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The influence of using animated videos on elementary school students' learning motivation

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ABSTRACT

The low learning motivation of students in learning science in elementary schools is a challenge that needs to be overcome through appropriate learning media to be used in the learning process. This study aims to determine the effect of using animated video media of the solar system on the learning motivation of SD Negeri 005 Kabun grade VI students. The approach used in this study is quantitative with a quasi-experimental method in the form of a nonequivalent control group design. The sample consisted of a control class of 19 students and an experimental class of 18 students. Data were collected through a questionnaire and analyzed using an independent sample t-test. The study's results showed a significant effect of the use of animated videos in learning science, especially the solar system material, on students' learning motivation. This is indicated by the increased attention, interest, and activeness of students in the experimental class compared to the control class. Based on these findings, it is recommended for teachers to be able to utilize animated video media as a learning aid to increase student motivation and involvement in the teaching and learning process.

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ABSTRAK

Rendahnya motivasi belajar peserta didik dalam pembelajaran IPAS di sekolah dasar menjadi tantangan yang perlu diatasi melalui media pembelajaran yang tepat untuk digunakan dalam proses pembelajaran. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media video animasi sistem tata surya terhadap motivasi belajar peserta didik kelas VI SD Negeri 005 Kabun. Pendekatan yang digunakan dalam penelitian ini adalah kuantitatif dengan metode desain quasi experimental berbentuk nonequivalent control group. Sampel terdiri dari kelas kontrol sebanyak 19 orang peserta didik dan kelas eksperimen sebanyak 18 orang peserta didik. Data dikumpulkan melalui angket kuesioner dan dianalisis menggunakan uji independent sample t-test. Hasil penelitian menunjukkan bahwa terdapat pengaruh yang signifikan dari penggunaan video animasi dalam pembelajaran IPAS khususnya materi sistem tata surya terhadap motivasi belajar peserta didik. Hal ini ditunjukkan dengan meningkatnya perhatian, minat, dan keaktifan peserta didik pada kelas eksperimen dibandingkan dengan kelas kontrol. Berdasarkan hasil temuan tersebut, disarankan bagi para guru agar dapat memanfaatkan media video animasi sebagai alat bantu pembelajaran untuk meningkatkan motivasi serta keterlibatan peserta didik dalam proses belajar mengajar.

Kata Kunci: *motivasi peserta didik; media pembelajaran; sekolah dasar; sistem tata surya; video animasi.*

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INTRODUCTION

One of the key factors influencing the success of learning is the media used by teachers to deliver instructional material. Teachers often rely on media that students find unengaging, which makes the learning process less appealing (Sunaryati *et al*., 2024). When learning media fail to capture students' interest, it can lead to various issues, such as a lack of focus, disruptive behavior, and even classroom disorder (Nurafifah *et al*., 2022). These issues, in turn, hinder the effective achievement of learning objectives. Therefore, teachers should be more selective in choosing the media they use, opting for more diverse and engaging options that can maintain students' interest and prevent boredom during the learning process.

Technological advancements have introduced various new types of teaching materials in the development of learning tools. These digital learning resources are expected to enhance students' enthusiasm for learning (Hadiapurwa *et al*., 2021; Ramdani *et al*., 2021). Animated video media is a highly effective tool for improving the quality of learning. Learning media that utilize animated videos—featuring moving images or videos accompanied by audio—can enhance students' concentration during the learning process. Animated videos are educational tools that use moving visuals combined with supporting sound, resembling a video or film (Putry, 2020). The use of animated video media can increase student responses, capture their attention, sustain their interest in learning, and boost their motivation throughout the learning process. By using animated videos, it is hoped that students will be inspired to better understand the learning material.

One of the key factors in creating an effective learning environment is the motivation to learn (Asnawati & Sutiah, 2023). Low levels of student motivation remain a persistent issue in the learning process at the elementary school level (Mustia, 2022; Syachtiyani & Trisnawati, 2021). In the context of primary education, such as in elementary schools, nearly half of the students have yet to demonstrate strong learning motivation, which may lead to suboptimal academic achievement, according to several studies. In fact, learning motivation plays a crucial role in improving students' academic outcomes.

Learning motivation among elementary school students is currently considered low, which negatively affects their academic performance. Several factors contribute to this low motivation, including the lack of opportunities for students to actively participate in the learning process, the use of ineffective teaching methods, limited variety in the learning media used by teachers, and the scarcity of available learning resources (Naibaho *et al.,* 2021*;* Rohmah & Zulfitria, 2024). Therefore, an effective strategy is needed to boost students' enthusiasm for learning. One such strategy is selecting appropriate learning media. Among the various available options, the use of animated video media in education has proven to be an effective tool. This includes benefits such as good flexibility and accessibility, encouragement of creativity and exploration, deeper understanding of the material, and unique visual appeal (Afrilia *et al*., 2022).

The use of animated videos in science learning is an engaging idea for fostering conceptual understanding among students (Yanti *et al*., 2024). This animated video media can transform students' perception of science, which they may have previously seen as boring, into something more interesting and enjoyable (Alifa *et al.*, 2021). The combination of engaging visuals and clear narration helps students grasp abstract concepts that are often difficult for them to understand. In addition, animation provides visual representations that aid in understanding scientific processes that are hard to observe directly, such as those in the solar system. Through animated videos, students can learn about the solar system in a more interactive, engaging, and in-depth way. The concept of the solar system is introduced and explained through natural phenomena commonly found in everyday life. This approach allows

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students to connect the material with their prior knowledge, making the concept of the solar system clearer and more concrete in their minds (Putri, *et al.*, 2022).

The use of animated videos not only helps students understand science material but also plays a role in boosting their enthusiasm for learning. The use of animated videos about the solar system is expected to encourage positive responses from students, increase their learning motivation, and create a more interactive and innovative learning atmosphere. Animated videos on the solar system have a significant impact on improving students' understanding of the concept (Pelawi & Ismail, 2023). The integration of animated videos serves as an effective method for clarifying complex science concepts at the elementary school level.

Based on the results of observations and interviews conducted by the researcher on February 3, 2025, at SD Negeri 005 Kabun with a sixth-grade teacher, it was found that the teacher often uses two-dimensional visual media when delivering lesson material. This has led to students experiencing difficulties and showing low levels of active participation during the learning process. The learning media used by the teacher still lacks variety. In contrast, students tend to prefer the use of animated videos, as they feel this medium helps them understand the material more quickly and makes the learning process more meaningful, while also increasing their motivation. However, the teacher also stated that the learning motivation of sixth-grade students at SD Negeri 005 Kabun remains low, due to a range of internal and external factors affecting the students.

Internal factors affecting students, such as the lack of parental support, often leave them feeling directionless in their learning. On the other hand, external factors relate to the limited opportunities students have to actively engage in the learning process, which is often delivered by teachers in a way that lacks appeal and interactivity. Moreover, many teachers still do not utilize learning media during the instructional process (Sihombing *et al., 2023*). As a result, the material presented to students tends to lack meaning, leading to suboptimal learning outcomes—as observed by the classroom teacher. In light of this, there is a need for a learning design that can enhance students' motivation to learn.

It is essential to select appropriate learning media that can be used in the current teaching and learning process to enhance students' motivation. Therefore, the researcher is interested in exploring the use of animated videos in learning, which are expected to meet both teachers' and students' needs in understanding the lesson material and in increasing students' learning motivation. The use of animated video media also aims to address the challenges arising from the limited use of media in the learning process at schools.

To address the issues found in the sixth grade at SD Negeri 005 Kabun, a learning strategy is needed that can attract motivation and interest and increase student engagement, one of which is through the use of animated video media. The use of animated videos in elementary school learning is considered important because it can present material visually and attractively, making it easier for students to understand abstract concepts. Based on this urgency, this study was conducted to examine the effect of using animated videos about the solar system on the learning motivation of sixth-grade students at SD Negeri 005 Kabun.

LITERATURE REVIEW

Learning Motivation

According to the Indonesian Dictionary, motivation is defined as an internal drive that arises within a person, either consciously or unconsciously, to perform an action with a specific purpose. Motivation is the totality of impulses, desires, needs, and similar energies that direct behavior (Siregar, 2020). It can

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also be understood as an intervening variable that activates, regulates, sustains, and guides behavior toward a particular goal.

Learning motivation among elementary school students has several distinctive characteristics that reflect their level of engagement and enthusiasm during the learning process. Students with high learning motivation generally exhibit positive behaviors, such as diligence in completing tasks and demonstrating full attention and seriousness in their work (Akbar *et al.*, 2024; Amien *et al.*, 2024). Additionally, they show perseverance when facing difficulties and do not easily give up when encountering obstacles in learning. Furthermore, motivated students also display a strong curiosity, enjoy discovering new problems, and are enthusiastic about seeking solutions. These characteristics serve as an important foundation for assessing and developing learning strategies that can nurture the learning enthusiasm of elementary school students.

Generally, motivation to learn is divided into two types: intrinsic motivation and extrinsic motivation. Intrinsic motivation is the drive that causes a person to act actively or function independently without requiring external influences, whereas extrinsic motivation is the opposite, where a person's drive and functioning are triggered by stimuli from the external environment (Prasnanda & Yusuf, 2024). Students' motivation to learn is influenced by various factors, originating both from within themselves and from the influence of teachers. Several factors affect learning motivation, including: 1) Students' aspirations or hopes; 2) Students' skills; 3) Students' conditions; 4) Students' environmental conditions; 5) Active elements in the learning process; and 6) Teachers' efforts in educating students (Elvira *et al.*, 2023). On the other hand, student motivation is characterized by several traits, including: 1) Being thorough in completing tasks; 2) Able to face challenges; 3) Having interest in various issues; 4) Preferring to work individually; 5) Easily bored by repetitive tasks; 6) Able to sustain arguments; and 7) Reluctant to let go of previously held beliefs. Individuals who exhibit these characteristics can be said to have high learning motivation (Nainggolan *et al.*, 2024).

Based on the above explanation, it can be concluded that learning motivation is the driving force that moves students to learn, originating both from within themselves (intrinsic motivation) and from external sources (extrinsic motivation). This motivation is influenced by various factors such as aspirations, abilities, personal and environmental conditions of the students, and the role of the teacher. Highly motivated students typically demonstrate thoroughness, resilience in facing challenges, a preference for working independently, boredom with monotonous tasks, and an interest in problem-solving.

Natural and Social Sciences (IPAS) Subjects in Elementary School

Natural and Social Sciences (IPAS) is a field of study closely related to human life, particularly the learning of natural sciences. It covers topics related to the human body, such as the digestive and respiratory organs, as well as food, medicine, agriculture, fisheries, industry, technology, and others (Amalia & Hardini, 2020). Given that human activities are closely connected to natural sciences, the teaching of science in schools—especially at the elementary school level—should be conducted in a practical and hands-on manner by teachers. In elementary schools, teachers play a role in training students' thinking abilities, such as understanding basic concepts of the material, developing learning content, and applying the material in daily life. The objective of science learning is to utilize scientific knowledge and fundamental science concepts in everyday life (Ansya, 2023).

The scope of science learning in elementary schools under the 2013 Curriculum is adjusted to the students' level of need and aims to improve learning outcomes covering spiritual aspects, attitudes, knowledge, and skills. The scope of science subjects at the elementary school level, based on the decision of the Minister of Education and Culture, includes the human body and senses, plants and animals, properties and states of surrounding objects, the universe and its phenomena, the forms of animal and plant bodies, life cycles of living beings, plant reproduction, states of matter, force and

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motion, forms and sources of energy, the human respiratory system, changes and properties of matter, heat conduction, electricity and magnetism, the solar system, and mixtures and solutions Susanti & Apriani, 2020).

Solar System

One important topic taught to sixth-grade elementary school students is the solar system. This material is studied in the science subject according to both the 2013 Curriculum and the Merdeka Curriculum as part of the basic competencies aimed at equipping students with an understanding of natural phenomena in the universe, particularly related to celestial bodies. The solar system material covers knowledge about planets, moons, stars, and other celestial objects that are part of the broader universe (Annisa *et al*., 2024). The solar system is a collection of various celestial objects, such as planets, satellites, asteroids, and comets, that are influenced by the sun's gravity. Since ancient times, humans have been fascinated by the beauty and mysteries of the night sky. However, the existence and arrangement of these objects were only fully revealed following advances in science and technology, revealing a system consisting of the sun and other celestial objects orbiting around it (Saputra *et al*., 2024).

One theory about the formation of the solar system is the nebular hypothesis proposed by Immanuel Kant in 1755. According to this theory, the formation of the solar system began from a rotating nebula. In 1796, Simon de Laplace introduced the idea that the planets were formed from gas rings ejected from the Sun's equator. Each planet in the solar system continuously revolves around the Sun, which is the central star, along its own orbital path. Because each planet is at a different distance from the Sun, its revolution periods vary. This variation in distance from the Sun causes differences in temperature on each planet (Mu'minin *et al*., 2023). The solar system consists of various celestial objects orbiting around it. Each part of the sky moves according to its structure in an orderly and complementary manner so that it does not interfere with the other planets. The following is an explanation of the entire solar system, including the Sun and its planets. The Sun is a very important part of the solar system, functioning as the main component of the system. The Sun is often referred to as the center of the solar system. The Sun has a mass equivalent to 332,830 times that of Earth. With such a large mass, its core becomes extremely dense, allowing continuous nuclear fusion to occur, producing an enormous amount of energy. This energy is then emitted into space in the form of electromagnetic radiation covering the electromagnetic spectrum. Besides the Sun, there are other members of celestial objects, namely the planets. Planets are a type of celestial body that vary in shape and size. There are eight planets in the solar system, namely Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune, each with distinct variations in shape and size.

Animated Video

One of the engaging and effective learning media used in science education at the elementary school level is animated video. Animated video media consists of recordings created in a specific manner, featuring images and sounds of objects arranged according to a predetermined sequence (Nurrahmi *et al*., 2024). The use of animated media can increase students' learning motivation throughout the instructional process. Animated videos serve as an attractive and unique learning tool, thereby motivating students to actively participate in learning. This media can elicit positive responses from students by creating an enjoyable learning environment and introducing a fresh experience during the learning process. Students are encouraged to pay closer attention to the learning material. Animated video media combines both audio and visual elements that include images. Its purpose is to foster a pleasant atmosphere and to function as a tool for delivering educational content. Moreover, animated video learning media allows students to access the material easily at any time (Chakam *et al*., 2023).

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Animated video is a collection of moving images accompanied by sound, arranged into an engaging unity that contains various information aimed at achieving learning objectives. Animated videos are considered highly appealing due to their numerous advantages. The benefits of using animated videos include: 1) attracting students' interest and concentration; 2) enhancing the visual appeal during teaching and learning activities; 3) facilitating the management of the learning process; 4) simplifying students' understanding; and 5) effectively explaining material that is considered difficult (Dewi & Negara, 2021).

Additionally, there are several advantages to using animated videos as learning media, namely: 1) greater effectiveness and speed in delivering material; 2) ease of repeating specific topics; 3) the ability to clearly and thoroughly explain processes and events; 4) the capability to transform abstract materials or concepts into more concrete forms; 5) high durability with minimal damage, allowing repeated use; 6) requiring teacher skills in utilizing technology; and 7) enhancing basic skills and providing new experiences for students. This animated video media aligns with the learning objectives and curriculum that prioritize student engagement in learning activities (Asih *et al*., 2023).

METHODS

The approach applied in this study is a quantitative approach using an experimental method, with a quasi-experimental design in the form of a nonequivalent control group design. This study is designed to examine the effect of using animated video media on the learning motivation of students at SD Negeri 005 Kabun. The research involves two groups: an experimental group using animated video media and a control group using PowerPoint presentations.

In this study, the subjects analyzed were all sixth-grade students at SD Negeri 005 Kabun, divided into two classes as shown in **Table 1**.

Table 1. Research Population

Explanation	Class	Male Students	Female Students	Total Students
Kontrol	VI A	13	6	19
Eksperimen	VI B	10	8	18

Source: Data from SD Negeri 005 Kabun 2025

The data collection methods in this study included questionnaires and research instruments used to measure the variables under investigation in the form of questionnaire sheets. The questionnaire used in this study was a closed questionnaire administered to the students to assess the impact of using animated video media on the learning motivation of sixth-grade students at SD Negeri 005 Kabun. Before proceeding to the prerequisite tests and hypothesis testing, the researcher first conducted a content validity test through expert judgment on the learning media in the form of an animated video about the solar system to be used in the study. The results of the expert validity assessment can be seen in **Table 2** below.

Table 2. Results of Expert Validity Test

Expert Name	Score	Percentage	Results
Expert 1	36	80%	Fit for use
Expert 2	38	84,4%	Fit for use

Source: Research Data Result 2025

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Based on Table 2, it can be concluded that the content validation by Expert 1 and Expert 2 on the solar system animated video media obtained scores of 36 and 38, respectively, with average percentages of 80% and 84%. These results indicate that the media is deemed suitable for trial use without requiring revisions.

Next, the data analysis techniques used in this study include prerequisite tests such as normality and homogeneity tests, while the hypothesis testing employs the independent sample t-test. The independent sample t-test is used to examine whether there is a significant difference between the means of two independent groups. In experimental research, this test is commonly used to compare the results between the group receiving the treatment (experimental group) and the group not receiving the treatment (control group).

RESULTS AND DISCUSSION

This study aims to examine the effect of using animated video media on the solar system on the learning motivation of sixth-grade students at SD Negeri 005 Kabun. Based on observations of the implementation of teacher and student activities during the learning process in the experimental class (which used animated videos) and the control class (which only used PowerPoint), the following are the results of the prerequisite tests and hypothesis testing.

Normality Testing

The normality test aims to determine whether a variable is normally distributed. In this study, the normality of the data was tested using the Shapiro-Wilk test through SPSS version 29. The data is considered to be normally distributed if the significance value from the calculation result is greater than 0.05.

Table 3. *Pretest* Normality Testing Result

Class	Sig (p)	Explanation
Control	0.431	Data normally distributed
Experiment	0.621	Data normally distributed

Source: Research Data Result 2025

From **Table 3**, the results of the pretest normality test show that the significance value for the control class is 0.431, while the experimental class has a significance value of 0.621. These results indicate that both classes have significance values ($p > 0.05$), meaning the data from both the control and experimental classes in the pretest are normally distributed.

Table 4. *Posttest* Normality Testing Result

Class	Sig (p)	Keterangan
Control	0.176	Data normally distributed
Experiment	0.578	Data normally distributed

Source: Research Data Result 2025

From Table 4, the results of the posttest normality test show that the significance value for the control class is 0.176, while the experimental class has a significance value of 0.578. This indicates that both

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classes have significance values (p > 0.05), meaning the data from both the control and experimental classes in the posttest are normally distributed.

Based on the data from the pre-test and post-test results used to measure changes in student motivation before and after the treatment, the experimental group, which received instruction using animated video media, showed a significant increase in average post-test scores compared to the pre-test scores. In contrast, the control group, which used PowerPoint as a learning medium, exhibited only a slight improvement in post-test scores. This indicates that the use of animated video media has a positive impact on enhancing students' learning motivation.

Homogeneity Testing

The homogeneity test aims to determine whether the samples have equal variances. To test uniformity, the Levene's statistical test was applied with a significance level of 0.05. The criterion used to assess homogeneity is as follows: if the p-value is less than α (α = 0.05), then the alternative hypothesis (Ha) is rejected. Conversely, in other cases, the null hypothesis (Ho) is accepted. A summary of the homogeneity test results is presented in **Table 5**.

Table 5. Homogeneity Testing Results

		Levene Statistic	df1	df2	Sig.
Control Class & Experiment Class	Based on Mean	.006	1	35	.938
	Based on Median	.014	1	35	.906
	Based on Median and with adjusted df	.014	1	32.113	.906
	Based on trimmed mean	.009	1	35	.926

Source: Research Data Analysis 2025

Based on Table 5 above, it is known that if the significance value (sig.) is greater than 0.05, then the alternative hypothesis (Ha) is accepted, meaning the data come from a homogeneous population. Conversely, if the significance value (sig.) is less than 0.05, the null hypothesis (H0) is rejected, indicating that the data come from a non-homogeneous distribution. From the data above, it can be seen in the "Based on Mean" column that the sig. value is 0.938 > 0.05. This indicates that the data come from a homogeneous distribution.

Hypothesis Testing

The independent sample t-test in this study is used to address the research question: "Is there an effect of using solar system animation videos on the motivation of sixth-grade students at SD Negeri 005 Kabun?" To answer this question, the independent sample t-test was conducted on the post-test data from the experimental group (animation video) and the post-test data from the control group (PowerPoint). The following are the data analysis results obtained using SPSS version 29.

Table 6. Independent Sample T-Test Result

Posttest Result	F	Sig.	t	df	Sig (2-tailed)	Mean	Std Error	Lower	Upper
Variances Assumed	.006	0.938	-5.883	35	<0.001	-6.357	1.081	-8.550	-4.163
Variances Not	-	-	-5.897	34.965	<0.001	-6.357	1.078	-8.545	-4.168

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Posttest Result	F	Sig.	t	df	Sig (2-tailed)	Mean	Std Error	Lower	Upper
Assumed									

Source: Research Data Analysis 2025

Based on the results obtained, the significance value (Sig. 2-tailed) is less than 0.001, which is below the significance level of 0.05. Therefore, it can be concluded that there is a significant difference between the experimental group and the control group. This indicates that the use of animated video media about the solar system has an impact on the learning motivation of sixth-grade students at SD Negeri 005 Kabun. Furthermore, the results show that the average post-test score for the control group is 118.42, while the experimental group's average reaches 124.78. This difference demonstrates that the learning motivation of students using animation video media is higher compared to those who do not use such media. Based on this explanation, the alternative hypothesis (Ha) is accepted, and the null hypothesis (H_0) is rejected, indicating that the use of solar system animation video media is proven effective in enhancing students' learning motivation.

Based on the results from the prerequisite tests through to the hypothesis test using independent sample t-test analysis, it is detailed that in the experimental group, the average pre-test score was in the low to moderate category, indicating that before the treatment, students were less motivated to learn science. However, after being given instruction using animated video media, the average post-test score increased to a high category, signaling a strong improvement in motivation. Students appeared more enthusiastic, actively asked questions, and were more focused during the learning process. Related to the statistical test results using the independent sample t-test, the significance value (Sig. 2-tailed) obtained was <0.001, which is lower than the significance threshold of 0.05. This indicates a significant relationship between the use of animated video media and student learning motivation. Thus, the research objective to determine the effect of animated video media on students' learning motivation has been answered, and the research problem posed has found a measurable solution. It can be concluded that animated video media has an impact on students' learning motivation. With diverse media available, students become more interested and better able to understand the material, thereby increasing their motivation to learn, which positively affects their learning outcomes.

Discussion

Learning is an effort by an educator to achieve specific goals and optimize the learning process. It is an activity through which individuals acquire knowledge, skills, and values by utilizing various resources. Learning that incorporates information and communication technology depends on the role of the educator as a facilitator rather than the primary source of information. Additionally, technology can be used as a learning tool or as a supportive medium to help achieve learning objectives. Digital learning media serve as tools to assist the learning process. One example is animated video, which combines images and sound to capture students' interest. Video is also an electronic medium that integrates audiovisual and video technology to deliver information. Therefore, video can attract students' attention, especially when created creatively by educators, such as by adding animation for use in elementary school learning (Haq & Irawati, 2022; Pasampuri *et al*., 2024).

One form of technological media suitable for current learning processes is animated video media (Sinaga *et al*., 2023). Animated video media presents moving images accompanied by sound and represents an advancement in science and technology. The utilization of animated video media has a significant impact on students during the learning process and can enhance their learning motivation. As an audio-visual learning medium, animation can deliver information that can be seen, heard, and

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experienced simultaneously. This audio-visual media is capable of presenting learning materials in a more engaging and non-monotonous manner, thereby facilitating the effective delivery of information.

Based on the research conducted, it can be observed that the use of animated video media on the solar system positively influences the learning motivation of sixth-grade students at SDN 005 Kabun. This is evidenced by the increased attention, interest, and active participation of students during the learning process. The use of animated video media elicits positive responses from students, motivating them to learn and creating a new learning atmosphere through listening to the lesson material (Irawan *et al*., 2021). Furthermore, the implementation of animated video learning media has a positive effect on students' interest and motivation to learn (Hayaturrohmah *et al*., 2025; Sari *et al.,* 2025). By utilizing animated video as a teaching medium, classroom learning activities become more effective and are able to foster students' motivation to focus on the material presented, resulting in increased enjoyment of the learning process (Nirmala *et al*., 2024; Purnama *et al*., 2023).

In animated videos, there are several advantages or benefits offered to users, namely (Dewayanti *et al*., 2023):

1. Attracting students' attention
   Animated videos display a combination of motion, color, sound, and dynamic visuals. These characteristics align well with the learning styles of elementary school children, who tend to be visual and kinesthetic learners.
2. Using simple and easy-to-understand language
   The language used in animated videos is usually tailored to the cognitive development level of the students. Explanations are delivered through light dialogue or narration, avoiding overly technical terms, thus making the content more communicative.
3. Helping to understand abstract concepts
   Animated videos are designed to simplify concepts that are difficult to observe directly. For example, in learning about the solar system, animated videos can realistically demonstrate planetary movements, thereby facilitating students' comprehension.

Besides its advantages, learning media also have several limitations. The constraints of using animated video media in the learning process include several challenges, namely (Yuliani *et al*., 2024):

1. Lack of teacher knowledge
   Many teachers do not yet have sufficient knowledge about the use of animated videos, thus requiring further training.
2. Limited availability of animated videos
   The availability of animated videos that match all learning materials is still limited, so not all topics can be delivered using this media.
3. Limited technical skills among teachers
   Many teachers have not mastered the techniques for using animated videos and even lack understanding of the basic concepts of this media.
4. Potential disruption of learning interaction
   If students become too passive or distracted while videos are played, their attention may wander, leading to a one-way and less interactive learning process.
5. Demand for creativity and technological adaptation
   Teachers are required to be more creative, intelligent, and capable of adapting to technological developments in education

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6. Need for emphasis on the importance of media
   Because animated video media is still relatively new, educators need to frequently explain its benefits and purposes to students during the learning process.

Based on the research findings, the use of animated video media in learning about the solar system has a positive effect on students' learning motivation. The engaging visualizations and interactive presentation of the material enhance students' interest and involvement throughout the learning process. Students become more enthusiastic, actively ask questions, and demonstrate a better understanding of the concepts within the solar system material compared to conventional learning without the use of animated media.

Thus, it can be concluded that animated video media is an effective alternative learning tool to be used at the elementary school level, especially for conveying abstract or complex materials such as the solar system. Therefore, teachers are encouraged to utilize animation technology more extensively as part of innovative teaching strategies to enhance students' motivation and overall learning outcomes.

CONCLUSION

Based on the research conducted in grade VI at SD Negeri 005 Kabun, it can be concluded that the use of animated video media in science learning (IPAS) on the solar system material has a positive effect on students' learning motivation. The use of this media makes students more interested, active, and enthusiastic in following the lessons, as well as helps them to better understand abstract materials more easily. These findings indicate that animated video media can serve as an effective alternative learning strategy to increase students' motivation and active engagement, as well as support the achievement of science learning objectives in elementary schools. This study recommends that teachers, especially at the elementary school level, consider utilizing animated video media in the science learning process, particularly for materials that are visual and complex, such as the solar system. Using media that aligns with students' characteristics and the subject matter not only enhances learning motivation but also strengthens a deeper conceptual understanding.

AUTHOR'S NOTE

The author declares that there is no conflict of interest related to the publication of this article. The author affirms that the data and content of this article are free from plagiarism.

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