



Application of Scramble-Type Cooperative Learning Model To Improve Learning Outcomes of Class VIII B State Junior High School 3 Lamongan

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Abstract

This study aims to improve the learning outcomes of students in class VIII-B SMP Negeri 3 Lamongan by applying the Scramble type Cooperative Learning Model. This type of research is Classroom Action Research. The material used is the respiratory system in humans in science lessons. The research subjects consisted of 1 class, namely class VIII-B as many as 28 students. This research was conducted with 2 cycles, each cycle will consist of 3 meetings. The success of improving student learning outcomes is measured through an increase in student scores from working on test questions. Student learning outcomes in the pre-cycle showed an average student score of 62.32, and after the action, the average student score was 66.78 in cycle I and 80.75 in cycle II. Based on the results of the study, it can be concluded that the application of the Scramble Learning Model can improve student learning outcomes.

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INTRODUCTION

Education aims to increase the quality of human resources. The educational process is inextricably linked to teaching and learning activities, as well as student-teacher interactions. Learning is the process of shifting one's behaviour from not knowing to understanding. An educator must be able to transfer knowledge, skills, and values when teaching. To create educational interaction during the learning process, the instructor must have five essential components: teaching objectives, learning materials, methods and procedures, facility equipment, and evaluation / assessment (Asril 2016). Accordingly, in order to create an engaging and dynamic learning experience, teachers must employ creative learning techniques. Choosing the correct learning model can help teachers create successful and high-quality learning experiences. If pupils receive high-quality instruction, their learning results will improve.

The learning model is a method or technique of presenting knowledge utilized by the teacher to attain learning objectives. A good learning model can actively engage students in the teaching and learning process (Sembiring, 2019). The more actively students participate in learning, the more meaningful their experiences and knowledge. Furthermore, as students' understanding improves, so will their learning outcomes.

Conventional learning approaches continue to fail to match the needs of students' understanding of science since learning is teacher-centered and students become bored (Hernalis, 2022). According to Harsono (2009), using incorrect teaching approaches will affect

student learning outcomes. As a result, it is required to adopt an innovative learning model, such as the Scramble Learning Model.

The scramble learning model is a card-based learning approach in which pairs of responses to questions are randomly organized (Suyatno, 2009). The scramble learning model engages pupils, improving their concentration and reasoning speed (Sembiring, 2019). Damayanti (2010) distinguishes three types of scramble learning models: (1) word scramble, a game of arranging scrambled letters to form meaningful words; (2) sentence scramble, a game of composing a sentence from randomly arranged words; and (3) discourse scramble, a game of composing logical discourse from random sentences. Previous studies have shown the efficacy of the scramble learning model in enhancing student engagement and academic performance. For instance, Rahayu (2015) demonstrated that students using the word scramble technique exhibited significant improvements in vocabulary retention and language skills. Similarly, a study by Kusuma (2017) found that sentence scramble activities boosted students' grammatical accuracy and sentence construction abilities.

With this scrambled learning paradigm, students can be instructed in their creativity in arranging words, sentences, or conversations in a random order to convey meaning. Another significant study by Pratama (2018) revealed that discourse scramble exercises improved students' ability to organize and articulate complex ideas, thereby fostering critical thinking and problem-solving skills. These findings underscore the versatility and effectiveness of scramble learning models in optimizing students' potential and academic achievement. By incorporating scramble activities, educators can create dynamic and interactive learning environments that promote active participation and enhance cognitive functions such as concentration and reasoning.

Based on observations at State Junior High School 3 Lamongan, several reasons for poor student learning outcomes, particularly in class VIII-B, have been identified. The observations revealed that students pay less attention to the teacher when explaining, and there are still many students who come in and out during the learning process. The continued use of the lecture technique causes students to become bored and tired. This lack of engagement means that students are not actively involved in learning; they merely listen to the teacher's explanations from their desks and take notes on crucial points. Supporting data shows that the average score of students in class VIII-B on recent exams is 55, well below the KKM (Minimum Competency Criteria) of 70. Furthermore, a survey conducted among the students indicated that 70% of them find the current teaching methods uninteresting and unmotivating. These non-ideal conditions underscore the necessity for implementing a more interactive and engaging learning model to enhance student participation and learning outcomes.

The ideal conditions expected to occur at State Junior High School 3 Lamongan with the implementation of the Scramble type learning model in class VIII-B include increased student engagement and active participation in the learning process. With the Scramble model, students would be more involved in arranging words, sentences, or discourse, thus promoting creativity and critical thinking. The anticipated outcome is that students will pay more attention to lessons, actively participate in class activities, and collaborate more effectively with their peers. This shift from passive to active learning is expected to improve their comprehension and retention of the material. The ultimate goal is to see a significant increase in the student's exam scores, with the average rising to meet or exceed the KKM of 70. Additionally, the new approach aims to foster a more stimulating and supportive learning environment, where students are motivated to learn and achieve better academic results.

The Scramble-type cooperative learning model has been widely studied for its potential to enhance student engagement and learning outcomes. Studies by Suyatno (2009) and Damayanti (2010) have shown that this model increases students' concentration, reasoning speed, and creativity by involving them in interactive activities like word, sentence, and

discourse scrambling. Further research by Rahayu (2015) and Kusuma (2017) demonstrated significant improvements in language skills and grammatical accuracy when the Scramble model was implemented. Despite these positive findings, there is limited research on the application of this model in Indonesian junior high schools, particularly in addressing the challenges posed by traditional lecture-based teaching methods.

While previous studies highlight the benefits of the Scramble model, a gap remains in understanding its impact on broader learning outcomes beyond language skills, such as overall academic performance and student motivation. Moreover, the specific context of class VIII-B at State Junior High School 3 Lamongan, where traditional teaching methods have led to disengagement and poor exam scores, has not been thoroughly investigated. This gap underscores the need for targeted research to explore how the Scramble-type cooperative learning model can address these specific challenges and improve learning outcomes in this particular educational setting.

The objective of this study is to explore the effectiveness of the Scramble-type cooperative learning model in improving the learning outcomes of class VIII-B students at State Junior High School 3 Lamongan. This research is novel as it specifically addresses the application of the Scramble model in an Indonesian junior high school context, focusing on a class that has shown disengagement and poor performance due to traditional lecture-based teaching methods. By implementing the Scramble model, the study aims to foster a more interactive and engaging learning environment, thereby enhancing students' academic performance and motivation.

The scope of the study includes the implementation of the Scramble-type cooperative learning model over two cycles in class VIII-B. It will measure the impact on student engagement, participation, and academic performance, comparing pre- and post-intervention exam scores to assess improvements. Additionally, student and teacher feedback will be collected to evaluate the perceived effectiveness and challenges of the Scramble model. This comprehensive approach will provide insights into the feasibility and benefits of adopting the Scramble model in similar educational contexts, contributing to the broader discourse on innovative teaching strategies in Indonesian schools.

METHODS

This is a sort of classroom action research. "Classroom action research is research conducted by teachers in the classroom or in the school where they teach with an emphasis on improving or improving learning processes and practices" (Arikunto, 2010, pp. 133-134). The Kurt Lewin model is the design or model of classroom action research employed in this study. It is based on the idea that action research consists of four primary components, each consisting of four steps: 1. planning, 2. implementation, 3. observation, and 4. reflection. The link between the four components demonstrates a cycle of recurrent behaviors. Each cycle concludes with a test; if the test results do not indicate classical completeness, the cycle is repeated until classical completeness is achieved.

This study included 28 students from class VIII-B at State Junior High School 3 Lamongan. The approach for this class action research was divided into two cycles: cycle I and cycle II. Each cycle consisted of three sessions with five components of action: planning, implementation, observation, testing, and reflection. The technique was used in the first and second sessions, with the third meeting serving as an evaluation of the previous two. The learning topic employed in this study is the human respiratory system, which is covered in the science subject for class VIII, even semester.

The data-gathering procedures included student activity observation sheets, peer observation, and test sheets to assess student learning outcomes. Furthermore, the data were evaluated to determine the proportion of student completion and the percentage of learning

implementation. This study is considered effective if 80% of students actively participate in learning and 70% achieve a score of ≥ 70 .

Student activity data is obtained based on instructor observations of students during learning using the following grading criteria:

$$\text{Percentage of Learning Implementation} = \frac{\text{Total Score Obtained}}{\text{maximum score}} \times 100\%$$

Where the observation data was qualified using the following criteria:

0% - 25%	Less
26% - 50%	Enough
51% - 75%	Good
76% - 100%	Very Good

Student completeness data is derived using the following calculations:
Student Completion Percentage

$$\text{Student Completion Percentage} = \frac{\Sigma(\text{completed student})}{\Sigma(\text{student})} \times 100\%$$

Using the following criteria:

0 – 20	Very Low
21 – 24	Low
41 – 60	Fair
61 – 80	High
81 – 100	Very High

(Alminiantik, 2018, hlm. 208)

RESULTS AND DISCUSSION

This study aimed to use the Scramble-type cooperative learning model to improve student learning outcomes. According to Suyatno (2009), the scramble learning model is a card-based learning model that finds pairs of responses to questions that are randomly organized. During the pre-cycle meeting, students from class VIII-B State Junior High School 3 Lamongan were given pre-test questions without any therapy to determine their beginning ability. The pupils were then treated as learners in cycles 1 and 2, using the Scramble-Type Cooperative Learning Model. Researchers will improve teaching and observe changes in student activity and learning outcomes in science topics over cycles 1 and 2.

The scramble learning approach can enhance student learning outcomes. Student learning results have continued to improve from pre-cycle to cycle one to cycle two. The table below shows student learning outcomes:

Table 3. Student Learning Completion Results.

Assessed Aspects	Research Results		
	Pre Cycle	Cycle 1	Cycle 2
Average student score	62,32	66,78	80,75
Number of students who are complete	14	19	25

Assessed Aspects	Research Results		
	Pre Cycle	Cycle 1	Cycle 2
Number of students who have not completed	14	9	3
Percentage of student completeness	50%	67,85%	89,28%
Presentation of students who have not completed	50%	32,14%	10,71%

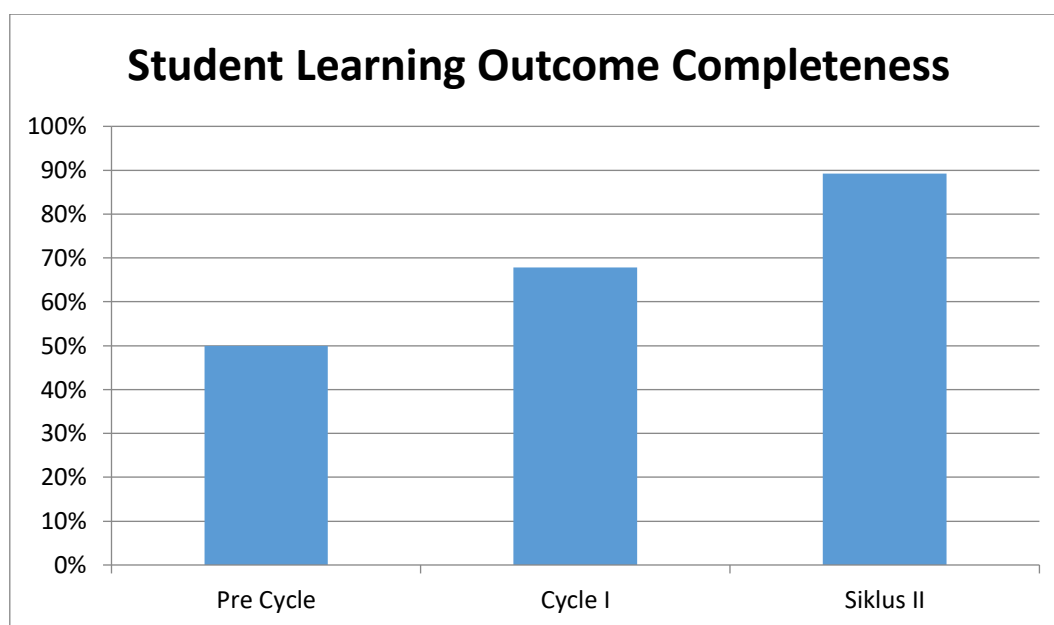


Diagram 1. Student Learning Completion

Based on the facts presented above, student learning results remain low. The number of students who completed the KKM was 14, so student completion accounted for just 50% of the total number of students, or 28 people. In addition, pupils' average score remains low, at 62.32. After completing the pre-cycle, the researchers moved on to cycles 1 and 2 to increase learning and student results.

Cycles 1 and 2 consisted of three meetings divided into two stages: planning and implementing the action. In cycle 1, the average learning outcomes of students in class VIII B using the Scramble-type cooperative learning model reached 66.78%, with a total of 19 students achieving 67.85% completion. This demonstrates that student learning completeness remains poor, hence the research must be pursued in cycle II to address the flaws of cycle 1.

In cycle 2, it can be noted that the average learning outcomes of students in class VIII B have improved to 80.75, with the number of students who completed as many as 25 students at an 89.28% rate. It can be determined that the learning process has gone extremely well, even though some students have yet to attain completeness, and there is no need to go to the next cycle.

The results of the cycle I data reveal that the learning process was not successful. This is due to the challenges that teachers and students face during the learning process, such as students paying less attention to the teacher's explanation of the material, students not understanding the purpose of the scramble learning model, students not participating in group work due to a lack of stimulus and motivation from the teacher, and limited space for students to move due to less conducive classroom conditions.

To improve the shortcomings in cycle I and to improve student learning outcomes, learning needs to be continued in cycle II by doing things like teachers motivating students to actively cooperate and be brave in expressing opinions, teachers supervising and controlling students in the process of teaching and learning activities, teachers must prepare a conducive space for students so that students are active and comfortable in learning, and teachers must increase study.

In cycle 1 of the study, the analysis of the three students who did not achieve learning completion reveals several key factors contributing to their incompleteness. Firstly, these students might have struggled with understanding the Scramble Learning Model itself. Since this model involves pairing responses to questions that are randomly organized, it requires a certain level of cognitive flexibility and adaptability. If students are not familiar with this type of learning or if they have not been adequately introduced to the method, they may find it challenging to engage fully. This initial unfamiliarity could lead to confusion and hinder their ability to keep pace with their peers, ultimately affecting their learning outcomes.

Secondly, the classroom environment and student engagement levels played a crucial role in the incompleteness observed in cycle 1. The data indicates that the learning process faced several challenges, including students paying less attention to the teacher's explanations and not understanding the purpose of the scramble learning model. This lack of attention and understanding can be attributed to insufficient motivation and stimulus from the teacher. In cooperative learning settings, the teacher's role is pivotal in fostering an engaging and supportive atmosphere. If the teacher's efforts to motivate and guide students were inadequate, it would directly impact students' participation and collaboration, resulting in suboptimal learning outcomes for some.

Finally, the physical constraints of the classroom environment likely contributed to the incompleteness of these students. Limited space and less conducive classroom conditions were noted as significant challenges during cycle 1. A cramped or poorly arranged classroom can restrict student movement and interaction, which are essential components of the Scramble Learning Model. Inadequate space can hinder group work, making it difficult for students to collaborate effectively and engage with the learning material. Furthermore, a non-conducive environment can also lead to distractions, reducing students' ability to concentrate and perform well in assessments. Addressing these environmental issues is crucial for improving student engagement and ensuring that all students have the opportunity to succeed.

After learning continued in cycle 2, student learning outcomes using the Scramble learning paradigm had increased significantly, with the percentage of completeness reaching 89.28%. This demonstrates that student engagement and learning outcomes are growing, and learning can be carried out effectively. As a result, the use of the Scramble-type cooperative learning model can improve students' activities and learning outcomes during the teaching and learning process.

The following shows the link between student activity and learning success in cycles 1 and 2:

Table 4. Student Activity

Cycle	Student Activity	
	Meeting 1	Meeting 2
Cycle 1	65,62%	68,75%
Cycle 2	75,65%	84,37%

Based on the facts shown above, each meeting increases student activity. This is based on the scramble learning paradigm, which can pique students' interest in learning, allowing them to participate actively in their learning, particularly in study groups. This is consistent

with Sembiring's (2019) statement that using the scramble learning paradigm might make pupils more active, hence increasing concentration and cognitive speed. The findings of the study align well with the hypothesis that the Scramble-type cooperative learning model can improve student learning outcomes. Initially, students' average scores were relatively low at 62.32 during the pre-cycle phase, with only 50% achieving completeness. This outcome was anticipated as no intervention had been applied. With the implementation of the Scramble-type learning model in cycles 1 and 2, there was a significant improvement in students' average scores and the percentage of students achieving completeness, which increased to 80.75 and 89.28% respectively in cycle 2. This progression underscores the model's effectiveness in enhancing student performance, confirming the hypothesis (Subandriyo, & Faishol, R., 2019).

However, the study also highlights areas where the hypothesis did not fully account for initial challenges. During cycle 1, the average score increased to 66.78, and completeness reached 67.85%, but this was deemed insufficient, indicating that merely implementing the Scramble model without addressing specific classroom dynamics and student engagement issues may not be enough. This deviation suggests that additional factors, such as teacher motivation and classroom environment, play crucial roles in the success of cooperative learning models, as noted by Wang, X., & Chen, Z. (2024) and Park, H., & Kim, Y. (2023).

The Scramble-type cooperative learning model has proven to be highly effective in improving learning outcomes among students in class VIII B State Junior High School 3 Lamongan. The data clearly show a substantial increase in average student scores from 62.32 in the pre-cycle to 80.75 by the end of cycle 2. This improvement underscores the model's capability to enhance academic performance, likely due to its interactive and engaging nature, which aligns with findings from similar studies by Nurhayati, et al. (2020) and Sulisty, et al. (2020).

Moreover, the model's effectiveness is further demonstrated by the increased number of students achieving completeness, rising from 14 students (50%) in the pre-cycle to 25 students (89.28%) in cycle 2. This indicates not only an overall enhancement in academic achievement but also a significant reduction in the number of students who were previously underperforming. Such outcomes suggest that the cooperative learning model fosters a more inclusive and supportive learning environment, promoting better understanding and retention of material among a diverse group of students (Rahman, F., & Hakim, L., 2021; Supriadi, D., & Santoso, S., 2020).

The implementation of the Scramble-type cooperative learning model led to notable improvements in student engagement and interaction. The data reveal a marked increase in student activity from 65.62% and 68.75% in cycle 1 meetings to 75.65% and 84.37% in cycle 2 meetings. This suggests that the model effectively fosters a more interactive and participatory classroom environment, which is consistent with the principles of active learning posited by Larasati, D., & Subagyo, A. (2022) and the collaborative learning theories of Vygotsky (1978).

These changes in student behavior and learning dynamics can be attributed to the interactive nature of the Scramble model, which encourages students to work together to solve problems and find answers. This collaborative approach not only enhances cognitive engagement but also promotes social interaction and communication skills, as students are required to articulate their thoughts and listen to their peers. Such dynamics align with findings by Hartati, S., & Widodo, W. (2023) and García, T., & Johnson, D. W. (2022), who emphasize the social and academic benefits of cooperative learning strategies.

From the teacher's perspective, the implementation of the Scramble-type cooperative learning model presented both challenges and rewards. Initially, teachers observed that students struggled with understanding the model's purpose and were less engaged, as seen in cycle 1. However, with adjustments and increased teacher involvement in motivating and guiding students, there was a notable improvement in cycle 2. This reflects the importance of teacher

facilitation in the success of cooperative learning, as highlighted by Dewi, R. S., & Utami, N. S. (2021) Chen, Y., & Zhang, W. (2020).

Teachers also noted that creating a conducive classroom environment was crucial for the model's effectiveness. By ensuring that the physical space allowed for movement and interaction, and by actively supervising and encouraging students, teachers were able to foster a more dynamic and engaging learning atmosphere. These observations align with the theories of classroom management and student engagement proposed by Derung, T. N. (2019) and Sudarmi (2017), who emphasize the role of the teacher in creating a supportive and productive learning environment.

The research faced several challenges and limitations that impacted the results. One of the primary difficulties was the initial lack of student engagement and understanding of the Scramble model during cycle 1. Many students did not fully grasp the purpose of the activities and were hesitant to participate, which led to lower-than-expected improvements in learning outcomes. This highlights a common issue in implementing new learning models, where initial resistance and confusion can impede effectiveness, as discussed by Asari, S., & Nur, H. (2021) and Ali, A., & Anwar, A. (2020).

Another significant challenge was the classroom environment. Limited space and less conducive conditions hindered student movement and interaction, affecting the overall success of the cooperative learning activities. This issue underscores the importance of physical classroom setup in facilitating active learning and engagement, as noted by Irawan, A., & Sukanto, A. (2020) and Johnson, D. W., & Johnson, R. T. (2020). Addressing these limitations required strategic adjustments by teachers, such as rearranging classroom furniture and providing clearer instructions, to optimize the learning environment for better outcomes.

CONCLUSION

The application of the Scramble learning model can improve student learning outcomes in class VIII science subjects at SMP Negeri 3 Lamongan, Lamongan Regency. The average obtained in cycle I was 66.78 with 19 students who completed it with a percentage of 67.85%, and 9 students who did not complete it with a percentage of 32.14%. In the second cycle, an average score of 80.75 was obtained with 25 students who completed it with a percentage of 89.28%, and 3 students who did not complete it with a percentage of 10.71%.

SUGGESTION

Subject teachers can apply the Scramble model during vulnerable hours, namely when children are starting to get bored with learning activities, to increase students' activeness in participating in learning and at the same time improve student learning outcomes, but they must always pay attention to the heterogeneity of students in group formation so that learning can be achieved. Do it to achieve maximum results.

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