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THE USE OF THE ROLE-PLAYING METHOD TO IMPROVE SCIENCE LEARNING OUTCOMES OF FIFTH-GRADE STUDENTS ON THE HUMAN DIGESTIVE SYSTEM AT SCHOOL

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ABSTRACT

This study aimed to improve students' science learning outcomes on the topic of the human digestive system through the implementation of the Role-Playing learning method in Grade V of SD Negeri 200108/12 Padangsidimpuan. The main problem addressed in this research was the low science learning outcomes of students, as many had not achieved the Minimum Completeness Criteria (KKM). This study employed a Classroom Action Research (CAR) design conducted in two cycles, with each cycle consisting of two learning meetings. The learning activities involved students actively performing roles related to the human digestive system through dramatization. Data were collected through learning outcome tests, observation sheets of teacher and student activities, and reflections conducted at the end of each cycle. The results showed a significant improvement in students' learning outcomes. The percentage of students who achieved mastery increased from 38.46% in the pre-cycle to 69.23% in Cycle I, and further increased to 84.61% in Cycle II. In addition, teacher and student activities also improved during the learning process. These findings indicate that the Role-Playing method is effective in improving science learning outcomes, particularly on the human digestive system material. Therefore, this method can be recommended as an alternative learning strategy to increase students' active participation and understanding in science learning.

Keywords: *Learning outcomes, Science learning, Classroom Action Research, Role Playing, Human Digestive System*

ABSTRAK

Penelitian ini bertujuan untuk meningkatkan hasil belajar Ilmu Pengetahuan Alam (IPA) siswa pada materi sistem pencernaan manusia melalui penerapan metode pembelajaran Role Playing pada siswa kelas V SD Negeri 200108/12 Padangsidimpuan. Permasalahan dalam penelitian ini adalah rendahnya hasil belajar IPA siswa, di mana sebagian besar siswa belum mencapai Kriteria Ketuntasan Minimal (KKM) yang telah ditetapkan. Penelitian ini menggunakan desain Penelitian Tindakan Kelas (PTK) yang dilaksanakan dalam dua siklus, dan setiap siklus terdiri atas dua kali pertemuan. Tindakan pembelajaran dilakukan dengan melibatkan siswa secara aktif untuk memerankan peran-peran tertentu yang berkaitan dengan materi sistem pencernaan manusia melalui kegiatan bermain peran. Teknik pengumpulan data meliputi tes hasil belajar, lembar observasi aktivitas guru dan siswa, serta refleksi pada akhir setiap siklus. Hasil penelitian menunjukkan adanya peningkatan hasil belajar siswa secara signifikan. Persentase ketuntasan belajar siswa meningkat dari 38,46% pada pra-siklus menjadi 69,23% pada Siklus I, dan meningkat kembali menjadi 84,61% pada Siklus II. Selain itu, aktivitas guru dan siswa selama proses pembelajaran juga mengalami peningkatan. Dengan demikian,

dapat disimpulkan bahwa penerapan metode Role Playing efektif dalam meningkatkan hasil belajar IPA siswa pada materi sistem pencernaan manusia.

Kata Kunci: *Hasil belajar, Pembelajaran IPA, Penelitian Tindakan Kelas, Role Playing, Sistem Pencernaan Manusia*

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INDTRODUCTION

Education is a fundamental effort to guide individuals in developing their potential so that they are able to live independently and responsibly in society. According to Law Number 20 of 2003 on the National Education System, education is a conscious and planned effort to create a learning atmosphere and learning process that enable students to actively develop their spiritual strength, self-control, personality, intelligence, noble character, and skills needed for themselves, society, the nation, and the state. In line with this, Piaget views education as a process of constructing knowledge, while John Dewey emphasizes education as a continuous and sustainable process in shaping better human beings.

Learning can be interpreted as a change in behavior that occurs as a result of interaction between students and their learning environment. Meanwhile, learning activities are defined as a two-way communication process between teachers and students that aims to achieve predetermined learning objectives. Therefore, learning should be designed to actively involve students so that they can acquire knowledge, skills, and positive behavioral changes.

According to Bloom, learning objectives are classified into three domains: cognitive, affective, and psychomotor. Effective learning should accommodate these three aspects by providing meaningful learning experiences. However, in practice, learning activities often focus only on achieving learning outcomes without paying sufficient attention to student engagement and understanding during the learning process.

Science learning in elementary schools plays an important role in developing students’ understanding of natural phenomena. However, science is often considered a difficult subject by students because it contains abstract concepts and complex processes. One of the science topics that requires concrete learning experiences is the human digestive system. This topic involves various organs and processes that are difficult for students to understand if delivered only through conventional teaching methods.

Based on preliminary observations conducted in Grade V of SD Negeri 200108/12 Padangsidimpuan on November 2, 2024, it was found that students’ science learning outcomes were still low. Many students had not achieved the Minimum Completeness Criteria (KKM) of 75. Several factors contributed to this condition, including the

use of teacher-centered learning methods, low student participation during lessons, difficulties in classroom management, and limited student concentration due to the school's location near a busy road.

To address these problems, teachers need to apply learning methods that actively engage students and make learning more meaningful. One alternative method that can be applied is the Role-Playing method. Role Playing is a learning method that involves students acting out certain roles related to the learning material. Through role playing, students can learn while actively participating, which helps them better understand abstract concepts through concrete experiences.

Previous studies have shown that the Role-Playing method can effectively improve students' learning outcomes in science subjects. By involving students directly in learning activities, this method encourages active participation, enhances motivation, and improves conceptual understanding. Therefore, this study aims to improve the science learning outcomes of fifth-grade students on the human digestive system material through the implementation of the Role-Playing learning method at SD Negeri 200108/12 Padangsidimpuan.

METHOD

This study employed Classroom Action Research (CAR) as the research design. Classroom Action Research is a systematic and reflective process conducted to identify and solve learning problems that occur in the classroom through planned actions. The purpose of this research was to improve the quality of the learning process and enhance students' learning outcomes through the implementation of appropriate instructional methods.

This research used a participatory Classroom Action Research approach, in which the researcher was directly involved in all stages of the research process, starting from planning, implementation, observation, data collection, data analysis, and reporting the research findings. The research was conducted in Grade V of SD Negeri 200108/12 Padangsidimpuan.

The Classroom Action Research model applied in this study was the Kurt Lewin model, which consists of four main stages arranged in a cyclical process: planning, action, observation, and reflection. The research was carried out in two cycles, and each cycle consisted of two learning meetings.

1. Planning

At this stage, the researcher designed learning activities using the Role-Playing method. The preparation included developing lesson plans, selecting learning materials, preparing learning media, designing student worksheets, and developing research instruments such as observation sheets and evaluation tests to measure students' learning outcomes.

2. Action

The action stage involved implementing the learning activities according to the lesson plans that had been prepared. The Role-Playing method was applied by assigning students specific roles related to the human digestive system and allowing them to perform these roles in the form of short dramatizations. During the learning process, the researcher was assisted by an observer who recorded the teaching and learning activities.

3. Observation

Observation was conducted to collect data on teacher and student activities during the learning process. Observation instruments included student activity observation sheets focusing on students' enthusiasm, attention, participation, and involvement in learning activities. In addition, data were also collected through student learning outcome tests, interviews, and documentation related to the

learning process.

4. Reflection

Reflection was carried out at the end of each cycle to evaluate the effectiveness of the actions taken. This stage involved analyzing the results of observations and student learning outcomes to identify strengths, weaknesses, and areas for improvement. The results of reflection were used as the basis for planning improvements in the subsequent cycle.

Data collected in this study included students' learning outcome test scores, observation sheets of teacher and student activities, and reflective notes from each cycle. The data were analyzed descriptively by comparing students' learning outcomes from the pre-cycle, Cycle I, and Cycle II to determine improvements in learning outcomes after the implementation of the Role-Playing method.

RESULTS AND DISCUSSION

Results

Based on preliminary observations conducted in Grade V of SD Negeri 200108/12 Padangsidimpuan, students' science learning outcomes were still low, particularly on the topic of the human digestive system. Many students had not achieved the Minimum Completeness Criteria (KKM) of 75, and students tended to be passive during the learning process. Therefore, classroom action research was conducted by implementing the Role-Playing method to improve students' learning outcomes.

Before the implementation of the action, a pre-cycle test was administered to measure students' initial cognitive learning outcomes. The results showed that the average score of students was 63.46, with only 10 out of 26 students (38.46%) achieving the KKM. These results indicated that students' initial understanding of the material was still categorized as low.

In Cycle I, the Role-Playing method was implemented in two meetings. In the first meeting of Cycle I, students' average score increased to 71.53, with 15 students (57.69%) achieving mastery. Although there was an improvement compared to the pre-cycle results, the overall class mastery had not yet met the success indicators.

In the second meeting of Cycle I, students showed further improvement. The average score increased to 77.69, and the number of students who achieved mastery increased to 18 students (69.23%). However, classical mastery learning had not yet been achieved, so the research was continued to Cycle II.

In Cycle II, improvements were made based on reflections from Cycle I, particularly in classroom management, time allocation, and student role distribution. In the first meeting of Cycle II, the average student score increased to 78.07, with 20 students (76.92%) achieving mastery. These results indicated that classical mastery learning had begun to be achieved.

In the second meeting of Cycle II, students' learning outcomes improved significantly. The average score increased to 83.84, and 22 students (84.61%) achieved the KKM. These results met the predetermined success indicators, indicating that the implementation of the Role-Playing method effectively improved students' science learning outcomes.

Discussion

The results of this study indicate that the Role-Playing learning method has a positive impact on improving students' science learning outcomes, particularly on the topic of the human digestive system. The consistent improvement in students' average scores and mastery percentages from the pre-cycle to Cycle II demonstrates the effectiveness of this method.

Role Playing allows students to actively participate in the learning process by acting out specific roles related to the learning material. This method helps students understand abstract concepts through concrete experiences, which is particularly suitable for elementary school students who are in the concrete operational stage of

cognitive development. Through role playing, students are not only listeners but also active learners who engage physically, cognitively, and emotionally in the learning process.

The findings of this study are consistent with previous research showing that the Role-Playing method can enhance student engagement, motivation, and conceptual understanding in science learning. Increased student participation during learning activities contributed to better comprehension of the human digestive system, as students could directly visualize and experience the functions of each digestive organ through dramatization.

In addition, improvements in teacher and student activities were observed during the implementation of the Role-Playing method. Teachers were able to manage the classroom more effectively, while students demonstrated higher levels of enthusiasm, cooperation, and responsibility in performing their roles. These factors contributed significantly to the improvement of learning outcomes.

Overall, the implementation of the Role-Playing method proved to be effective in improving science learning outcomes for fifth-grade students. Although some challenges were encountered, such as time management and classroom organization, these issues were gradually addressed through reflection and improvement in subsequent cycles.

CONCLUSION

Based on the results of the classroom action research conducted in Grade V of SD Negeri 200108/12 Padangsidimpuan, it can be concluded that the implementation of the **Role-Playing learning method** effectively improved students' science learning outcomes, particularly on the topic of the human digestive system. This improvement was evident from the increase in students' average scores and mastery learning percentages from the pre-cycle to Cycle II.

In the pre-cycle stage, students achieved an average score of **63.46** with a mastery percentage of **38.46%**. After the implementation of the Role-Playing method in Cycle I, the average score increased to **77.69**, with **69.23%** of students achieving mastery. Further improvement occurred in Cycle II, where the average score reached **83.84**, and the mastery percentage increased to **84.61%**, exceeding the predetermined success indicators.

In addition to improving learning outcomes, the Role-Playing method also increased students' active participation, enthusiasm, and engagement during the learning process. Students were able to understand abstract science concepts more easily through concrete learning experiences. Therefore, the Role-Playing method is recommended as an effective instructional approach for science learning in elementary schools to enhance student engagement and learning outcomes.

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