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The Influence of Using Animated Video Media on Students' Motivation and Understanding in Science Learning in Grade V of SD Negreri 29 Kota Pagar Alam

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Abstract: This study aims to determine the effect of using learning videos on the motivation and understanding of science concepts of elementary school students. The study was conducted using the Classroom Action Research (CAR) model in two cycles at SD Negeri 29 Kota Pagaralam, involving 30 fifth grade students. The results showed an increase in learning motivation and understanding of concepts after using learning videos. In cycle I, most students did not understand the material well, but in cycle II there was a significant increase in both student participation and learning outcomes. Learning videos have been proven to be able to create a more interesting learning atmosphere and help students understand abstract science material.

Keywords: Video Media, Learning Motivation, Student Understanding, IPA

PRELIMINARY

Basically, technology is created to make human life easier, such as in communication and education (Susanto, Jailani, & others, 2023). the rapid growth of information technology has had a significant impact on the education sector (Ngongo, Hidayat, & Wiyanto, 2019). By using information and communication technology, the learning process can take place according to applicable conditions.(Dhori, Muqowim, & Nurhayati, 2021). Very rapid changes require teachers to be more creative in managing learning (Hasriadi, 2022). Teachers are no longer the only source of information, but rather facilitators of learning. Teachers in their role as facilitators have been shown to contribute positively to the success of students' learning processes.(Rahmawati & Suryadi, 2019). In delivering learning materials, an educator requires teaching materials, both in printed and non-printed form (Ciptaningtyas, Mukmin, & Putri, 2022).

Learning media functions as part of learning activities and helps teachers deliver lessons so as to increase students' interest and attraction to the topics being taught

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(Wulandari, Salsabila, Cahyani, Nurazizah, & Ulfiah, 2023). Learning media must have a special appeal to make the class fun and not boring. This can be done in a simple form and with technology (Kotimah, 2024). Interesting and varied learning media are needed to adapt to various learning styles of students. In science learning, teachers can utilize available applications to engineer natural events. One alternative solution that teachers can use is learning videos, which function as an aid in delivering material to make it more interesting and easy for students to understand (Pagarra & Idrus, 2018). In elementary school, learning natural science (IPA) is one of the subjects included in the curriculum structure. IPA encourages students to actively participate in learning. Students are expected to be able to understand basic concepts and be able to analyze various problems as a result of this learning (Wibowo, Putri, & Mukmin, 2022).

In the context of learning Natural Sciences (IPA), learning media has a very important role, especially because the nature of IPA material is abstract and requires concrete visual illustrations to be easily understood by elementary school students. In the learning process, the use of video media is a creative alternative to convey complex material in a more interesting and interactive way. Thus, educators need to innovate in the use of learning media that support learning activities. One form of media that is effectively used is learning videos (Pamungkas & Koeswanti, 2021).Video media can help students understand difficult concepts because they can display visuals, audio, and movements that are similar to real situations. In addition, because their presentations are more interesting and not boring, videos can also increase learning motivation. Animated videos are one type of learning media that can significantly increase students' desire to learn (Irawan, Dahlan, & Fitrianisah, 2021)This study aims to determine whether the use of learning videos has an effect on students' understanding of science concepts or not (Pratiwi, Gunawan, & Ermiana, 2022).

Initial observations at SD Negeri 29 Kota Pagaralam indicate that students have low motivation to learn science. The lack of active student involvement in learning activities, such as a lack of enthusiasm for asking questions and answering questions from teachers, and a lack of interest in the subject matter, are indications of this. Additionally, most students' evaluation results are below the Minimum Competency Criteria (KKM) threshold, indicating that their understanding of science concepts is still insufficient.

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This issue highlights the need for innovative teaching methods to encourage students to better understand and become more motivated. The use of animated video media is an alternative that can be employed. This medium has the advantage of combining visual and audio elements in an engaging way, thereby helping students understand abstract material more clearly and improving information retention. Therefore, the purpose of this study is to evaluate the extent to which animated video media influences students' motivation to learn and their level of understanding of concepts during science learning. It is hoped that the results of this study will help teachers create more interactive and engaging learning strategies.

METHOD

This study uses a qualitative approach with a Classroom Action Research (CAR) model to improve the learning process, motivation, and understanding of students' science concepts through video media. The study was conducted in two cycles, each consisting of planning, implementation, observation, and reflection, following the Kemmis and McTaggart model. The researcher played an active role as an implementer, observer, and collaborator with grade V teachers at SD Negeri 29 Kota Pagaralam. The subjects of the study were 30 fifth grade students selected based on their low motivation and understanding of science, with 16 males and 14 females. The study lasted for 2 months, from February to April 2025. The researcher also involved teachers, principals, and colleagues as observers to obtain objective data. The instruments used include a learning motivation questionnaire based on the ARCS model, a science concept understanding test, and an observation sheet to record student activities. All instruments have been validated.

Implementation begins with action planning, including compiling lesson plans and preparing learning videos. During learning, teachers deliver materials using videos, students discuss and work on questions. Data are analyzed descriptively qualitatively and quantitatively, by comparing test results and student motivation between cycles. Triangulation techniques are used to ensure the validity of the data, involving observation, interviews, and documentation, as well as member checks and peer reviews. This comprehensive approach aims to obtain an accurate picture of the learning process and its impact on improving student motivation and learning outcomes in science.

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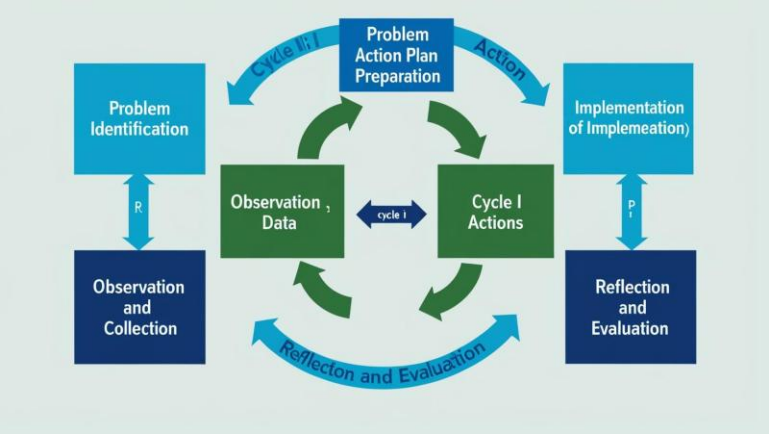

Picture 1. Data Analysis Chart

RESULTS

This classroom action research was conducted in two cycles, and its main objective was to improve students' motivation and understanding of the concepts taught in science learning through video media. Data analysis was conducted in a combination manner, using both qualitative and quantitative approaches.

Table I. Research Results

Cycle	Rated aspect	Results	Analysis
Cycle I	Motivation to Learn (ARCS)	**Attention & Relevance**: Students show attention and interest in the learning video.	Students are interested in the material presented through videos, but do not yet fully understand the concept in depth.
	Concept Understanding	12 out of 30 students (40%) achieved scores above the KKM.	The results of the concept understanding test are still low, indicating that even though motivation has increased, students' understanding of the material is still limited. Some students are still passive in discussions.
	Observation	Students seemed enthusiastic when watching videos, but were less active in discussions.	Videos have a positive impact on student attention, but are not in-depth enough to motivate discussion or better understanding.
Cycle II	Motivation to Learn (ARCS)	**Confidence & Satisfaction**: The average score of the learning motivation questionnaire increased.	Increased motivation in the aspects of self-confidence and satisfaction, shows that students feel more confident and satisfied with learning using videos after improvements have been made.
	Concept Understanding	24 out of 30 students (80%) achieved scores above the KKM	Significant improvement in student conceptual understanding, with more students successfully understanding the material in its entirety.
	Observation	Students are more active in discussions and better understand material such as the water cycle and the properties of light.	More contextual video learning, along with added booster activities, increases student participation and understanding.

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DISCUSSION

After the researcher conducted observations, it showed that the use of video as a learning medium can create a more dynamic and interesting learning atmosphere. During the first cycle, many students were inactive and unfocused. However, after reflection and improvements were made in the second cycle, student engagement increased drastically. Visualization is very important for science learning because it can help students understand abstract concepts (Khusniawati, Nulhakim, Taufik, & Sutarno, 2024).

Picture 2. Science Learning Media Animation Video

Learning videos can increase students' desire to learn and their understanding of science learning concepts.This media has the ability to display images, sounds, and movements that are similar to what happens in the real world, which helps students understand abstract material. Studies show that understanding and remembering information or messages contained in visual symbols or images can speed up goal achievement (Harefa & Hayati, 2021). Animated videos have been proven to be an effective learning medium in science lessons, especially about the benefits of energy for life. This is for several reasons: they can provide students with unexpected experiences, allow them to see things they could not see before, and give them the opportunity to replay the video whenever they want. Video-based learning can also increase students' interest and desire to learn (Putra, Kristiantari, & Wiarta, 2024).

An important factor in the learning process is learning motivation, which affects the extent to which students are involved in learning activities. Studies show that animated media increases students' desire to learn. This is in line with previous studies that say, The science learning process will be easier with video-based learning media, especially at the elementary level because students at the elementary level are still

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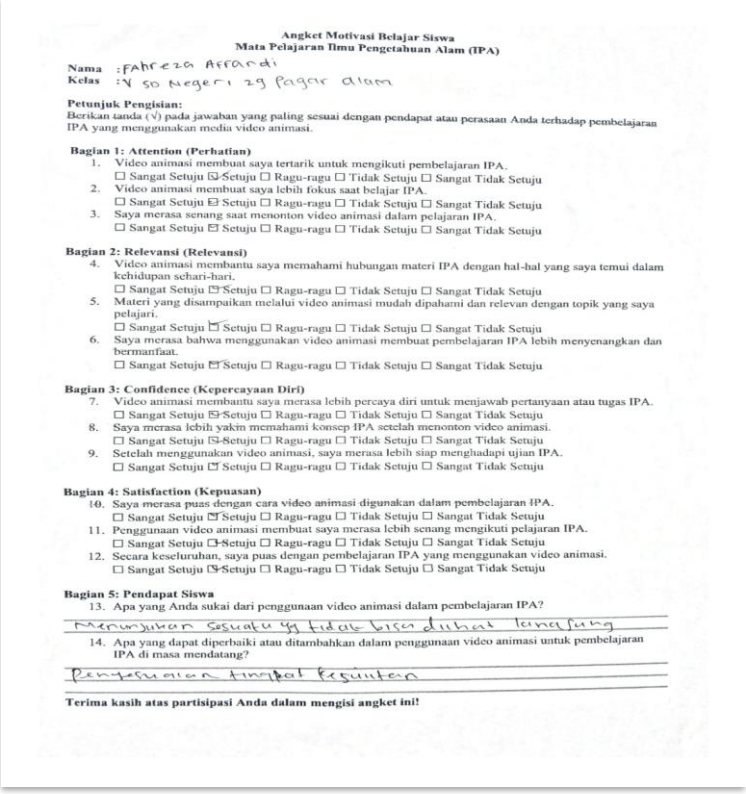
classified as children and the material is given with interesting pictures, choruses, and animations, which can attract students' interest and attraction (Sari, at al., 2022).

Initial observations show that students in grade V have low motivation to learn science. Many students have difficulty understanding abstract science concepts if the teacher only delivers them verbally. However, after the application of animated video media, there was a significant change in the level of attention and relevance shown by students. The animated videos used in learning succeeded in attracting students' interest and making them feel more connected to the material being taught. From the results of an interview with Mr. Rudi as a class VA teacher, he said "In my opinion, the use of animated videos is very helpful. Children look more interested and focused during the lesson. Material that is usually difficult to understand becomes easier for them to understand". Animated video media can make it easier for students to understand the material, because this video is able to attract attention and maintain student focus during the learning process.(Rahmayanti & Istianah, 2018). Other research also revealed that teachers felt it was more effective to use science learning videos during limited face-to-face learning periods (Wahyuningsih, Faradita, & Setiawan, 2022).

Picture 3. Sample Filling Out Student Questionnaire



Angket Motivasi Belajar Siswa
Mata Pelajaran Ilmu Pengetahuan Alam (IPA)

Nama : Fahreza Affandi
Kelas : V SD Negeri 29 Pagar Alam

Petunjuk Pengisian:
Berikan tanda (√) pada jawaban yang paling sesuai dengan pendapat atau perasaan Anda terhadap pembelajaran IPA yang menggunakan media video animasi.

Bagian 1: Attention (Perhatian)
1. Video animasi membuat saya tertarik untuk mengikuti pembelajaran IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
2. Video animasi membuat saya lebih fokus saat belajar IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
3. Saya merasa senang saat menonton video animasi dalam pelajaran IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju

Bagian 2: Relevansi (Relevansi)
4. Video animasi membantu saya memahami hubungan materi IPA dengan hal-hal yang saya temui dalam kehidupan sehari-hari.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
5. Materi yang disampaikan melalui video animasi mudah dipahami dan relevan dengan topik yang saya pelajari.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
6. Saya merasa bahwa menggunakan video animasi membuat pembelajaran IPA lebih menyenangkan dan bermanfaat.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju

Bagian 3: Confidence (Kepercayaan Diri)
7. Video animasi membantu saya merasa lebih percaya diri untuk menjawab pertanyaan atau tugas IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
8. Saya merasa lebih yakin memahami konsep IPA setelah menonton video animasi.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
9. Setelah menggunakan video animasi, saya merasa lebih siap menghadapi ujian IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju

Bagian 4: Satisfaction (Kepuasan)
10. Saya merasa puas dengan cara video animasi digunakan dalam pembelajaran IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
11. Penggunaan video animasi membuat saya merasa lebih senang mengikuti pelajaran IPA.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju
12. Secara keseluruhan, saya puas dengan pembelajaran IPA yang menggunakan video animasi.
☐ Sangat Setuju ☑ Setuju ☐ Ragu-ragu ☐ Tidak Setuju ☐ Sangat Tidak Setuju

Bagian 5: Pendapat Siswa
13. Apa yang Anda sukai dari penggunaan video animasi dalam pembelajaran IPA?
Menunjukan sesuatu yg tidak bisa dilihat langsung
14. Apa yang dapat diperbaiki atau ditambahkan dalam penggunaan video animasi untuk pembelajaran IPA di masa mendatang?
Penyesuaian tingkat kesulitan

Terima kasih atas partisipasi Anda dalam mengisi angket ini!

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The results of the science concept understanding test in grade V of SD Negeri 29 Pagar Alam showed an increase in the average score of students from cycle I to cycle II. In the first cycle, most students were still unable to explain science concepts in depth, such as in the topics "Changes in the Form of Objects" and "Properties of Light". After the second cycle was carried out with a more visual and practical approach through video, students showed an increase in their ability to explain, analyze, and apply science concepts in everyday life. This is in accordance with previous studies which said, The advantages of animated videos lie in the attractive visual aspects, their ability to evoke emotional responses, and their flexibility to be adjusted to the characteristics of the audience (Zahroh, Apriyani, & Afrilia, 2025).

In addition, the observation results showed that students were more active and involved in the lesson. This shows that animated videos can be a tool that helps students be more involved in science learning. After using the learning video, student learning outcomes increased, which shows that the video has a great influence on students (Fahri, 2020).

CONCLUSION

The use of video learning media in science subjects has been proven effective in increasing learning motivation and conceptual understanding of fifth grade students at SD Negeri 29 Kota Pagaralam. The results of the study showed a significant increase from cycle I to cycle II, both in terms of student involvement in the learning process and achievement of learning outcomes. Video media, especially in the form of animation, is able to present abstract science material to be more concrete, interesting, and easy to understand. With an interactive visual and audio approach, learning videos are an innovative solution to overcome low motivation and students' difficulties in understanding science concepts. Based on the results of this study, it is recommended that teachers optimize the use of learning videos in science learning to improve student understanding. Further research can explore the use of videos in other subjects or other factors that influence student understanding. In addition, this study can be expanded by involving more students to strengthen the existing findings.

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