be further improved. This will create a more supportive learning environment and facilitate optimal academic achievement in the future.

**Cycle II Results**

In Cycle II, improvements were made based on reflections from Cycle I with the aim of improving student motivation and learning outcomes. Some of the improvement steps implemented were as follows:

1.Planning and Structuring Activities At the planning stage, researchers added puzzle activities to encourage students to discuss more in groups. This activity was designed so that students could solve puzzles involving more complex science concepts. The Learning Plan (RPP) was also improved by adding a variety of learning media, so that students could be more interested and involved in the learning process.

2.Implementation During implementation, students are given more opportunities to use puzzle media in learning science concepts. This activity aims to increase student engagement in group discussion and collaboration. Small groups are formed to allow students to work together in solving the puzzles, so that they can better understand the material being taught.

3.Observation The observation results in Cycle II showed a significant increase in student motivation and engagement. It was seen that more students were enthusiastic and actively participated in group discussions. Measurement of learning outcomes was done through formative tests which showed progress compared to Cycle I.

4.Reflection Reflection at the end of Cycle II showed a significant increase in student motivation and learning outcomes compared to Cycle I. Most students managed to achieve scores above the Minimum Completion Criteria (KKM), and their learning motivation also increased. Thus, this study can be considered successful in achieving its objectives.

Table 2. observation results of student motivation and learning outcomes in cycle 2.

| Nama Siswa | MOTIVASI (Skala 1-5) | Nilai Tes Siklus I |
|---|---|---|
| Ahmad Dahlan | 5 | 80 |
| Ahmad Fauzi | 4 | 75 |
| Amiruddin | 5 | 82 |
| Andi Basri | 3 | 92 |
| Andi Mulyadi | 5 | 78 |
| Anisa Rahma | 4 | 85 |
| Arif Hidayat | 5 | 90 |
| Aslam Mahmud | 5 | 80 |
| Baharuddin | 4 | 80 |
| Bahrul Ulum | 5 | 83 |
| Faisal | 4 | 80 |
| Farhan Zainuddin | 4 | 88 |
| Hasanuddin | 5 | 76 |
| Hidayat | 4 | 80 |
| Hidayah sari | 5 | 72 |
| Ibrahim | 4 | 85 |
| Ikshan | 5 | 75 |
| Jamal Akbar | 4 | 90 |
| Kasmawati | 5 | 75 |
| Lutfiah | 4 | 82 |
| Muhammad arif | 5 | 88 |
| Muhammad Danil | 3 | 85 |
| Muhammad Idris | 3 | 85 |
| Nurdin | 5 | 94 |
| Putri Aisyah | 3 | 84 |
| Putri Salsabilah | 5 | 80 |
| Rahmatullah | 4 | 80 |
| Syalmawati | 5 | 78 |
| Silasia | 4 | |
| Taufikkurahman | 5 | |

**Average Motivation: 4,8**
**Average Score: 81,88**

In Cycle II, there was a significant increase in the average student motivation, which reached a score of 4.8. This increase indicates that the strategies implemented were successful in increasing student engagement. The addition of activities such as puzzles and variations in learning media seem to have made students more motivated and enthusiastic in following the lesson.

The average test score in Cycle II was 81.88, which showed that students' learning outcomes had progressed positively compared to Cycle I. This increase reflected that the improvements in the learning method had an impact on students' understanding of the material. This increase in scores reflects that the improvements in the learning method had an impact on students' understanding of the material. More students achieved high scores, reflecting the effectiveness of the intervention.

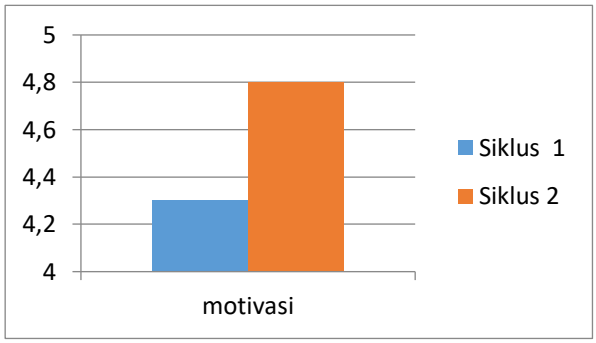
The implementation of puzzle activities in small groups has improved collaboration and interaction among students. This is reflected in increased motivation, with more students actively participating in group discussions. This activity allows students to work together and more deeply understand more complex science concepts.

Observations showed that students were increasingly enthusiastic in lessons, with many active in discussions and the use of varied learning media. This indicated that the change in learning strategy had helped to improve overall student engagement. While most students showed significant progress, there was one incomplete score, which needs further attention. However, in general, the data showed that the formative test results in Cycle II had improved significantly, supporting the conclusion that the intervention had been successful.

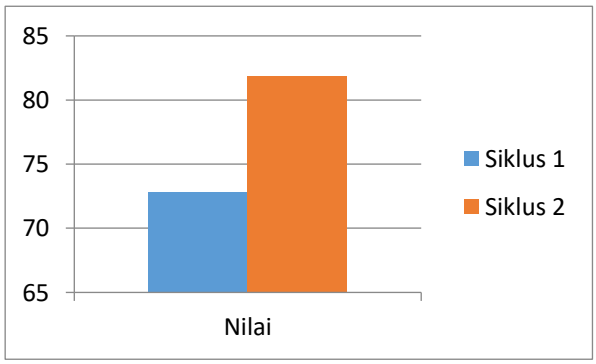
Reflection at the end of Cycle II showed that the improvements implemented were successful in achieving the goal of increasing student motivation and learning outcomes. With these satisfactory results, the research can be considered successful and provides a strong basis for further development in subsequent cycles. The comparison between cycle 1 and 2 can be seen in the table below:

**Table 3. Comparison of observation results of student motivation and learning outcomes in cycles 1 and 2**

| Category | Cycle 1 | Cycle 2 |
|---|---|---|
| **Motivation** | 3.25 | 4.8 |
| **Value** | 72.83 | 81.88 |




**Grafik 1. Hasil Motivasi**




**Grafik 2. Hasil Belajar Siswa.**

## Conclusion

In Cycle I, the average student motivation was at 3.25, indicating a moderate level of motivation. Although some students showed higher motivation, many students were at a lower level. This indicates variability in student engagement, which may have affected their learning outcomes. However, in Cycle II, the average motivation increased significantly to 4.8. This increase suggests that the improvements implemented, such as the addition of the puzzle activity and the variety of learning media, were effective in increasing student motivation. The addition of these elements seems to be successful in creating a more interesting learning environment and motivating students to participate more actively.

### Active Student Engagement

The increase in students' motivation in Cycle II is closely correlated with their increased engagement in learning. The puzzle activity implemented allowed students to collaborate in small groups, solve problems together and discuss more complex concepts. This engagement was reflected in the observations which showed that students were more enthusiastic and active in group discussions. With the opportunity to collaborate and interact, students are more motivated to actively participate in the learning process.

### Changes in Learning Outcomes

In Cycle I, the average student test score was 72.83, indicating that student learning outcomes were at a fairly good level. However, there were still around 60% of students who had not achieved the Minimum Completion Criteria (KKM), indicating a need for improvement in the learning process. In Cycle II, there was a significant increase in the average student test score to 81.88. This increase reflected that improvements in learning strategies, such as the addition of more challenging activities and increased media variety, had a positive impact on students' understanding and mastery of the material.

### Effectiveness of Puzzle Media

The use of puzzle media in Scramble learning model is proven to be effective in improving students' motivation and learning outcomes. Puzzles designed to reflect complex science concepts encourage students to think critically and work together in groups. This activity not only makes learning more interesting but also allows students to solve problems collaboratively. This experience helps students understand the material better and reinforces their understanding of the concepts taught.

**Variety of Learning Media**

Improvements made in Cycle II also included increasing the variety of learning media. In addition to puzzles, researchers added other learning media designed to increase student engagement. This variety of media helps students to see concepts from different perspectives and makes learning more dynamic. With different types of media, students are not only engaged visually but also intellectually, which contributes to their improved motivation and learning outcomes.

**Improved Student Collaboration**

The formation of small groups to solve the puzzle in Cycle II has improved collaboration among students. Working together in groups allows students to share knowledge and strategies, as well as help each other in understanding difficult material. This increased collaboration not only strengthens concept understanding but also improves students' social skills. By working in groups, students learn to respect the views of others and communicate more effectively.

**Difficulties Faced**

Although there was a lot of progress, some students still faced difficulties. For example, in Cycle I, some students had difficulty in working independently with the puzzle media. In Cycle II, the additional time for group discussion was expected to overcome this difficulty, but there were still some students who needed more attention. Researchers need to identify and address these difficulties more specifically to ensure that all students can gain maximum benefit from the applied learning method.

**Lesson Plan Improvement**

Reflections from Cycle I indicated that there needed to be improvements in the lesson plan. The addition of more challenging activities and allowing more time for group discussions proved beneficial in Cycle II. These changes helped to increase student engagement and improve their understanding of the material. The improvements made to the lesson plan have resulted in a significant increase in student learning outcomes, demonstrating the importance of customizing lesson plans according to student needs. Influence of Group Discussion, Group discussion was one of the important aspects of the improvements in Cycle II. By giving students more time to discuss in groups, they can share ideas and strategies to solve the puzzle. These discussions not only helped students in understanding the material but also strengthened their collaborative skills. This contributed to the increase in students' motivation and learning outcomes, as reflected in the Cycle II data.

**Quantitative Data Analysis**

Analysis of the quantitative data from Table 1 and Table 2 shows that there was a significant increase in average motivation and test scores between Cycle I and Cycle II. The increase in average motivation from 3.25 to 4.8 and the increase in average test scores from 72.83 to 81.88 indicate that the intervention had a positive impact. This data supports the conclusion that the improvements implemented in Cycle II were successful in improving both aspects.

**Motivation and Learning Graph**

The graph showing the results of student motivation and learning provides a clear visualization of the changes that occurred between Cycle I and Cycle II. The graphs show a marked difference in student motivation and learning outcomes, supporting the analysis that the improvements were effective. This visualization also helps in evaluating the effectiveness of the intervention and planning the next steps.

**Effectiveness of Scramble Model**

Scramble learning model assisted by puzzle media is proven effective in improving students' motivation and learning outcomes. By providing interesting challenges and motivating students to collaborate, this model creates a dynamic learning environment. Evaluation of the model showed that it increased student engagement and helped them to better understand more complex concepts.

Implications for Learning Practice The results of this study have important implications for classroom learning practices. The application of Scramble model with puzzle media and the addition of group discussion activities can be an effective strategy to improve students' motivation and learning outcomes. Teachers can use these findings to design more engaging and interactive learning, as well as to adapt their methods to students' needs.

Overall, this study shows that the application of Scramble learning model assisted by puzzle media can improve students' motivation and learning outcomes. With the improvements implemented in Cycle II, students' motivation and learning outcomes experienced a significant increase. This research provides evidence that well-designed interventions can bring positive changes in the learning process. The reflection of these cycles shows the importance of evaluation and adjustment in the learning process. By reflecting, the researcher can identify the strengths and weaknesses of the methods applied and plan for any necessary improvements. This process helps to ensure that learning strategies remain effective and relevant to students' needs.

The Role of Motivation in Learning Student motivation is a key factor in academic achievement. The research shows that high motivation is positively correlated with better learning outcomes. Therefore, it is important for educators to create a learning environment that motivates students and increases their engagement in the learning process.

The use of varied learning media, such as puzzles, can make learning more interesting and interactive. This media not only helps in delivering the material but also improves students' critical and collaborative thinking skills. This research underscores the importance of selecting and applying appropriate media to achieve learning objectives.

**Evaluation and Continuous Improvement**

Ongoing evaluation and improvement of research results is essential to achieve optimal results. By continuously evaluating and improving learning methods, educators can ensure that the learning process remains effective and meets students' needs. This research shows that an approach based on reflection and improvement can bring positive results.

**Conclusion**

This study shows that the application of the Scramble learning model assisted by puzzle media has a significant impact in increasing student motivation and learning outcomes in science subjects. In Cycle I, student motivation was recorded at an average of 3.25, indicating a moderate level of motivation. This reflected the variation in student engagement, with some students showing a fairly high level of motivation, while others were at a lower level. In addition, the average student test score in Cycle I was 72.83, indicating that learning outcomes were generally quite good but had not yet reached the expected optimal target. This indicates that although most students were able to achieve sufficient scores, there is a need to improve the consistency and understanding of the material among students.

To overcome the shortcomings found in Cycle I, various improvements were made in Cycle II. The study introduced significant improvements in learning activities by adding time for group discussions and modifying the puzzles to be more challenging. These changes aimed to increase students' engagement in the learning process and facilitate the understanding of more complex concepts. During Cycle II, there was a substantial increase in student motivation, which rose to an average of 4.8. This indicates that the strategies implemented successfully increased students' enthusiasm and engagement in learning activities.

The average student test score in Cycle II also experienced a significant increase, reaching 81.88. This increase indicates that the improvements made in learning methods have a positive impact on students' understanding of the material. This increase in learning outcomes reflects that more challenging activities and

variations in learning media succeeded in increasing the effectiveness of learning and helping students to better understand science concepts. Evaluation from Cycle II showed that students were more actively participating in group discussions and more engaged in the learning process, which contributed to the achievement of higher learning outcomes.

In addition, the use of puzzle media in the Scramble learning model is proven effective in improving students' motivation and learning outcomes. Puzzles designed to reflect complex science concepts motivate students to think critically and work together in groups. This activity not only makes learning more interesting but also strengthens students' understanding of the material. The puzzle media used in the learning process serves as an effective tool in encouraging collaboration and interaction between students.

Improvements in the variety of learning media also contribute positively to improving students' motivation and learning outcomes. By adding different types of media, students can see concepts from different perspectives and make learning more dynamic. This variety of media helps students engage visually and intellectually, which contributes to their increased motivation and understanding of the subject matter.

The formation of small groups to solve the puzzle in Cycle II also improved collaboration among students. Working together in groups allows students to share knowledge, strategies, and help each other in understanding difficult material. This increased collaboration not only strengthens concept understanding but also improves students' social skills, such as communication and cooperation. This reflects the positive impact of a learning approach that encourages interaction between students.

Despite the significant progress, the study also identified some difficulties faced by the students, especially in Cycle I. Some students had difficulty in working independently with the puzzle media. Although the additional time for group discussion in Cycle II is expected to overcome this difficulty, there are still some students who need more attention. Researchers need to continue to identify and address these difficulties to ensure that all students get the maximum benefit from the applied learning method.

Overall, this study proved that well-designed interventions, including the implementation of Scramble learning model with puzzle media and improvements in learning activities, can significantly improve students' motivation and learning outcomes. These results emphasize the importance of evaluation and adjustment of learning strategies to achieve optimal results. Ongoing evaluation and improvements based on reflection can help ensure that the learning process remains effective and relevant to students' needs, and supports better academic achievement.

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