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The Influence of Video and Image Media on Students' Mathematics Learning Outcomes in View of Learning Interest

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A B S T R A K

Rendahnya minat siswa dalam belajar berdampak pada hasil belajar yang rendah. Tujuan penelitian ini adalah menganalisis pengaruh antara penggunaan media video dan media gambar terhadap hasil belajar siswa ditinjau dari minat belajar siswa; pengaruh minat belajar siswa yang tinggi dan rendahnya minat belajar siswa terhadap hasil belajar siswa dan interaksi penggunaan media pembelajaran dan minat belajar siswa dengan hasil belajar siswa ditinjau dari minat belajar siswa. Populasi dalam penelitian ini adalah berjumlah 34 siswa. Pengumpulan data terdiri dari data angket minat dan data tes hasil belajar. Angket digunakan untuk mengumpulkan data tentang minat belajar siswa dengan menggunakan media video dan gambar, sedangkan tes berkaitan dengan hasil belajar siswa melalui media pembelajaran video dan gambar. Analisis data penelitian ini menggunakan teknik Anova dua arah. Hasil penelitian menunjukkan terdapat perbedaan pengaruh antara penggunaan media video dan media gambar terhadap hasil belajar siswa ditinjau dari minat belajar.. Berdasarkan analisis deskriptif dapat diketahui bahwa minat siswa yang tinggi lebih baik dibandingkan minat siswa yang rendah terhadap hasil belajar siswa. Implikasi penelitian ini adalah dapat memberikan wawasan berharga tentang pentingnya pemilihan media pembelajaran yang sesuai dengan minat siswa.

A B S T R A C T

Students' low interest in learning has an impact on low learning outcomes. The aim of this research is to analyze the influence of the use of video media and image media on student learning outcomes in terms of student interest in learning; The influence of high student interest in learning and low student interest in learning on student learning outcomes and the interaction of the use of learning media and student interest in learning with student learning outcomes in terms of student interest in learning. The population in this study was 34 students. Data collection consists of interest questionnaire data and learning outcomes test data. Questionnaires are used to collect data about students' learning interests using video and image media, while tests are related to student learning outcomes through video and image learning media. Analysis of this research data used the two-way Anova technique. The results of the research show that there are differences in the influence between the use of video media and image media on student learning outcomes in terms of learning interest. Based on descriptive analysis, it can be seen that high student interest is better than low student interest on student learning outcomes. The implications of this research are can provide valuable insight into the importance of choosing learning media that suits students' interests.

1. INTRODUCTION

Education plays an important role in shaping a person's personality, knowledge and skills. With the help of education, a person can realize his potential and become a productive member of society. Education can develop personal potential and improve the quality of life. Education helps a person to live independently and contribute to society. Education can also help someone develop their personality and become an intelligent, ethical and responsible person. For society, education can improve the quality of human resources and contribute to the country's progress. Therefore, education must be a priority for every individual and nation. Education helps people understand various things so they can make good decisions and solve the problems they face. Education can also help society build a better civilization. Education is a long-term investment that brings great benefits to individuals, society and the country. Education is the

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deliberate and planned creation of a learning atmosphere and learning process that enables students to actively develop their potential and equip themselves with religious and spiritual strength, self-control, personality, intelligence, noble morals, and what is needed for themselves and society and country. and nation. Skill. This shows that education plays an important role in determining the future of a nation (Pamungkas & Koeswanti, 2022; Sihombing & Silalahi, 2022). By forming, developing and increasing personality potential, knowledge and skills, it provides a positive aura for the progress of the Indonesian nation's human resources.

Education is a sector that has a very important position and plays an important role in developing human attitudes and behavior through teaching and training efforts. Vocational High School (SMK) is a form of formal education unit that provides vocational education at the secondary education level. Vocational school education aims to prepare students to have skills, knowledge and attitudes that suit the needs of the world of work. Vocational school education has an important role in preparing students to enter the world of work. Through vocational school education, students can develop the work competencies needed to compete in the world of work. Education is a field that occupies a very important position and has a very important role in improving human attitudes and behavior. Vocational High School is a form of formal educational institution that provides vocational education at the secondary school level. Vocational education aims to prepare students with skills, knowledge and attitudes that are relevant to the demands of the world of work. Vocational education is essential to prepare students to enter the job market. Vocational education helps students develop the career skills they need to compete in the world of work. The aim of education is to equip and prepare someone to work in their field, to acquire skills and business planning skills to meet work and life needs. The characteristics of highly competent vocational school graduates are what the public and educated service users expect. Membership requires time management and ongoing bookings. This is achieved through activities which are the main focus of the learning process at SMK. Mathematics is one of the basic branches of knowledge for technological development, plays an important role in scientific disciplines, and improves human thinking patterns; it is also the main key to other sciences in schools (Sari et al., 2016; Situmorang, 2020).

Mathematics learning sector education in vocational high schools (SMK) aims to equip students with the knowledge, skills and attitudes needed to solve mathematical problems related to their field of expertise. Mathematics learning in vocational schools must be adapted to the needs and characteristics of vocational school students. Vocational school students have different educational backgrounds, so mathematics teachers need to apply varied learning methods. Apart from that, mathematics learning in vocational schools must be relevant to the world of work, so mathematics teachers need to link learning material to problems that occur in the world of work. Mathematics has uses and functions to support human activities. By studying mathematics, a person can develop his skills. Mathematics is a science that studies numbers, structure, space and change. Mathematics is a universal language that can be used to express ideas and concepts in various fields of knowledge, such as science, engineering, economics and business. Mathematics can help us think logically, solve problems, and make the right decisions. Mathematics can also help us understand the world around us. Mathematics is a part of life that is needed anytime and anywhere, so mathematics is important. However, you need to be aware that there are many obstacles that occur in schools in teaching mathematics. The low student mathematics learning outcomes are due to the fact that there are still many students who have not reached the KKM; based on the 2015 PISA survey, it shows that Indonesian mathematics is ranked 62nd out of 70 countries (Novitasari, 2016; Noviyana, 2019). Therefore, action is needed to provide changes to student success in learning mathematics at school.

Based on the results of initial observations and interviews with mathematics subject teachers in class, there is no use of media in delivering mathematics subjects. This will of course also have an impact on mathematics learning activities in the future. One-way learning activities will cause students to become inactive. The learning process will inhibit students' creativity and interest in participating in learning activities. This learning process will also make students quickly bored and uncreative. Many factors can influence students' mathematics learning outcomes, such as students' interest in learning and understanding of concepts (A, 2016; Fatqurhohman, 2019). This problem requires a change that can have a big impact on learning activities in schools. The obstacles that occur at Bustanul Ulum Pakusari Islamic Vocational School require action as a solution to the existing problems. The use of video and image media will certainly help solve problems in the material of linear absolute value equations for one variable. Mathematics is also called an abstract science, so a medium is needed to conceptualize this science (N. F. Handayani, 2020; Manapa, 2021). Mathematics learning has extensive material, so it is necessary to use learning media in the learning process (Sukarini & Manuaba, 2021; Wibowo & Pratiwi, 2018). Video media is a medium that combines audio and image elements simultaneously and is very effective in improving student learning outcomes (Tegeh et al., 2019; Yunita & Wijayanti, 2019).

Research related to the influence of video and image media on students' mathematics learning outcomes has shown significant developments in the last few decades. Various studies have indicated that the use of visual media, such as videos and images, can improve students' understanding of abstract mathematical concepts. Early research focused more on the effectiveness of visual media in general in improving learning outcomes, showing that visualization aids in information retention and concept understanding. As technology has developed, further research has explored the use of interactive video media that allows students to actively participate in the learning process. Several studies have also begun to consider the variable interest in learning, finding that students with high interest in learning tend to benefit more from visual media compared to those with low interest in learning. In addition, recent research has attempted to combine quantitative and qualitative approaches to gain a more comprehensive understanding of how and why video and image media influence learning outcomes. The results of these studies show that when visual media are used effectively, taking into account students' learning interests, there is a significant increase in understanding of mathematical concepts and overall learning outcomes. However, there is still a need for further research that considers various other contextual and individual variables to optimize the use of this media in mathematics education (Amrah, Sahabuddin, E. S., & Atirah, R. D. (2020) ; E-Prints UNM, 3 et al., 2020; Durrotunnisa & Nur, 2020).

Video media can present information dynamically and interestingly, so that it can increase students' understanding and learning motivation. Video media is one of the most popular learning media today. This media combines elements of sound and moving images so that it can present information in an interesting and informative manner. In general, video media can be interpreted as electronic media that is capable of displaying moving images accompanied by sound. Video media can be used for various purposes, including learning, entertainment and promotion. In learning, video media can be used to convey various subject matter, from abstract concepts to practical skills. Video media can help students understand lesson material more easily and with pleasure. Video media can be used to convey information that students can hear and see, so that abstract or incomplete problems, concepts or content can be explained clearly and completely. This video media can also provide long-term memory for students because it displays the movement of objects plus sound according to the message (Arifin et al., 2021; Daryanes & Ririen, 2020; Fitri et al., 2021). This is an advantage for teachers when using video media in the teaching and learning process.

Image media is media that conveys messages from the message source to the message recipient. The message to be conveyed is expressed with communication symbols. The meaning of these symbols must be understood so that the communication process is successful and effective. Image media gives the impression that its application is more creative, such as being able to display images, graphics and layouts that are easily understood by the recipient. Image media can be defined as media that clearly, strongly and completely brings together facts and ideas through a combination of words and images. An ideal environment for conveying messages in the form of short summaries. Image media has proven to be very effective in increasing understanding of mathematical concepts; students are directly involved in learning activities (Mayasari et al., 2021; Nurfadhillah et al., 2020; Suhaemi et al., 2020; Trisnani & Utami, 2020). Therefore, image media can help students understand abstract subject matter in a more concrete way. Image media can help students strengthen their memory of lesson material. This is because image media can provide a deeper impression for students. Image media can also attract students' attention and interest in learning. This is because image media can present subject matter in a more interesting and enjoyable way.

This description shows that the application of video and image media in mathematics learning can have a positive influence on student learning outcomes. Students are more focused on participating in learning activities. Video media and image media can also foster student interest and provide a better connection between the content of the lesson material and the real world, thus having an impact on student learning outcomes. To be effective, video and image media should be placed in a meaningful context, and students should be invited to interact in each activity so that a dynamic information process occurs from teacher to student. With interest, someone will tend to pay more attention to something they pay attention to. Interest in learning will have an influence on the achievement of positive learning activities. This shows students' liking and comfort in learning, so that it will produce good results. Interest makes a big contribution to student learning success. The learning process will run smoothly if accompanied by interest. This is because students have set goals that they like.

With this explanation, learning activities through video and image media will have a positive impact on improving student learning outcomes in terms of their learning interest. Therefore, the aim of this research is to analyze the influence between the use of video media and image media on student learning outcomes in terms of student interest in learning; the influence of high student interest in learning and low student interest in learning on student learning outcomes at Bustanul Ulum Pakusari Islamic Vocational

School; and the interaction between the use of learning media and student interest in learning with student learning outcomes in terms of interest in learning at Bustanul Ulum Pakusari Islamic Vocational School.

2. METHOD

The research method used is a quantitative method with an experimental approach. An experimental approach is used to explain the influence between research variables. Meanwhile, the design used was treatment with 2 x 2 levels. The research design carried out was to determine two groups, consisting of one group with video media treatment and the other group with image media treatment. Meanwhile, learning interest in this research is categorized into high learning interest and low learning interest. Criteria for learning interest are presented in Table 1.

Table 1. Assessment of Student Learning Interest

Positive Statements		Negative Statement	
Statement	Score	Statement	Score
Always	4	Never	1
Often	3	Sometimes	2
Sometimes	2	Often	3
Never	1	Always	4

(Widoyoko, 2015)

Indicators of student interest in learning are characterized by feelings of joy, student interest, student involvement or participation in learning, and attentive attitudes towards learning (Hilmi, 2013). The criteria for student interest in learning are presented in Table 2.

Table 2. Criteria for Student Learning Interest

Formula	Criteria	Results
$X \geq (M_{I\,am} + SD_{I\,am})$	Very high	$X \geq 93$
$M_{I\,am} \leq X < (M_{I\,am} + SD_{I\,am})$	Height	$78 \leq X < 93$
$(M_{I\,am} - SD_{I\,am}) \leq X < M_{I\,am}$	Low	$63 \leq X < 78$
$X < (M_{I\,am} - SD_{I\,am})$	Very low	$X < 63$

Meanwhile, the ideal mean price (Mi) and ideal standard deviation (SDi). Criteria for learning interest are shown in the form of very high, high, low and very low. In Table 2, it is known that learning interest is said to include students in the high learning interest group if it is in the high and very high criteria, while it is said to include students in the low learning interest group if it is in the low and very low criteria. criteria. The research design is presented in Table 3.

Table 3. Research Design

Variable	Instructional Media	
	Video (A1)	Gambar (A2)
tall flower (B1)	microA1 B1	microA2 B1
low interest (B2)	microA1 B2	mikroA2 B2

The population in this study was the entire class. Meanwhile, those used were classes X A and X C, each class numbering 34 students. The technique used is purposive sampling, namely a technique for determining samples with certain considerations. The samples taken in this research were Class X A and Class X C who have the same abilities and activities. Data collection consists of interest questionnaire data and learning outcomes test data. Questionnaires are used to collect data about students' learning interests using video and image media, while tests are related to student learning outcomes through video and image learning media. Analysis of this research data used the two-way Anova technique. Data analysis aims to test the proposed hypothesis. The data analysis technique used was two-way ANOVA (analysis of variance), with a significance level of 0.05.

Quantitative research procedures with an experimental approach to examine the influence of video and image media on students' mathematics learning outcomes in terms of learning interest can be carried out in several steps. First, determine the population and research sample, namely students from several classes selected randomly. Second, carry out initial measurements of student interest in learning using a

structured questionnaire that has been validated. Third, divide the sample into two experimental groups: one group uses video media and the other group uses image media in mathematics learning. Fourth, provide treatment with predetermined media over a certain period, for example one semester, while ensuring that the material taught is the same for both groups. Fifth, after the treatment period, measure student learning outcomes using a mathematics achievement test that has been designed and validated previously. Sixth, data analysis using statistical techniques, such as ANOVA, to determine the effect of video and image media on learning outcomes, as well as testing the interaction between media type and students' level of interest in learning. Finally, interpret the results of the analysis and draw conclusions regarding the effectiveness of video and image media on students' mathematics learning outcomes by considering learning interest variables, as well as providing recommendations for applying research results in educational practice.

Before analyzing the data obtained, the questionnaire and test instruments were tested for validity and reliability. By using the product moment formula from Pearson using SPSS Statistics 25 it can be declared valid if rcount > rtable and vice versa; if rcount < rtable then it is invalid. Because the sample size is 34, the r table is 0.344. In testing the validity and reliability of the questionnaire and test instruments, the following were obtained: on the questionnaire. Of the 30 questions, 5 items were declared invalid, namely (7,11,19,22, and 30), because rcount < rtable with a significance level of 5% and N = 34 with a critical value of 0.344. Furthermore, the validity of the questionnaire instrument was tested for reliability and obtained 0.867. This result is greater than the critical value of 0.344. because $r_{11} > r_1$ or 0.917 > 0.344, then the questionnaire statement items are reliable; Of the 6 learning outcomes test items, 2 questions were declared invalid, namely (4 and 6) because rcount < rtable with a significance level of 5% and N = 34 with a critical value of 0.344. By looking at the blueprint, the content validity of the learning outcomes test is still met. Furthermore, the validity test of the learning results was tested for reliability and obtained 0.914. This result is greater than the critical value of 0.344. Because 0.964 > 0.344, the test item statement is reliable. Meanwhile, hypothesis testing was carried out using the Analysis of Variance (ANOVA) technique at a significance level of $\alpha = 0.05$.

3. RESULT AND DISCUSSION

Result

Research data was obtained from students in classes XA and XC at IBU Vocational School, each class numbering 34 students. After calculating the interest in learning questionnaire, it was discovered that in class Research requirements are normality test and homogeneity test. In the normality test, researchers used SPSS assistance through the Kolmogorov-Smirnov and Shapiro-Wilk tests. Meanwhile, in the homogeneity test, researchers used the Barlett test.

In research that uses statistical analysis, there are several assumptions that must be met. As previously stated, this research is research using experimental methods, and the analysis used in this research is two-way analysis of variance. The prerequisite tests used are the normality requirements test using Kolmogorov-Smirnov and Shapiro-Wilk, as well as the homogeneity of variance test using the Bartlett test. The data normality test was carried out on the pretest and posttest data of the two groups who were given learning using two different methods, namely the use of video media and visual media. Normality tests were carried out using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The test results show the Kolmogorov-Smirnov sign value is 0.103 and Shapiro Wilk is 0.102. Thus the first assumption has been fulfilled, namely normal distribution and analysis of variance can be continued. The normality test is presented in Table 4.

Table 4. Normality Test

	Kolmogorov-Smirnov^A			Shapiro-Wilk		
	Statistics	**df**	**Say.**	**Statistics**	**df**	**Say.**
Results	0.098	136	0.103	0.967	136	0.102

This test was carried out using the Bartlett test which is the default setting for analysis, with the help of the SPSS program. The significance level value is 0.492, which means the research data comes from groups whose variance is relatively the same or not significantly different. Thus, the homogeneity of variants which is a requirement before carrying out variance analysis has been fulfilled. The homogeneity test is presented in Table 5.

Table 5. Homogeneity Test

Test Results		
Box M		0.526
F	About.	0.518
	df1	1
	df2	13068.000
	Say.	0.492

After carrying out the required tests, it continues with an explanation of the research results. Below we will explain one by one the description of the research data. Through video media, the pretest average was 78 and the posttest average was 83.5. This means there is an increase of 5.5. The lowest posttest score was 71 and the highest was 93. In terms of improvement, it was found that there was an increase in the highest score before and after being taught using video media; namely the highest score on the pretest was 88, then on the posttest it increased to 93. Through visual media, the pretest average was 74.68 and the posttest was 78.09. This means there is an increase of 3.41. The lowest posttest score was 70 and the highest was 90. In terms of improvement, it was found that there was an increase in the highest scores before and after being taught using visual media; namely the highest score in the pretest was 83, then in the posttest it increased to 90. Students with low interest had an average pretest of 72.35 and posttest of 75.35, resulting in an increase of 3. The lowest posttest score was 70 and the highest was 87. For students with low interest there was an increase in the highest score before and after being given treatment, namely the score The highest in the pretest was 80, then in the posttest it increased to 87.

Students who were highly interested had a pretest average of 80.32 and a posttest average of 86.23, resulting in an increase of 5.91. The lowest posttest score was 77 and the highest was 93. For students with high interest, there was an increase in the highest scores before and after being given treatment; namely the highest score on the pretest was 88, then on the posttest it increased to 93. The statistical value of learning outcomes with high interest. After obtaining statistical description data, the researcher calculated F to determine the first hypothesis and third hypothesis. Data between subjects for hypothesis testing is presented in Table 6.

Table 6. Test of Between-Subject Effects

Source	Type III Sum of Squares	df	Means Square	F	Say.
Corrected Model	2517.000A	3	839.000	80.369	0.000
Intercept	443882.882	1	443882.882	42520.213	0.000
Media	497.882	1	497.882	4.7693	0.000
Interest	2013.235	1	2013.235	192.851	0.000
Media * Interest	5.882	1	5.882	0.563	0.456
Error	668.118	64	10.439		
Total	447068.000	68			
Corrected Amount	3185.118	67			

In this first hypothesis test, we test whether there is a significant difference in influence between the use of video media and image media on learning outcomes in terms of learning interest. Based on statistical tests in SPSS 25, the average use of video media was 83.5 and the use of visual media was 78.09. Meanwhile, to determine the difference in influence, Fcount is 4.769 which is greater than F_{table} of 3.34. Based on the decision making, H0 is rejected and Ha is accepted, this shows that there is a significant difference in influence between the use of video media and image media on student learning outcomes in terms of interest in learning at the Bustanul Ulum Pakusari Islamic Vocational School. Based on descriptive analysis, it can be seen that by using video media, student learning outcomes will be better than by using image media.

The second hypothesis test tests whether there is a significant difference in influence between high learning interest and low learning interest on learning outcomes. Based on statistical tests in SPSS 25 for Windows, the average student interest in learning was 86.23 and students with low interest in learning was 75.35. Meanwhile, to determine the difference in influence, the Fcount is 192.851, which is greater than the F_{table} of 3.34 and the sign value is 0.00<0.05. Based on the decision H0 is rejected and Ha is accepted, there is a significant difference in influence between students who have high interest in learning and students who have low interest on student learning outcomes at SMKS Islam Bustanul Ulum Pakusari. Based on descriptive analysis, it can be seen that students with high interest in learning are better than students with low interest in learning in terms of student learning outcomes.

In this third hypothesis test, we test whether there is an interaction between the use of learning media and students' interest in learning together with student learning outcomes at Bustanul Ulum Pakusari Islamic Vocational School. Based on statistical tests in SPSS 25 for Windows in table 4.11, in determining the interaction between the use of learning media and student interest in learning on student learning outcomes, an Fcount of 0.563 is smaller than 3.34 and a sign value of 0.456 > 0.05. Based on the decision making, H0 is accepted and Ha is rejected, namely there is no interaction between the use of learning media and student interest in learning and student learning outcomes at Bustanul Ulum Pakusari Islamic Vocational School.

Discussion

In learning activities, the video media used is displayed via a projector. The teacher ensures that the media and all equipment are complete and ready to use; the teacher explains the goal to be achieved, namely being able to determine the equation of the absolute value of a variable; The teacher explains the subject matter to students during the learning process and avoids incidents that can disturb students' concentration. Students are serious and happy to see learning videos which are very interesting and liked by children. This can be seen from the child's calm and focus when watching a video learning the equation of the absolute value of a variable. No students talk to themselves or joke with their friends; all the students seemed to be concentrating on what they were seeing on the video screen. The teacher gives and asks students who have difficulty or do not yet understand the equation for the absolute value of a variable after watching the video. At the end of the activity the teacher and students draw conclusions regarding the material on the equation of the absolute value of one variable together. Thus, it can be concluded that the research has a positive and significant influence on the use of audio and video learning media on learning outcomes for subtheme 1: cultural diversity of my community. It is hoped that the results of this research will provide new knowledge regarding the use of learning media so that the use of innovative learning media can improve learning outcomes (Ambara et al., 2020; Novita et al., 2019; Pamungkas & Koeswanti, 2022).

Based on the data processing that has been carried out, the use of video learning media influences student learning outcomes because of the availability of learning media in the form of videos; Students can see directly the objects being studied through learning videos so that students are more interested in participating in learning; students get a clear explanation of the equation of the absolute value of one of the variables from the video; Features more Image, audio and kinesthetic learning styles; Students can also study independently; and By implementing video-based learning media, students can convey what they have learned in a fun way; teachers and students can discuss and conclude in depth at the end of the activity (Karnasih, 2020; Sukarini & Manuaba, 2022; Wibowo & Pratiwi, 2022).

In using image media, researchers start by preparing the media; all equipment is complete and ready to use; the teacher greets the students and explains the goal to be achieved, namely being able to determine the equation of the absolute value of a variable; teachers explain subject matter to students during the learning process and avoid incidents. events that can disturb students' concentration. The teacher provides image media containing images of absolute value equations to students in their groups. Students discuss and understand the equation for the absolute value of a variable. Students also discuss and solve problems given by the teacher to each group. In discussion activities, students exchange opinions and equate perceptions, and the teacher becomes a facilitator in this activity. At the end of the activity the teacher and students draw conclusions regarding the material on the equation of the absolute value of one variable together.

Other research results show that image media has a big influence on the success of learning activities. This is based on other research which states that the equation 48.066+ 0.483 is accepted. It was concluded that image media had an influence on students' mathematics learning outcomes at SDN Ajung, Balangan Regency. The increase in student learning outcomes during the learning process using image media can be seen from the results of student learning tests during the two cycles which have increased (Dahar, n.d.; N. F. Handayani, 2020; N. P. R. Handayani & Abadi, 2020; Hilmi, 2021). Learning outcomes have increased in accordance with the specified classical learning success indicators, namely ≥ 80% and individually achieve the specified Learning Completion Criteria (KKM), namely ≥ 66.

Based on the use of image media, it shows that image media influences student learning outcomes because of the availability of learning media in the form of videos; students can see directly the objects being studied through image media so that students enjoy learning; there is a discussion between friends in each group to discuss the equality of the absolute value of a variable based on image media; students can also study independently; and reduce boredom in learning activities; and teachers and students can discuss and conclude in depth at the end of the activity through learning activities using image media. Hypothesis testing shows that there is a significant difference in influence between the use of video media and visual

media on student learning outcomes in terms of interest in learning at the Bustanul Ulum Pakusari Islamic Vocational School. The use of video media is better than the use of image media. High interest in learning is better than low interest in learning. This can be seen from the pretest and posttest scores for each change in the average of high learning interest and low learning interest. Based on the decision making, H0 is accepted and Ha is rejected, namely there is no interaction between the use of learning media and students' interest in learning on student learning outcomes at Bustanul Ulum Pakusari Islamic Vocational School.

The implications of research on the influence of video and image media on students' mathematics learning outcomes in terms of learning interest are very broad and significant for various parties in the world of education. First, for teachers and educators, the results of this research can provide valuable insight into the importance of choosing learning media that suits students' interests. Teachers can consider using video and image media to make mathematics learning more interesting and easy to understand, thereby improving student learning outcomes. Second, for educational policy makers, these findings can be a basis for designing curricula that are more adaptive and responsive to student needs, by integrating technology and visual media in learning. Third, for educational media and technology developers, this research could be an encouragement to create more interesting and effective educational content, especially for subjects that are considered difficult such as mathematics. Finally, for further educational research, these findings can open up opportunities for further studies on the influence of various types of learning media and other learning interest factors on learning outcomes, so that they can continue to improve the overall quality of education.

Research on the influence of video and image media on students' mathematics learning outcomes in terms of learning interest has several limitations that need to be considered. First, this research may be limited to a sample of students from one or a few schools, so the results may not be generalizable to all students in different educational contexts. Second, measuring student interest in learning using a questionnaire may not be completely accurate because it depends on students' honesty and self-awareness. Third, this research only compares two types of visual media without considering other variations such as interactive animation or digital simulations which may also have a significant effect on learning outcomes. Fourth, the limited duration of the study may not have been sufficient to observe long-term changes in student learning outcomes.

4. CONCLUSION

Based on the results of research data analysis that has been carried out in students' mathematics classes in terms of students' learning interests. There is a difference in the influence between high student interest in learning and low student interest in learning on student mathematics learning outcomes at Bustanul Ulum Islamic Vocational School. There is no interaction between the use of learning media and students' interest in learning or students' mathematics learning outcomes in terms of learning interest at Bustanul Ulum Islamic Vocational School. Therefore, it cannot be said that a learning media will be effective if it is combined with student characteristics, such as student interest in learning mathematics.

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