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The Relationship between the Use of Audio-Visual Learning Media and Learning Motivation with Learning Outcomes in Elementary School

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Abstract: Learning media is an important aspect of learning. There are many media developments in this era, from the various learning media especially audiovisual types. This media is widely used by teachers because it is believed to have an impact in improving learning outcomes. This investigation aims to prove the relation between the use of audiovisual media and learning motivation with the learning's outcomes of IPAS for grade V students in Gugus Diponegoro, Sigaluh District, Banjarnegara Regency. This study uses a correlational quantitative method. Sampling was taken with a purposive sampling technique which had a total sampling of 85 respondents. The result is the coefficient of determination shows (1) 0.683 there is a relationship between the use of audiovisual learning media with IPAS learning outcomes; (2) 0.721 there is a relationship between learning motivation with IPAS learning outcomes; and (3) 0.825 together there is a relationship between the use of audio- visual learning media and learning motivation with IPAS learning outcomes in Gugus Diponegoro Sigaluh District Banjarnegara Regency.

Keywords: Audiovisual learning media; Learning motivation; Learning outcomes

Introduction

Indonesia has implemented the Merdeka Curriculum to enhance student-centered learning, emphasizing character development through the Pancasila Student Profile (Nursalam et al., 2023). However, a major challenge lies in teachers' readiness to adapt to these changes, which involve both cognitive and character-building aspects (Warsihna et al., 2023). One crucial dimension emphasized is critical reasoning, a key skill for navigating the digital era (Wiyani, 2023).

Technological advancements have transformed education, especially at the elementary level, where digital tools enhance learning media (Anita & Astuti, 2022). Research indicates that technology-based media improve student engagement and learning outcomes (Sa'odah et al., 2022). Audiovisual media, widely used in classrooms, help clarify concepts and stimulate imagination (Pertiwi et al., 2023). Despite various studies on learning media, gaps remain in understanding what makes audiovisual media more effective than traditional methods. Studies suggest that it enhances comprehension and retention by engaging multiple senses (Wardani et al., 2024), but comparative research within the Merdeka Curriculum context is still limited.

This study aims to analyze the effectiveness of audiovisual media in Grade V IPAS learning in Gugus Diponegoro, Sigaluh District, Banjarnegara Regency. Preliminary findings show that 4 out of 8 teachers use audiovisual media for IPAS, with 98 out of 120 students meeting the KKTP criteria. This suggests a potential link between audiovisual media and improved academic performance, warranting further investigation.

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Learning outcomes, influenced by factors like motivation, play a crucial role in education (Made et al., 2024). Motivation significantly affects both behavior and academic success ((Ridho'i et al., 2022; Aspiani et al., 2023)). Digital learning innovations support critical thinking and engagement (Landina & Agustiana, 2022), making teacher proficiency in media utilization essential (Ainiyyah et al., 2023). Audiovisual media effectively deliver content through sound and visuals (Darihastining et al., 2020), while video-based learning allows for repeated, detailed explanations (Imelda Nur Aryanti & Rusnilawati, 2022).

Under the Merdeka Curriculum, IPAS integrates Natural and Social Sciences, shifting from rote memorization to deeper comprehension ((Solikah et al., 2024); (Mayarni et al., 2023)). Audiovisual media support this transition by simplifying complex concepts. Studies on Sparkol Videoscribe animation (Dewi & Tyas, 2024) and interactive PowerPoint in IPAS learning have shown significant improvements in student performance (Nurani & Tyas, 2024).

This study is unique in analyzing both audiovisual media and student motivation in the Merdeka Curriculum framework. Despite training sessions, many teachers in Gugus Diponegoro still face challenges in accessing and utilizing digital media due to infrastructure limitations. By addressing these gaps, this research provides insights for enhancing elementary education policies and teaching strategies. The findings can guide teacher training, curriculum development, and digital integration in classrooms to optimize learning outcomes in the digital era.

Based on classroom observations in Gugus Diponegoro, the researcher was motivated to conduct a study entitled "The Relationship between the Use of Audio-Visual Learning Media and Learning Motivation with Student Learning Outcomes in Grade V IPAS Learning in Diponegoro Gugus, Sigaluh District, Banjarnegara Regency." This study not only addresses the existing gaps in literature but also offers practical implications that can enhance both policy and practice in elementary education.

Method

The research design is quantitative with a correlational approach. Sugiyono, (2019) defines quantitative research as a positivist-based methodology using research instruments to collect data to study certain populations or groups. Data analysis in quantitative research aims to prove the hypothesis.

Eight schools in the Diponegoro Cluster, Sigaluh Sub-district, Banjarnegara Regency, were used as research sites. Learners filled in a google form that served as a questionnaire for data collection purposes. There were two supporting questions and 18 statements in the satisfaction survey on audiovisual learning media usage. Meanwhile, the statement items in the learning motivation questionnaire totaled 15 items.

Purposive sampling is used as a sampling technique. Sugiyono, (2019) explains that this technique means that the sample is determined through certain considerations, in this study, namely by selecting schoo ls whose teachers use audio visual learning media.

Table 1. Research Sample

School	Number of Learners
SDN 1 Sigaluh	32
SDN 1 Kalibenda	25
SDN 1 Singamerta	18
SDN 2 Gembongan	10
Total	85

Four schools containing 85 Grade V learners were selected from a total of eight schools with 120 learners. IBM SPSS Version 25 software was used to conduct the requirements and hypothesis testing as part of the data analysis technique. Figure 1 illustrates the research plan.

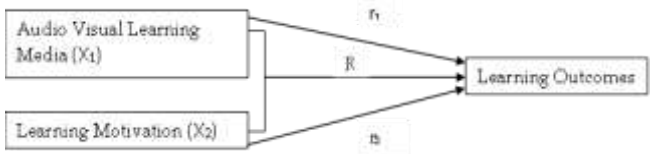

Figure 1. Research Scheme

Result and Discussion

The findings of the requirements test were obtained from filling out a questionnaire on the use of audiovisual media. Normality, multicollinearity, and linearity, tests are part of the requirements test.

Table 2. Normality Test Results

		Penggunaan Media Audiovisual	Motivasi Belajar	Hasil Belajar
N		85	85	85
Normal Parameters[a,b]	Mean	59.21	46.45	80.02
	Std. Deviation	7.556	7.867	9.761
Most Extreme Differences	Absolute	.077	.080	.071

		Penggunaan Media Audiovisual	Motivasi Belajar	Hasil Belajar
	Positive	.077	.076	.054
	Negative	-.077	-.080	-.071
Test Statistic		.077	.080	.071
Asymp. Sig. (2-tailed)		.200[c,d]	.200[c,d]	.200[c,d]

The normality test obtained a normally distributed residual value. As evidenced in the figure, the significance value is 0.200>0.05. Deviation From Linearity is a metric used to measure linearity test results. A linear relationship is seen in the variable use of audiovisual learning media with IPAS learning outcomes because the linearity test gets a significant value of 0.492> 0.05. A linear relationship is also shown between the learning motivation variable and IPAS learning outcomes which obtained a variable significance value of 0.182>0.05. There is no multicollinearity between independent variables as indicated by a tolerance value of 0.506 (0.506> 0.1) and obtaining a VIF value of 1.974 (1.974 < 10).

Figure 4. Students Access Interactive Power Point "Sispema"

Figure 2. Learning Using Interactive Power Point "Sispema"

Figure 5. Use of Media in Group Activities

Figure 3. Learning Using YouTube Videos

Figure 6. Researcher Explains Steps to Fill Out Questionnaire

Figure 7. Students Fill Out the Questionnaire

The Relationship between the Use of Audio-Visual Learning Media and IPAS Learning Outcomes

To facilitate the delivery of material, audio- visual media comes with technology that combines sound with visual components or animation (Mayarni et al., 2023). The use of audiovisual learning resources such as YouTube videos and interactive powerpoints is the main emphasis of this research. Researchers set 3 indicators which include: (1) the quality of learning media used in learning; (2) the use of audio-visual learning media in building teacher communication and interaction with students; and (3) the coverage of the use of audio visual learning media.

The results of interviews with classroom teachers helped researchers obtain information about IPAS learning material on the digestive system which was carried out for 2 meetings so that the teacher used 2 media in learning, namely interactive power points and YouTube videos. The teacher uses an interactive power point "Sispema" which stands for the human digestive system.

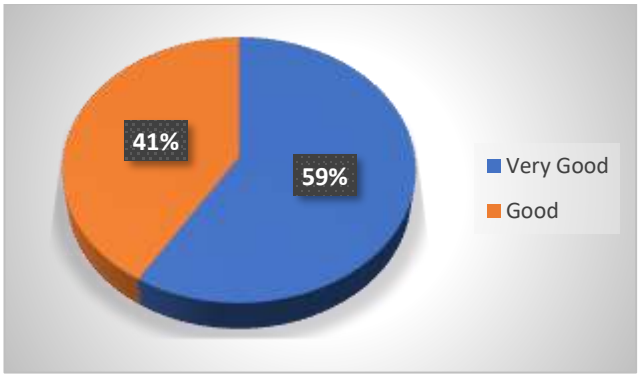

Figure 8. Results of Questionnaires on the Use of Audio-Visual Learning Media

According to Figure 8, 50 learners (58.82%) gave an excellent rating to the media used by the teacher. These results show that when learners use these resources in their learning activities, they consistently gain several benefits, including the quality of learning materials, the ability to foster interaction and communication between teachers and learners, and the scope of their use.

The media used by the teacher was evaluated by 35 learners (41.18%) by obtaining good criteria. The use of audiovisual learning resources is good criteria which means that learners often accept the quality of learning resources used in learning activities, that the use of audio-visual learning resources helps foster interaction and communication between learners and teachers, and that the use of audiovisual learning resources is covered.

The rcount value of 0.826 was obtained based on the findings of the correlation hypothesis test between the variable of the use of audiovisual learning materials and IPAS learning outcomes. This finding indicates that the relationship is good. This implies that students will learn IPAS more effectively if the available audiovisual learning resources are used more effectively. The rcalculated value of 0.826 in the range of 0.81 to 1.00 indicates the size of the correlation coefficient in the very strong criteria. The correlation is considered significant because at the 5% level the significance value is 0.000<0.05.

The use of audiovisual learning media contributed 82.6% to the learning outcomes of IPAS, the remaining 17.4% was another factor that was not studied. The results of researcher observations and teacher interviews corroborate the results of these calculations and show that the use of audiovisual learning media in class V of Gugus Diponegoro, Sigaluh District, Banjarnegara Regency effectively maximizes students' IPAS learning outcomes. One of the reasons is that the use of interactive powerpoints and learning videos by teachers is useful for channeling material to students. In line with the research of Khoirunnisa et al., (2024)students can learn using learning media with audiovisual types to obtain learning outcomes that meet the KKTP.

Luh et al., (2021) research also found that interactive power points are effective in learning science. Suliyati et al., (2023) research on educational animation videos which are considered valid, useful, and successful in improving creative thinking skills in science subjects. While the results of research by Mulyanto & Mustadi, (2023) show that elementary school students can benefit from the use of interactive power point learning materials in social studies learning activities. Research Wirawan & Gading (2022) shows how learning outcomes in science subjects can be improved using interactive power points.

According to the results of these calculations, it was found that there was a positive and significant relationship between the use of audiovisual learning media and the learning outcomes of IPAS for grade V students in the Diponegoro Cluster. The use of this learning tool can help teachers communicate science

concepts better to students so that they can understand them. This is indicated by interactive power point learning media "Sispema" and YouTube videos, which can be effectively used in learning and have the benefit of increasing understanding. This means that teaching media with audiovisual types is very effective when used to improve IPAS learning outcomes.

Relationship between Motivation and IPAS Learning Outcomes

Efforts to encourage encouragement and enthusiasm for learning to students require motivation to learn. Uno, (2016) argues that learning motivation is a drive that comes from internal and external sources to change behavior. This is in line with the opinion of Ainiyyah et al., (2023) that the high and low motivation to learn is determined by two elements that have an influence on motivation, namely internal and external desires. Motivation from within has a significant influence on how the learning process develops and how well students learn (Arya Mudanta et al., 2020). Optimal learning outcomes cannot be achieved by even smart learners if they do not have the motivation to learn (Ningrat S et al., 2018). The right motivation is included in several indicators, namely having the desire to continue learning, the desire to succeed, and the dreams and future goals needed to achieve the best learning outcomes.

Based on this opinion, researchers determined 3 indicators in this study including: (1) The existence of desire and desire to succeed; (2) The existence of motivation and learning needs; and (3) the existence of future hopes and aspirations.

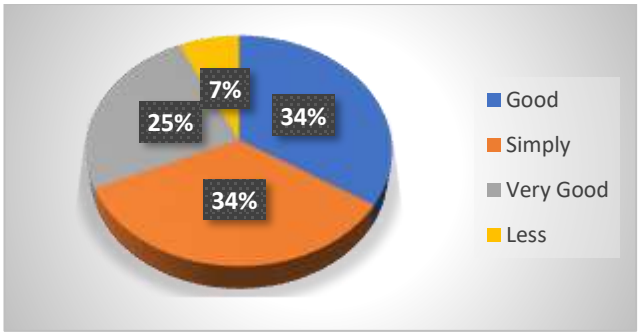

Figure 9 Learning Motivation Questionnaire Filling Results

Figure 9 shows the percentage of results from filling out the learning motivation variable questionnaire. There are 29 students (34.12%) who have learning outcomes with good criteria, 29 students (34.12%) with sufficient criteria, 21 students (24.71%) with very good criteria, and 6 students (7.06%) with less criteria.

From the hypothesis testing, the relationship between motivation and IPAS learning outcomes obtained rcount of 0.849. The findings of this calculation indicate a positive correlation between IPAS learning outcomes and learning motivation. A high level of motivation tends to have an influence on learning outcomes. The rcalculated value of 0.849 in the range of 0.81 to 1.00 indicates the magnitude of the correlation coefficient in the very strong criteria. The correlation is considered significant because with a significance level of 5% the significance value is 0.000 <0.05. The correlation between motivation and IPAS learning outcomes reached 84.9% of the whole, the remaining 15.1% is another factor that was not studied.

Thus, learning motivation significantly influences the improvement of IPAS learning outcomes. This motivation has an impact on learners' achievement in IPAS subjects because better results are achieved when learners are driven to learn and have a strong desire to succeed. On the other hand, learning outcomes usually decline in the absence of sufficient motivation. In line with Ananda & Hayati, (2020) they claim that learners' achievement goals can trigger their passion for learning and guide them throughout the educational process. Because the achievement of these goals will lead to self-actualization, so it can increase learning motivation. Thus, teachers play an important role in increasing learners' excitement and encouraging them to fully engage in the learning process (Utari & Putra, 2021). Researchers interviewed grade V teachers in Gugus Diponegoro, Sigaluh sub-district, Banjarnegara district and the findings corroborate this. Based on the interviews, students' learning motivation tends to be high. The high learning motivation means that it will have an impact on the IPAS learning outcomes they get. Learning motivation and science learning outcomes seem to have a strong correlation, according to the teacher's statement.

Optimal grades can be achieved by students when they are more motivated to learn. In line with the opinion of Ikhlasul & Adan, (2023) that the purpose of learning motivation is to motivate students to achieve the best possible learning outcomes. In summary, grade V students in the Diponegoro Cluster have learning motivation and IPAS learning outcomes that are significantly correlated and have a positive influence.

The Relationship between the Use of Audio-Visual Learning Media and Learning Motivation with IPAS Learning Outcomes

To improve the success of teaching and learning activities, audiovisual learning media is very important in the classroom. Interactive power points and YouTube videos are examples of audiovisual learning media that convey more in-depth information than just text or images. Utilizing audiovisual media well can affect learning motivation and will affect academic achievement.

Table 3. Multiple Correlation Test Results

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	.825	.821	4.131

The use of audiovisual learning media and learning motivation with IPAS learning outcomes together has a rcount of 0.825, according to the results of the multiple correlation hypothesis test. As a result, both variables show a positive relationship at the same time. Students' IPAS learning outcomes can improve when using audiovisual learning resources and are more motivated to learn. The rcalculated value of 0.825 in the range of 0.81 to 1.00 shows the strength of the correlation coefficient in the strong criteria. The correlation is considered significant because with a significance level of 5% the significance value is 0.000 <0.05. The combined contribution of learning motivation and the use of audiovisual learning media with IPAS learning outcomes was 82.5%, with an additional factor not included in the study of 17.5%.

The findings of these calculations show that both variables have a positive and significant effect on the learning outcomes of IPAS grade V students in the Diponegoro Cluster at the same time. Making maximum use of audiovisual learning resources will help students understand the content during learning, so that it will increase their learning motivation. Both variables together have an impact on improving IPAS learning outcomes. The results of this study also reveal an increase in learning motivation that contributes to improving the learning outcomes obtained. Therefore, the research hypothesis is proven.

Conclusion

The research conducted aims to investigate whether the use of audiovisual learning media and motivation are related to IPAS learning outcomes. Based on the research findings, the use of audiovisual learning media and learning motivation has a distinctly significant effect on IPAS learning outcomes. Thus, audio visual learning media should be considered as a means of science and technology education. In addition, teachers play an important role in encouraging learners to be motivated to learn, which can improve their academic achievement. Suggestions for schools are to design more effective learning programs. Thus, it is expected to improve the quality of education by supporting the provision of audiovisual-based learning facilities, such as projector devices, computers, or interactive learning videos, so that learning becomes more interesting. Suggestions for teachers, namely, to improve students' understanding of learning materials, it is recommended that audiovisual learning media be used more often during the learning process, whether IPAS subjects or others. Suggestions for students are expected to utilize audiovisual learning media as a reference for independent learning and can improve their understanding and achievement. In addition, students also need to increase learning motivation consistently by setting clear learning goals.

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Author Contributions

DE plays a role in determining the research idea, methodological design, data collection, data analysis, and writing the original draft of the article. DNT oversees guiding, supervising, and validating the instruments used. in the research.

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Conflicts of Interest

The authors declare no conflict of interest.

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