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The Implementation of Interactive Learning Media to Enhance the Learning Motivation of Grade III Students on the Topic of Animal Life Cycles in Natural and Social Sciences Learning at UPT SD Negeri 068007 Medan Tuntungan

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Abstract

Low learning motivation presents a challenge in elementary natural and social sciences (IPAS) learning, particularly when instruction on animal life cycles relies primarily on verbal explanations and textbooks. This study examines the use of interactive learning media to support third-grade students' learning motivation at UPT SD Negeri 068007 Medan Tuntungan. The research framework comprises classroom action research involving 20 students and two cycles, each encompassing planning, action, observation, and reflection. Data collection procedures include observation, documentation, and interviews, with descriptive quantitative and qualitative analysis. The reported outcomes are illustrated using simulated data. In this illustrative dataset, the number of students classified in the good motivation category increased from 7 (35%) at the initial stage to 12 (60%) in Cycle I and 17 (85%) in Cycle II. Overall observation scores increased from 52% initially to 68% in Cycle I and 84% in Cycle II. These simulated patterns illustrate how changes in learning motivation could be monitored across successive action research cycles. Interactive media are proposed as a means of encouraging students' attention, enthusiasm, and active participation, but the reported figures do not establish their effectiveness. The study provides an illustrative framework for examining motivational change through iterative classroom improvement; actual field data must replace the simulated figures before scientific publication.

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Keywords: Interactive Learning Media; Learning Motivation; Animal Life Cycles; IPAS; Classroom Action Research

INTRODUCTION

Education is one of the important factors in shaping high-quality human resources. The success of education is determined not only by mastery of learning materials but also by teachers' ability to create an active, engaging, and enjoyable learning environment. The use of appropriate learning media can support teachers in creating meaningful learning experiences and increasing students' interest and motivation (Anggraeni et al., 2021; Munawaroh et al., 2023). One of the factors influencing learning success is students' learning motivation. Learning motivation refers to the drive that encourages students to participate in learning activities, pay attention to teachers' explanations, actively participate, and make efforts to understand the materials being studied. Therefore, teachers need to implement appropriate strategies and utilize learning media that suit the characteristics of elementary school students so that learning objectives can be optimally achieved (Pradani, 2022).

Natural and Social Sciences (IPAS) learning in elementary schools aims to help students understand various natural and social phenomena related to everyday life. The integration of natural and social sciences in IPAS is intended to provide students with a more comprehensive understanding of the relationship between natural and social phenomena in their surroundings (Evitasari et al., 2025). One of the topics studied by third-grade students is animal life cycles. This topic discusses the stages of animal growth and development, such as those of chickens, butterflies, and frogs. In studying this material, students need to understand the sequence of life stages and the physical changes that occur in certain animals. When learning relies solely on verbal explanations and textbooks, students may experience difficulties in visualizing these transformation processes. Therefore, learning media are needed that can present the material visually, concretely, and engagingly so that students can more easily understand the concepts being studied. The use of video-based interactive multimedia can help present learning content in a more attractive visual format and encourage students' interest in learning (Anggraeni et al., 2021).

One alternative that can be implemented is interactive learning media. Interactive learning media are instructional tools that combine elements of images, text, animation,

videos, educational games, and activities that allow students to interact directly with the learning materials. The use of these media provides students with opportunities to observe, experiment, answer questions, arrange sequences of images, and receive feedback during the learning process. According to Malihah (2024), based on a review of studies published between 2022 and 2024, the use of Augmented Reality in elementary school IPAS learning has the potential to support conceptual understanding, learning motivation, student engagement, and critical thinking skills. These findings indicate that the appropriate utilization of technology can serve as an alternative for creating more engaging and meaningful learning experiences.

According to Pradani (2022), the use of Wordwall media in elementary school science learning demonstrates that game-based media can support improvements in students' learning interest and motivation. These changes are reflected in students' activeness in participating in learning activities, their punctuality in submitting assignments, and their willingness to ask questions about materials they do not yet understand. Furthermore, Darmawan and Firdausa (2024) examined the use of Augmented Reality media in IPAS learning and explained its potential to increase students' interest in materials that were previously considered abstract or difficult to understand. These findings further reinforce the importance of selecting learning media that are appropriate to the needs of elementary school students.

In its application to the topic of animal life cycles, interactive learning media can be used to display images or animations of animal life stages in sequential order. Teachers can encourage students to observe the life cycle of butterflies, arrange the growth stages of chickens, compare the life cycle changes of frogs, and answer quizzes based on the materials they have studied. These activities are expected to increase students' attention, curiosity, enthusiasm, and participation throughout the learning process. However, the use of interactive media needs to be accompanied by teacher guidance, structured activities, and appropriate evaluation so that the media are not merely visually appealing but also help students achieve the learning objectives.

Based on the above description, the implementation of interactive learning media is an alternative that deserves to be examined in IPAS learning for third-grade students at UPT SD Negeri 068007 Medan Tuntungan. This study focuses on efforts to improve students' learning motivation through the use of engaging media that actively involve students in

learning about animal life cycles. The initial learning conditions need to be identified through observations, interviews with teachers, and documentation to determine the actual problems occurring in the classroom. Subsequently, changes in learning motivation can be observed through indicators of attention, enthusiasm, active questioning and answering, participation in learning activities, and perseverance in completing assignments.

Accordingly, the study entitled "The Implementation of Interactive Learning Media to Enhance the Learning Motivation of Grade III Students on the Topic of Animal Life Cycles in Natural and Social Sciences (IPAS) Learning at UPT SD Negeri 068007 Medan Tuntungan" aims to describe the implementation of interactive learning media and determine changes in students' learning motivation following the implementation of the learning intervention. This study is expected to provide practical contributions to teachers in developing IPAS learning that is more active, engaging, and appropriate to the characteristics of elementary school students.

METHODS

This study employed the Classroom Action Research (CAR) method (Sugiyono, 2019). Classroom Action Research was selected because it aims to improve and enhance the quality of the learning process through the direct implementation of actions in the classroom. This approach allows researchers to identify learning problems, implement appropriate instructional improvements, and evaluate their effectiveness through systematic observation and reflection (Sulastri, 2023; Muslihah & Musaddat, 2025). This study focused on the implementation of interactive learning media to improve the learning motivation of Grade III students on the topic of animal life cycles in Natural and Social Sciences (IPAS) learning at UPT SD Negeri 068007 Medan Tuntungan. The use of interactive learning media is expected to create more engaging, active, and enjoyable learning experiences, thereby encouraging students to participate optimally in learning activities (Ali et al., 2025; Susanti et al., 2024).

According to Kemmis and McTaggart, action research is conducted through repeated cycles consisting of four main stages, namely planning, acting, observing, and reflecting. These four stages are interrelated and carried out systematically to identify the progress of the implemented actions and determine the improvements required in the subsequent cycle. The application of these stages enables researchers to evaluate learning

activities, identify obstacles, and formulate improvements based on the results of previous actions (Sulastri, 2023; Muslihah & Musaddat, 2025). This model is appropriate for the objectives of this study because it enables researchers to evaluate the implementation of interactive learning media based on students' responses and learning motivation throughout the learning process.

This study was conducted at UPT SD Negeri 068007 Medan Tuntungan, involving 20 Grade III students as research subjects. The study was planned to consist of two cycles, with each cycle comprising four stages: planning, acting, observing, and reflecting. The implementation of actions in each cycle was adjusted based on the evaluation results of the preceding cycle. If the success indicators were not achieved in the first cycle, the researcher made improvements in the second cycle based on the reflection results. Similar classroom action research has demonstrated the use of repeated instructional cycles to improve students' learning motivation and classroom participation (Nurlaeli et al., 2024; Susanti, 2021).

The first stage was planning. At this stage, the researcher conducted preliminary observations to identify the conditions of IPAS learning and determine problems related to students' learning motivation. Subsequently, the researcher prepared learning instruments in the form of teaching modules, developed interactive learning media appropriate to the topic of animal life cycles, prepared Student Worksheets (Lembar Kerja Peserta Didik—LKPD), and developed observation sheets for students' learning motivation. The media used could include images, animations, educational videos, and interactive quizzes presenting the stages of animal life cycles, such as those of chickens, butterflies, and frogs. The use of visual and interactive learning media can support students' interest, attention, and active involvement in classroom learning (Ali et al., 2025; Barokah et al., 2024; Amalia et al., 2026). In addition, the researcher established learning motivation indicators and success criteria as the basis for evaluating the implemented actions.

The second stage was acting. At this stage, the teacher conducted IPAS learning by implementing interactive learning media in accordance with the prepared plan. The learning activities began with the presentation of learning objectives and an introduction to the topic of animal life cycles. Subsequently, the teacher displayed images, animations, or videos illustrating the stages of animal growth and development. Students were given opportunities to observe the media, identify the stages of animal life cycles, arrange images in sequence,

participate in discussions, answer questions, and take part in interactive quizzes. Throughout the activities, the teacher provided guidance, motivation, and reinforcement to encourage students to become more active and confident in expressing their opinions. The integration of educational games, digital media, and interactive learning activities can create more enjoyable learning experiences and encourage students' active participation (Susanti et al., 2024; Hermansah & Jakaria, 2025; Aurila et al., 2026).

The third stage was observing. Observation was conducted simultaneously with the implementation of the actions to examine students' activities and learning motivation throughout the learning process. The observations were carried out using previously prepared observation sheets. The aspects observed included students' attention to the teacher's explanations and learning media, enthusiasm in participating in activities, activeness in asking and answering questions, participation in discussions or interactive activities, and perseverance in completing assignments. The researcher also recorded various obstacles encountered during the implementation of interactive learning media. Observation is an important component of classroom action research because it provides information about students' behavioral changes, participation, and responses during the implementation of instructional actions (Susanti, 2021; Muslihah & Musaddat, 2025).

The fourth stage was reflecting. At this stage, the researcher analyzed the observation results and field notes to evaluate the implementation of learning in each cycle. The analysis was conducted by comparing the initial conditions with the results obtained after the actions were implemented. The researcher identified aspects that had been implemented successfully as well as obstacles that continued to hinder student engagement. If learning motivation had not yet reached the success indicators, improvements could be made by introducing more engaging variations of learning media, providing clearer instructions, ensuring equal opportunities for participation, and adding interactive activities appropriate to the characteristics of Grade III students. Reflection is essential in classroom action research because it provides a basis for evaluating the effectiveness of previous actions and determining appropriate improvements in subsequent cycles (Sulastri, 2023; Nurlaeli et al., 2024).

Data collection in this study was conducted through observation, documentation, and interviews when necessary. Observation was used to obtain data regarding students' learning motivation during the learning process. Documentation was used to supplement the

research data, including learning instruments, observation sheets, and activity documentation, in accordance with school permission. Interviews with the classroom teacher could be conducted to obtain additional information regarding the initial learning conditions and students' responses to the use of interactive media. The combination of observation, interviews, and documentation can provide complementary information for evaluating the implementation of classroom learning improvements (Susanti, 2021; Muslihah & Musaddat, 2025).

The collected data were then analyzed using quantitative and qualitative descriptive approaches. Quantitative analysis was conducted by calculating the percentage of students' learning motivation scores, while qualitative analysis was carried out by describing changes in students' behavior, engagement, and responses throughout the learning process. The combination of quantitative and qualitative analysis enables researchers to describe both the numerical improvement in learning motivation and the behavioral changes observed during the implementation of instructional actions (Muslihah & Musaddat, 2025; Sulastri, 2023).

This study was conducted collaboratively between the researcher and the classroom teacher. Collaboration was carried out during the planning, acting, observing, and reflecting stages. The teacher was responsible for implementing the learning activities, while the researcher was responsible for preparing the instruments, observing the learning process, collecting data, and analyzing the results of the actions. Collaboration in classroom action research supports systematic implementation, observation, and evaluation of instructional improvements (Muslihah & Musaddat, 2025).

The success of this study was determined based on improvements in students' learning motivation following the implementation of interactive learning media. The success indicators included increased attention, enthusiasm, activeness in asking and answering questions, participation in learning activities, and perseverance in completing assignments. As an initial target, the study established that at least 80% of the 20 students, or a minimum of 16 students, should achieve the good or very good category of learning motivation. The use of interactive learning media and educational games has been associated with increased student engagement, interest, and motivation in elementary school learning (Ali et al., 2025; Nurlaeli et al., 2024; Barokah et al., 2024). Thus, this study is expected to provide a systematic overview of the implementation of interactive learning media as an effort to improve the

learning motivation of Grade III students on the topic of animal life cycles at UPT SD Negeri 068007 Medan Tuntungan.

RESULTS

This classroom action research was conducted in Grade III at UPT SD Negeri 068007 Medan Tuntungan, involving 20 students as research subjects. The study focused on the implementation of interactive learning media to improve students' learning motivation on the topic of animal life cycles in Natural and Social Sciences (IPAS) learning. The study was designed in two cycles, each consisting of planning, acting, observing, and reflecting stages. Learning motivation data were collected through observations of students' attention, enthusiasm, activeness in asking and answering questions, participation in learning activities, and perseverance in completing assignments.

1. Initial Conditions Before the Action

Before implementing interactive learning media, preliminary observations were conducted to obtain an overview of students' learning motivation in IPAS learning. The preliminary observations focused on students' engagement in following the teacher's explanations, responding to questions, and completing assignments related to the topic of animal life cycles. The results of these observations were used as a basis for planning actions appropriate to the learning needs.

Based on the simulated data used in preparing this manuscript, students' learning motivation under the initial conditions still required improvement. Of the 20 students, 7 students (35%) were in the good learning motivation category, while 13 students (65%) had not yet reached this category. This condition illustrates the need for learning activities that provide students with more opportunities to observe, experiment, answer questions, and actively participate in learning activities.

The topic of animal life cycles requires clear presentation because students need to understand the sequence of animal growth and development stages. Therefore, the use of interactive learning media was planned as an improvement measure through the presentation of images, animations, educational videos, and interactive quizzes. These media were expected to help students understand the material while increasing their interest and engagement throughout the learning process.

2. Implementation of Cycle I

The implementation of Cycle I began with the planning stage, which involved preparing learning materials, developing interactive media on animal life cycles, and preparing observation sheets for students' learning motivation. The media were designed to visually present the life stages of animals, such as chickens, butterflies, and frogs, in sequential order.

During the implementation stage, the teacher explained the learning objectives and connected the material to students' everyday experiences. Subsequently, the teacher presented images or animations of animal life cycles and invited students to observe each stage. Students were then given opportunities to arrange images in sequence, answer questions, participate in discussions, and take part in interactive quizzes. The teacher provided guidance and reinforcement to encourage students to participate confidently in learning activities.

Based on the simulated data, the implementation of interactive learning media in Cycle I demonstrated an improvement in learning motivation compared with the initial conditions. A total of 12 out of 20 students (60%) achieved the good learning motivation category, while 8 students (40%) still required improvement. The overall percentage of the learning motivation observation score in this simulated dataset reached 68%.

This improvement indicates progress in student engagement during the learning process. The use of images and animations helped present the material in a more engaging manner, while quizzes and image-sequencing activities provided students with opportunities to participate directly. Nevertheless, further improvements were still necessary to ensure that all students had more equal opportunities to participate in learning activities.

The results of the Cycle I reflection indicated that the implementation of the actions needed to be improved through the provision of simpler instructions, the equal distribution of opportunities to answer questions, additional guidance for students who remained passive, and variations in interactive activities that did not focus exclusively on students who were already active. These improvements were subsequently used as the basis for planning Cycle II.

3. Implementation of Cycle II

Cycle II was conducted based on the results of the Cycle I reflection. At the planning stage, the teacher improved the learning procedures by incorporating additional activities designed to encourage the participation of all students. Interactive media were used in a more structured manner, accompanied by small-group discussions, games involving the arrangement of animal life cycle stages, and quizzes to assess students' understanding.

During the implementation stage, the teacher provided opportunities for students to observe the media, identify the stages of animal life cycles, arrange images in sequence, and explain their observations. The teacher also appreciated students' efforts and participation while providing guidance to those who continued to experience difficulties. Throughout the activities, observations were conducted to identify changes in learning motivation based on the predetermined indicators.

Based on the simulated data, the results of Cycle II indicated that 17 out of 20 students (85%) achieved the good learning motivation category, while 3 students (15%) had not yet reached this category. The overall percentage of the learning motivation observation score reached 84%. This result was higher than that of the initial conditions and Cycle I.

This improvement illustrates that learning activities involving students through visual observation, discussions, educational games, and quizzes can support the creation of a more active learning environment. Nevertheless, students who had not yet achieved the good learning motivation category continued to require further attention and guidance. Based on the simulated success target, namely that at least 80% of students should achieve the good learning motivation category, this target was achieved at the end of Cycle II.

4. Comparison of Students' Learning Motivation at Each Stage

A comparison of the initial conditions, Cycle I, and Cycle II was conducted to identify changes in students' learning motivation following the implementation of interactive learning media. A summary of the simulated data is presented in Table 1.

Table 1. Comparison of Students' Learning Motivation

Research Stage	Students in the Good Category	Percentage	Overall Observation Score
Initial Conditions	7 students	35%	52%
Cycle I	12 students	60%	68%
Cycle II	17 students	85%	84%

Based on Table 1, the number of students achieving the good learning motivation category increased from 7 students under the initial conditions to 12 students in Cycle I, and subsequently increased to 17 students in Cycle II. In percentage terms, the proportion of students achieving this category increased by 25 percentage points from the initial conditions to Cycle I and by another 25 percentage points from Cycle I to Cycle II. Overall, the increase from the initial conditions to Cycle II reached 50 percentage points.

The learning motivation observation scores also demonstrated an increasing pattern, rising from 52% under the initial conditions to 68% in Cycle I and 84% in Cycle II. This pattern indicates that the planned actions have the potential to improve student engagement in the learning process. However, conclusions regarding the success of the actions must be based on actual observation data collected using consistent instruments and assessment criteria.

DISCUSSION

The research findings based on the simulated data indicate an improvement in students' learning motivation following the implementation of interactive learning media on the topic of animal life cycles. This improvement is reflected in the increasing number of students achieving the good learning motivation category and the rising percentage of observation scores at each research stage. These findings illustrate the potential of interactive media as an alternative for creating IPAS learning that is more engaging, participatory, and appropriate to the characteristics of elementary school students.

Interactive learning media enable learning materials to be delivered through a combination of images, animations, videos, and activities that involve students' responses. In the topic of animal life cycles, visual presentations can help students identify the sequence of animal life stages and understand the physical changes that occur. Thus, students do not merely receive verbal explanations but also have opportunities to observe visual representations and assess their understanding through learning activities.

Improvements in learning motivation can also be associated with the opportunities for participation provided through activities such as arranging images in sequence, participating in discussions, answering questions, and taking part in interactive quizzes. These activities provide opportunities for students to become directly involved in the learning process. When teachers provide appropriate feedback and appreciation, students also receive

support to maintain their attention and develop greater confidence in expressing their answers. However, the influence of media on learning motivation remains dependent on the relevance of the materials, the quality of activities, classroom management, and teacher guidance.

The findings of this simulation are conceptually consistent with Pradani's (2022) research concerning the use of Wordwall media to support students' learning interest and motivation in elementary school science learning. Game-based media can provide variations in learning activities and encourage students to respond actively to the learning materials. Furthermore, Malihah's (2024) review of the utilization of Augmented Reality in elementary school IPAS learning highlights the potential of interactive technology to support conceptual understanding and student engagement. Although the media used in these studies may differ, the relevant principle is the importance of selecting media that are appropriate to learning objectives and students' needs.

The improvement of actions from Cycle I to Cycle II was also an important component of the classroom action research. In Cycle I, the use of interactive media began to provide variations in learning activities, but several students still required encouragement to participate actively. Through reflection, teachers could improve instructions, provide more equitable opportunities for participation, and introduce additional activities that encouraged student engagement. Thus, improvements in learning motivation were not solely associated with the use of media but also with improvements in the way teachers managed learning activities in each cycle.

In addition to providing benefits for students, the implementation of interactive learning media can serve as a means of reflection for teachers in developing student-centered learning. Teachers can use observation results to identify students who require additional guidance, adjust activities according to students' abilities, and select the most appropriate forms of media. This approach allows learning improvements to be implemented gradually based on classroom needs rather than merely relying on assumptions about media considered engaging.

Based on this discussion, the implementation of interactive learning media can serve as a viable alternative for further development in IPAS learning, particularly on the topic of animal life cycles in Grade III at UPT SD Negeri 068007 Medan Tuntungan. If actual observation results demonstrate a similar pattern, improvements in students' attention,

enthusiasm, participation, and perseverance can serve as evidence that the learning intervention has supported improvements in learning motivation. The final research conclusions must nevertheless be based on actual data so that the contribution of interactive learning media can be explained objectively and scientifically justified.

The findings of this study are consistent with several previous studies demonstrating that the use of interactive learning media can improve students' learning motivation, interest, and engagement in the learning process. Harsiwi and Arini (2020) found that the use of interactive learning media had a positive effect on elementary school students' learning outcomes. Furthermore, Anggraeni et al. (2021) demonstrated that the development of video-based interactive learning multimedia could improve students' learning interest, with an N-Gain score of 0.64, categorized as moderate. Pradani (2022) also reported that the use of Wordwall media could enhance students' interest and learning motivation by increasing their classroom participation, willingness to ask questions, and active engagement in science learning. Similarly, Pentianasari et al. (2023) showed that the development of interactive learning media assisted by Lectora Inspire could support IPAS learning in elementary schools through more engaging and interactive material presentation. Meanwhile, Hafinda et al. (2025) found that the use of Wordwall media had a positive effect on elementary school students' learning motivation and academic achievement. These findings share similarities with the present study, particularly in utilizing interactive media to create engaging learning experiences and encourage students' active participation. However, the present study has a distinct focus on implementing a combination of images, animations, educational videos, and interactive quizzes to improve the learning motivation of third-grade students in the animal life cycle topic within IPAS learning through a two-cycle Classroom Action Research (CAR) approach. Therefore, this study contributes to the application of interactive learning media as an instructional strategy aimed at improving students' learning motivation in understanding the animal life cycle.

Research implications, the findings suggest that interactive learning media can create a more engaging learning environment and encourage students' attention, enthusiasm, and active participation. Teachers are therefore encouraged to integrate images, animations, educational videos, and interactive quizzes into IPAS learning, particularly when teaching the animal life cycle.

Research limitations, this study was limited to 20 third-grade students at UPT SD Negeri 068007 Medan Tuntungan and focused specifically on the animal life cycle topic. The research was conducted through two cycles of Classroom Action Research; therefore, the findings may not be generalizable to other schools, grade levels, or learning materials. F

CONCLUSION

Based on the results of the classroom action research conducted over two cycles, the use of interactive learning media on the topic of animal life cycles in Grade III IPAS learning at UPT SD Negeri 068007 Medan Tuntungan demonstrates potential for improving students' learning motivation. Media that combine images, animations, videos, and interactive activities can create a more engaging learning environment and encourage students' attention, enthusiasm, activeness, and participation. Improvements in the learning process in each cycle were implemented through refinements in media utilization, the provision of instructions, and student guidance. Thus, interactive learning media can serve as an alternative strategy for improving learning motivation while taking into account the appropriateness of the media, students' characteristics, and learning evaluation. The extent of the improvement in learning motivation needs to be verified using actual field observation data, as the figures presented previously are simulated data.

This study contributes to elementary education research by providing insight into the use of interactive learning media to improve students' learning motivation in IPAS. It also demonstrates how combining visual and interactive elements can support more engaging learning experiences, particularly in teaching science-related concepts.

Future researchers are encouraged to conduct similar studies with larger samples, different grade levels, and various learning topics. They may also examine the long-term effects of interactive learning media on students' motivation, learning outcomes, and classroom engagement using more diverse research methods.

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