



The Effect of Digital Learning Media on Motivation and Learning Outcomes of IPAS

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Abstract: This research is a quantitative research conducted in class V SD Gugus Wijaya Kusuma. The purpose of this study was to determine the effect of Digital Learning Media on the Motivation and Learning Outcomes of students in IPAS lessons in class V. In this study researchers focused on social studies subjects. In the study, three variables were analyzed, namely two independent variables and one dependent variable. Populations and samples of this study were 59 students. Data collection techniques through interview techniques, observation and questionnaire distribution and also secondary data. Data analysis in this study was carried out by testing validity, reliability, classical assumptions, and hypotheses. In testing the hypothesis of this study conducted by means of t test to get the influence between variables X1 to Y, X2 to Y. The results of the research that has been done found that, from the results of the t test coefficients of media on motivation, the significance value is $0.000 < 0.05$, meaning that there is an influence of media on learning motivation. From the results of the t test Constant media on motivation obtained R Square value of 0.452 means that the media variable affects student learning motivation by 45.2% and the rest is influenced by other factors. From the results of the t test media coefficients on the results of a significance value of $0.000 < 0.05$ means that there is an influence of the media on learning outcomes. From the results of the t test Constant media on the results obtained R Square value of 0.202. This means that the media variable affects student learning outcomes by 20.2% and the rest is influenced by other factors. Based on the results of data analysis, it means that digital learning media has an effect on the motivation and learning outcomes of fifth grade students in social studies lessons in Wijaya Kusuma Gugus.

Keywords: Digital learning media; Influence; IPAS; Learning outcomes; Learning motivation

Introduction

In Law No. 20 of 2003 article 1 that Education is a conscious effort and plan to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state. One of the factors that can affect the progress of the nation is the quality (Human

Resources) in mastering knowledge and technology in the era of the industrial revolution 4.0 (Verma et al., 2022). The quality of education in Indonesia will be increasingly required to increase in order to keep up with the times which are gradually developing very rapidly. Without us realizing that technological progress is now very rapidly growing from time to time. The development of science is strongly supported by technological advances, this indicates the progress of the times.

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Education is able to make a person have an understanding and also knowledge of something that can make him a being who thinks and acts critically (Rasmani et al., 2023). Educational technology is a system that can be utilized to support learning so that the desired results can be achieved (Haleem et al., 2022). Educational technology is also a systematic study of how to achieve educational goals in accordance with the provisions for the use of learning information technology in schools (Granić, 2022; Valverde-Berrocoso et al., 2022).

In this era of globalization, education in Indonesia is growing rapidly. The presence of globalization demands many fundamental changes for each individual in viewing globalization as a necessity rather than a threat (Petricevic et al., 2019). In answering the challenges of globalization, good human resources, reliable character and high competitiveness are needed, to make this happen, education must present itself as part of the challenge of globalization, this challenge must be able to educate and produce graduates who are highly competitive (qualified) instead of failing to face various onslaughts of dynamic progress in globalization.

Currently, the curriculum in Indonesia has undergone changes in renewal from time to time for the better and is also refined based on the needs and demands of development in the world of education (Dwivedi et al., 2023). The education applied in schools today is the Merdeka curriculum or Merdeka Belajar (Handayani et al., 2024). Merdeka Belajar revives the education system by developing core competencies and making learning fun. Merdeka belajar promotes competency and value-based curriculum and assessment in the pedagogy category and an individualized approach centered on students and student needs (Hadi et al., 2023).

The existence of curriculum changes results in changes to learning as well, one of which is in the learning of science and social studies which is now combined into IPAS. IPAS (Natural and Social Sciences) is a subject that is a new innovation but has similarities with the subjects in the previous curriculum. IPAS subjects are a form of actualization of integrated learning from two aspects whose basics are different but when put together can become a unity that goes hand in hand.

Natural and Social Sciences (IPAS) is a science whose content examines living and non-living things in the universe and their interactions, and also examines human life as an individual who is a social being who interacts with his environment. In general, science can be defined as a combination of various knowledge that is arranged logically and systematically by taking into account cause and effect (Dwivedi et al., 2023). This knowledge is the scope of natural and social knowledge

(McKenna, 2022). In this study, researchers focused on social studies subjects. Learning that is interaction, teachers and students interact to customize learning. Students' enthusiasm in learning should be encouraged through effective instruction, which will affect their behavior. Changes in behavior-related aspects including knowledge, attitudes, and skills are at issue (Yanti et al., 2020). That is how social studies learning emphasizes these aspects.

Based on the results of interviews with Class V teachers at SD Gugus Wijaya Kusuma, according to the homeroom teacher, the use of digital learning media is very helpful in learning to influence student motivation and learning outcomes. According to the homeroom teacher, the use of YouTube is more often used because it uses audio and visuals that attract students' attention. On the results of observations in class V SD Gugus Wijaya Kusuma students like learning by using digital learning media. However, there are several obstacles such as the fact that many teachers still use the lecture method and assignments when teaching which makes students less enthusiastic about learning, complete facilities but are not optimized, and the learning process in the classroom still focuses on the teacher (Hollister et al., 2022; Pho et al., 2021).

Therefore, using digital learning media can improve student motivation and learning outcomes. Learning media is one of the learning tools that can help teachers in the teaching and learning process and functions in conveying messages to students so that they can achieve educational goals and better student learning outcomes (Marpanaji et al., 2018). There are currently many learning media, especially digital learning media which are increasingly sophisticated, can use anything. Media refers to anything that can function as a medium. As we know "Digital Media" refers to online materials that allow us to use for a variety of learning.

Behind the importance of the role of teachers as the progress of a nation has a responsibility that is not easy, teachers are expected to master the various skills needed in the sense of making the teaching profession professional. Success in education comes from good results in learning (Alyahyan et al., 2020; Cachia et al., 2018; Osman et al., 2021). One factor that helps determine those results is the type of media students use to learn (Ansari et al., 2020; Sivakumar et al., 2023). One of the challenges teachers face is figuring out which learning media is best for their students to use to achieve the best results (Wahyuningsih et al., 2021). If students are able to demonstrate a level of mastery of the material they learn, then the learning process is considered successful. Teachers are responsible for planning and managing learning activities in such a way as to match the objectives to be achieved in each subject. To achieve

these goals, teachers must be good at determining the media they will use.

Based on the above background, researchers are interested and motivated to conduct research and write about how the influence of digital learning media on motivation and learning outcomes in students. Therefore, this research was given the title "The Effect of Digital Learning Media on the Motivation and Learning Outcomes of Grade V Students in Elementary School IPAS Lessons in Grade V Elementary School, Gugus Wijaya Kusuma.

Method

In this study, three variables were analyzed, namely two independent variables and one dependent variable. For the sake of analysis, the name of each variable is changed with one symbol. For the learning motivation variable given the symbol X1, the learning outcome variable is given the symbol X2 and the digital learning media variable is given the symbol Y. In testing the hypothesis of this study, it was carried out by means of the t test to get the effect between the variables X1 on Y, X2 on Y. The quantitative data used comes from primary data, namely from distributing questionnaires containing questionnaires to fifth grade students in the Wijaya Kusuma cluster elementary school which was used as a research sample. Data collection using research instruments and data analysis is quantitative with the aim of testing the hypothesis that has been set.

This research is an Ex Post Facto study in which the independent variables in this study are not controlled or treated specifically but this study only reveals facts based on the measurement of symptoms that already existed in the respondents before this research was conducted. Ex Post Facto research is one of the many types of research, both in social science and natural science research. The term Ex Post Facto indicates that a change in the independent variable has occurred, so the research is faced with the problem of how to determine the cause of the effect being observed. Because there is no control, in Ex Post Facto research it will be more difficult to conclude that the independent variable X is really related to the dependent variable Y.

The research was conducted in January-March 2024 in the fifth grade of elementary school in Wijaya Kusuma cluster. This research was conducted in the fifth grade of elementary school of Gugus Wijaya Kusuma Semarang City. The elementary schools that conducted the research were Podorejo 01 State Elementary School, Podorejo 02 State Elementary School, Podorejo 03 State Elementary School. The treatment in this study was conducted during IPAS learning in class V of Gugus Wijaya Kusuma. In this study, the population was fifth

grade students of SD Gugus Wijaya Kusuma. Population is as a whole element in research which includes objects and subjects with certain characteristics and characteristics. So basically the population is all members of a group of events or objects that live together in a place that has been planned and will be the target of the conclusion of the final results of a study.

Table 1. Research Population

| School Name | Number of Students |
|-----------------------|--------------------|
| SD Negeri Podorejo 01 | 16 students |
| SD Negeri Podorejo 02 | 24 students |
| SD Negeri Podorejo 03 | 19 students |
| | 59 students |

Samples can simply be interpreted as part of the population that will be the actual source of data in a study (Vasileiou et al., 2018). The samples used in this study were fifth grade students of SD Gugus Wijaya Kusuma.

Table 2. Research Sample

| School Name | Number of Students |
|-----------------------|--------------------|
| SD Negeri Podorejo 01 | 16 students |
| SD Negeri Podorejo 02 | 24 students |
| SD Negeri Podorejo 03 | 19 students |
| | 59 students |

The variables of this study consist of independent variables (X) and dependent variables (Y): Digital Learning Media (Y); Student Learning Motivation (X1); Student Learning Outcomes (X2). The data collection procedures in this study are: Primary data is data obtained by field surveys collected directly from the source. Through observation interview techniques and distributing questionnaires. Secondary data is data that has been collected by a second party or data obtained from other parties to support the success of the research (Näher et al., 2023).

The instruments for collecting data in this study are as follows: Data collection on digital learning media variables uses a questionnaire by distributing questionnaires which are 15 statements to fifth grade students of SD Gugus Wijaya Kusuma. The data collected in this study will be measured using an interval scale referred to as a Likert scale. The Likert scale provides four alternative answer choices, namely Strongly Agree (SS), Agree (S), Disagree (TS), Strongly Disagree (STIS). This is given without providing a doubtful or middle answer option for definite answers from subjects such as undecided and others. The following is a Likert Scale tab used in this study: Collecting data on student learning motivation variables in this study is a method of using a questionnaire, by distributing questionnaires which are 15 statements to

fifth grade students of SD Gugus Wijaya Kusuma. The data collected in this study will be measured using an interval scale referred to as a Likert scale.

The Likert scale provides four alternative answer choices, namely Strongly Agree (SS), Agree (S), Disagree (TS), Strongly Disagree (STS). This is given without providing a doubtful or middle answer option for definite answers from subjects such as undecided and others. The following is a Likert Scale tab used in this study. As for the learning outcome variable by making observations, where researchers get data from the second party, namely the fifth grade teacher of SD Gugus Wijaya Kusuma. The data obtained in the form of cognitive scores which are daily test scores. Affective assessment uses an affective domain observation sheet which has 4 aspects assessed (Believing in God Almighty, Behaving Noble, Critical Reasoning, Creative) carried out by researchers, as well as psychomotor assessment which has 2 aspects assessed (Accuracy in observing, and finding map information, Timeliness in completing tasks) using a psychomotor domain observation sheet carried out by researchers.

Table 3. Likert Scale Used

| Answer Options | Score | |
|-------------------------|-------------------|-------------------|
| | Positive Question | Negative Question |
| Strongly Agree (SS) | 4 | 1 |
| Agree (S) | 3 | 2 |
| Disagree (TS) | 2 | 3 |
| Strongly Disagree (STS) | 1 | 4 |

The data analysis technique carried out in this study is as follows:

Validity Test

This research uses validity tests when managing data in order to obtain valid data. The validity test is used to determine the extent to which the accuracy and accuracy of the measurement instrument in performing its measuring function, so that the data obtained is relevant or in accordance with the purpose of the measurement. A test can be said to be valid if the test size gives accurate measurement results. A test can be said to be invalid if it produces data that is irrelevant to the purpose of holding the measurement.

Reliability Test

This study uses a reliability test to obtain reliable data. The reliability test is a test or test in order to determine the accuracy or irregularity of the test, meaning that whenever the test is repeated it will give the same or relatively the same results. The reliability test is carried out to be able to ensure that if a re-measurement is carried out using similar indicators the results will not change.

Classical Assumption Test

Normality Test

The data normality test aims to show that the data from the sample comes from a normally distributed population (Khatun, 2021).

Linearity Test

This linearity test aims to determine whether the two or more variables being tested have a linear relationship or not significantly.

Hypothesis testing

Test t

The t test is conducted to test each of the effects of each independent variable on the dependent variable. Hypotheses are temporary conjectures on the formulation of research problems, where the formulation of this research problem is stated in the form of a question sentence. In connection with the problem of this study, namely the effect or not of digital learning media on motivation and learning outcomes of IPAS fifth grade students of SD Gugus Wijaya Kusuma Semarang city, the hypothesis proposed in this study is: Digital Learning Media Affects Motivation to Learn IPAS of Grade V Students in Elementary School Cluster Wijaya Kusuma; Digital Learning Media Affects IPAS Learning Outcomes of Grade V Students of Gugug Wijaya Elementary School Kusuma.

Result and Discussion

From the results of research that has been conducted in class V of the Wijaya Kusuma cluster elementary school as the intended class for research, then in this result and discussion there will be several things that will be reviewed, namely: Validity test; Reliability test; Classical assumption test, normality test, linearity test; Hypothesis testing, t test. In this study, student learning outcomes in the form of cognitive, affective, and psychomotor learning outcomes obtained from the results of test scores and observations. The following is data for learning outcomes:

Validity Test

This research uses validity tests when managing data in order to obtain valid data. Validity testing in this study was carried out on the Digitas Learning Media variable (Y) and Learning Motivation (X1). Using SPSS 16,5% significance level, N=19 then $r_t = 0.46$, Criteria: $r_h > r_t$ then valid, $r_h < r_t$ then invalid.

Based on the data table 4, validity testing using SPSS 16 on the Digital Learning Media variable (Y) found the results of 15 questionnaires only 1 invalid question.

Table 4. Digital Learning Media

| About | r count | r table | Summary |
|-------|---------|---------|---------|
| 1 | 0.67 | 0.46 | Valid |
| 2 | 0.64 | | Valid |
| 3 | 0.60 | | Valid |
| 4 | 0.61 | | Valid |
| 5 | 0.33 | | Invalid |
| 6 | 0.51 | | Valid |
| 7 | 0.58 | | Valid |
| 8 | 0.73 | | Valid |
| 9 | 0.52 | | Valid |
| 10 | 0.50 | | Valid |
| 11 | 0.44 | | Valid |
| 12 | 0.54 | | Valid |
| 13 | 0.48 | | Valid |
| 14 | 0.58 | | Valid |
| 15 | 0.51 | | Valid |

Based on the data table 5, validity testing using SPSS 16 on the Student Learning Motivation variable (X1) found the results of 15 questionnaires only 1 invalid question.

Table 5. Student Learning Motivation

| About | r count | r table | Summary |
|-------|---------|---------|---------|
| 1 | 0.52 | 0.46 | Valid |
| 2 | 0.72 | | Valid |
| 3 | 0.48 | | Valid |
| 4 | 0.60 | | Valid |
| 5 | 0.53 | | Invalid |
| 6 | 0.47 | | Valid |
| 7 | 0.51 | | Valid |
| 8 | 0.50 | | Valid |
| 9 | 0.51 | | Valid |
| 10 | 0.49 | | Valid |
| 11 | 0.55 | | Valid |
| 12 | 0.52 | | Valid |
| 13 | 0.48 | | Valid |
| 14 | 0.65 | | Valid |
| 15 | 0.06 | | Valid |

Reliability Test

The reliability test is a test or test in order to determine the accuracy or irregularity of the test, meaning that whenever the test is repeated it will give the same or relatively the same results. This study uses a reliability test using SPSS to obtain reliable data. Variables are said to be reliable if they meet the following criteria: If r-alpha is positive and greater than r-table then the statement is reliable. If r-alpha is negative and smaller than r-table then the statement is not reliable; If the Cronbach's Alpha value > 0.6 then reliable; If the Cronbach's Alpha value < 0.6 then it is not reliable. The variable is said to be good if it has a Cronbach's Alpha value > 0.6.

Table 6. Reability Test of Digital Learning Media Case Processing Summary

| Cases | Valid | N | % |
|-------|-----------------------|----|--------|
| | Excluded ^a | 19 | 32.20 |
| | Total | 40 | 67.80 |
| | | 59 | 100.00 |

a. Listwise deletion based on all variables in the procedure.

Table 7. Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .841 | 15 |

Table 8. Item-Total Statistics

| | Scale Mean if Deleted | Scale Variance if Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Deleted |
|-------|-----------------------|---------------------------|----------------------------------|-----------------------------|
| Me.1 | 47.94 | 24.83 | .623 | .826 |
| Me.2 | 48.57 | 23.70 | .557 | .826 |
| Me.3 | 48.21 | 24.50 | .524 | .829 |
| Me.4 | 48.31 | 23.67 | .520 | .829 |
| Me.5 | 48.05 | 26.49 | .243 | .843 |
| Me.6 | 48.05 | 25.49 | .443 | .834 |
| Me.7 | 48.42 | 24.14 | .481 | .831 |
| Me.8 | 48.42 | 22.48 | .660 | .818 |
| Me.9 | 48.05 | 25.05 | .428 | .834 |
| Me.10 | 48.05 | 25.16 | .409 | .835 |
| Me.11 | 48.00 | 25.22 | .407 | .835 |
| Me.12 | 48.21 | 24.50 | .443 | .834 |
| Me.13 | 48.31 | 25.00 | .383 | .837 |
| Me.14 | 47.94 | 25.27 | .525 | .830 |
| Me.15 | 47.94 | 24.83 | .623 | .826 |

Based on Table 6, the reliability statistic table shows the results of the analysis of the reliability test with r hitung Cronbach's Alpha overall is 0.841 > 0.6. Then the decision using a significance level of 5%, then this question is reliable (consistent).

Case Processing Summary

Table 9. Student Learning Motivation Reliability Test

| Cases | N | % |
|-------|-----------------------|----|
| | Valid | 19 |
| | Excluded ^a | 40 |
| | Total | 59 |

a. Listwise deletion based on all variables in the procedure.

Table 10. Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .787 | 15 |

Table 11. Item-Total Statistics

| Mo.1 | Scale Mean if deleted | Scale Variance if Item deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|-------|-----------------------|--------------------------------|----------------------------------|----------------------------------|
| Mo.1 | 47.63 | 23.69 | .428 | .773 |
| Mo.2 | 47.47 | 23.59 | .680 | .763 |
| Mo.3 | 48.15 | 23.69 | .376 | .776 |
| Mo.4 | 47.84 | 22.69 | .510 | .765 |
| Mo.5 | 47.52 | 24.26 | .464 | .773 |
| Mo.6 | 47.78 | 23.62 | .359 | .778 |
| Mo.7 | 48.00 | 23.22 | .393 | .775 |
| Mo.8 | 48.00 | 22.77 | .360 | .780 |
| Mo.9 | 47.68 | 23.67 | .423 | .773 |
| Mo.10 | 47.89 | 23.21 | .375 | .777 |
| Mo.11 | 47.94 | 22.83 | .439 | .771 |
| Mo.12 | 48.42 | 23.25 | .423 | .773 |
| Mo.13 | 47.94 | 22.71 | .324 | .785 |
| Mo.14 | 47.68 | 22.33 | .568 | .760 |
| Mo.15 | 47.68 | 26.45 | -.033 | .800 |

Based on table 7, the reliability statistic table shows the results of the analysis of the reliability test with rcount Cronbach's Alpha overall is $0.78 > 0.60$. Then the decision using a significance level of 5%, then this question is reliable (consistent).

Linearity Test

This linearity test aims to determine whether the two or more variables being tested have a linear relationship or not significantly. The linearity test in this study was carried out with the help of SPSS. If the calculated significance value is greater than 0.05, the variable data can be said to be linear.

Table 12. Linearity Test of Media with Learning Outcomes Case Processing Summary

| | Included | | Excluded | | Total | |
|--------------------------|----------|-----------|----------|-----------|-------|-----------|
| | N | Percent % | N | Percent % | N | Percent % |
| Result * Media Influence | 59 | 100 | 0 | 0.0 | 59 | 100 |

Report

Table 13. Result

| Media Influence | Mean | N | Std. Deviation |
|-----------------|-------|----|----------------|
| 75.00 | 79.00 | 1 | . |
| 79.00 | 76.00 | 1 | . |
| 80.00 | 82.50 | 2 | 2.12 |
| 82.00 | 82.66 | 3 | 1.15 |
| 84.00 | 83.00 | 4 | 2.94 |
| 86.00 | 82.30 | 13 | 2.09 |
| 88.00 | 83.50 | 10 | 2.83 |
| 89.00 | 83.33 | 9 | 1.93 |
| 91.00 | 84.28 | 7 | 2.21 |
| 93.00 | 84.75 | 4 | 2.87 |

| Media Influence | Mean | N | Std. Deviation |
|-----------------|-------|----|----------------|
| 95.00 | 84.66 | 3 | 3.05 |
| 96.00 | 81.00 | 1 | . |
| 98.00 | 90.00 | 1 | . |
| Total | 83.20 | 59 | 2.68 |

Table 14. ANOVA Table

| | | Sum of Squares | df | Mean Square | F | Sig. |
|--------------------------|------------------------------------|----------------|----|-------------|-------|------|
| Result * Media Influence | Between Groups | 158.27 | 12 | 13.19 | 2.32 | .020 |
| | Linearity Deviation from Linearity | 84.62 | 1 | 84.62 | 14.89 | .000 |
| | Within Groups | 261.28 | 46 | 5.68 | | |
| | Total | 419.55 | 58 | | | |

Table 15. Measures of Association

| | R | R Squared | Eta | Eta Squared |
|--------------------------|------|-----------|------|-------------|
| Result * Media Influence | .449 | .202 | .614 | .377 |

Based on table 8, the output above obtained the value of Deviation from Linearity Sig. $0.32 > 0.05$, it can be concluded that there is a significant linear relationship between the media variable and learning outcomes.

Table 16. Linearity Test of Media with Learning Motivation Case Processing Summary

| | Included | | Excluded | | Total | |
|------------------------------|----------|-----------|----------|-----------|-------|-----------|
| | N | Percent % | N | Percent % | N | Percent % |
| Motivation * Media Influence | 59 | 100 | 0 | 0.0% | 59 | 100 |

Report

Table 17. Motivation

| Motivation* Media Influence | Mean | N | Std. Deviation |
|-----------------------------|-------|----|----------------|
| 75.00 | 84.00 | 1 | . |
| 79.00 | 82.00 | 1 | . |
| 80.00 | 81.50 | 2 | 3.53 |
| 82.00 | 84.00 | 3 | .000 |
| 84.00 | 84.50 | 4 | 4.93 |
| 86.00 | 86.15 | 13 | 3.76 |
| 88.00 | 87.00 | 10 | 3.39 |
| 89.00 | 88.66 | 9 | 2.00 |
| 91.00 | 88.85 | 7 | 1.06 |
| 93.00 | 89.75 | 4 | 2.98 |
| 95.00 | 92.33 | 3 | 4.04 |
| 96.00 | 96.00 | 1 | . |
| 98.00 | 96.00 | 1 | . |
| Total | 87.40 | 59 | 4.00 |

Table 18. ANOVA Table

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----------------------------|------------------------------------|----------------|----|-------------|-------|------|
| Result* Media Influence | Between (Combined) Groups | 472.77 | 12 | 39.39 | 3.96 | .000 |
| | Linearity Deviation from Linearity | 420.04 | 1 | 420.04 | 42.23 | .000 |
| | | 52.73 | 11 | 4.79 | .48 | .905 |
| | Within Groups | 457.46 | 46 | 9.94 | | |
| | Total | 930.23 | 58 | | | |

Table 19. Measures of Association

| | Included | | Excluded | | Cases Total | |
|------------------------------|----------|-----------|----------|-----------|-------------|-----------|
| | N | Percent % | N | Percent % | N | Percent % |
| Motivation * Media Influence | 59 | 100 | 0 | 0.0% | 59 | 100 |

Based on table 9, the output above obtained the value of Deviation from Linearity Sig. 0.905 > 0.05, it can be concluded that there is a significant linear relationship between the media variable and learning motivation.

Hypothesis Test

Hypotheses are temporary conjectures on the formulation of research problems, where the formulation of this research problem is stated in the form of a question sentence.

Digital Learning Media Affects

Motivation to Learn IPAS of Grade V Students in Elementary School Cluster Wijaya Kusuma.

Digital Learning Media Affects

IPAS Learning Outcomes of Grade V students of Gugug Wijaya Elementary School Kusuma.

Media t-Test on Motivation

Table 20. Coefficients^a

| Model | Unstandardized Coefficients | Standardized Coefficients | Std. Error | Beta | t | Sig. |
|-------|-----------------------------|---------------------------|------------|------|------|------|
| 1 | (Constant) | | | | | |
| | Motivation | | 9.26 | | 2.64 | .011 |
| | | | .106 | .672 | 6.85 | .000 |

a. Dependent Variable: Media Influence Obtained from the results of the t test, the significance value of 0.000 < 0.05 means that there is an influence of media on learning motivation.

Table 21. Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .672 ^a | .452 | .442 | 3.22 |

a. Predictors: (Constant), Motivation From the test results, the R Square value is 0.45. This means that the media variable affects student learning motivation by 45.2% and the rest is influenced by other factors.

Based on the results of the calculations that have been carried out, it can be concluded that hypothesis 1 can be accepted, which means that learning motivation has a positive and significant effect partially on digital learning media.

Media to Outcome t-Test

Table 22. Coefficients^a

| Model | Unstandardized Coefficients | | Standardized Coefficients | | t | Sig. |
|--------------|-----------------------------|------------|---------------------------|------|------|------|
| | B | Std. Error | Beta | t | | |
| 1 (Constant) | 27.79 | 15.83 | | 1.75 | .085 | |
| Result | .722 | .190 | .449 | 3.79 | .000 | |

a. Predictors: (Constant), Result from the test results, the R Square value is 0.202. This means that the media variable affects student learning outcomes by 20.2% and the rest is influenced by other factors.

Table 23. Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .449 ^a | .202 | .188 | 3.89 |

a. Dependent Variable: Media Influence Obtained from the results of the t test, the significance value of 0.000 < 0.05 means that there is an influence of media on learning outcomes.

Based on the results of the calculations that have been carried out, it can be concluded that hypothesis 2 can be accepted, which means that learning outcomes have a positive and significant effect partially on digital learning media. The t test is an individual partial regression coefficient test conducted to determine whether the independent variables (X1 and X2) individually affect the dependent variable (Y), the t test in this study was assisted by using SPSS.

Digital learning is a learning system that uses technology and also teaching practices that can utilize information technology well and effectively (Octaberlina, 2023). Digital learning is not just using laptops or mobile phones but a combination of technology and other digital content (Dhawan, 2020). Digital learning media is a way of delivering material with various digital sources so as to obtain information or material that can be stored in digital form. Digital learning media in its presentation can use a monitor screen for its use, when learning in class with the help of

a computer or laptop, screen and LCD so that it can be used as an effective tool (Santos et al., 2021).

The use of media should be able to increase students' motivation to learn. The learning process can be carried out in the form of activities, where students work and experience what is in the individual or group environment. The limitations experienced by students can be overcome through the use of media in learning (Abdulrahman et al., 2020; Beemt et al., 2020). Every learner has a unique experience, which varies depending on the elements that influence how rich a child's life is, such as accessibility of books, traveling opportunities, etc. Differences can be overcome through learning media. If it is not possible to bring students directly to the object being studied, then it is the learner who delivers the object. The item in question can be a real thing, a miniature replica, a model, or a picture that can be displayed. Learning by using digital media can greatly help students in following the learning process in the ongoing class, one of the digital media is *YouTube* where *YouTube* is currently widely used in learning.

YouTube is one of the digital media that is widely opened by internet users in the world *YouTube* provides a variety of videos ranging from video clips, movies and many videos made by *YouTube* users themselves. Not only that, *YouTube* can be used as a means of marketing products by uploading business videos that we do for free. *YouTube* is like a double-edged knife where it has a negative and positive influence on life in society (Reischauer et al., 2023). The positive impact of utilizing *YouTube* as a learning media is that it can foster the motivation of students to be more creative, and also get a variety of information videos as tutorials (Zamiri et al., 2024), can deepen the material that has been taught. In addition to the positive impact, *YouTube* also has a negative impact in the form of being prone to *cyber bullying* which can cause depression to students. In addition, excessive or continuous use of *YouTube* will result in a sense of dependence that can make students lazy to learn, and a lot of content that is not educational or criminal is often uploaded by content creators which can result in students imitating this (Utami et al., 2021). Where currently *YouTube* provides very many interesting learning videos so that students are more motivated to learn.

Motivation has a strategic role in various learning activities. No one learns without motivation. If there is no motivation, there will be no learning activities. Achievement motivation has an important role in student education as an encouragement to achieve optimal achievement and also acts as a determinant of student learning outcomes (Steinmayr et al., 2019). Motivation in learning is divided into two, *extrinsic* motivation and *intrinsic* motivation (Sandika, 2021). Learner motivation can be analogized as fuel to drive the

engine. Learning motivation encourages students to behave actively to achieve in the classroom, but too strong motivation can have a negative effect on the effectiveness of students' learning efforts because it takes a period of time to appreciate, absorb and do how the theory of motivation can be applied in everyday life, especially in terms of education (Urhahne et al., 2023).

Motivation can be the driving force that generates activity for someone to fulfill their needs. The complex power possessed by learners can be utilized by teachers in order to arouse the passion for learning of learners and lead them to the gold learning. Information *transfer* will occur more easily if the presentation of the material is carried out by the teacher using an interesting way so that it is able to make the motivation of students look active in the learning process. For example, teachers can equate learning materials with *real* examples so that they can touch directly on the lives of students.

Learning outcomes are strongly influenced by students' interest in the subject matter, because if the subject matter is not interesting to them, they will not learn it well (Ernawati et al., 2022; Sailer et al., 2021). Students will not be motivated to learn and will not find the lessons satisfying. To improve student learning outcomes, interesting teaching materials are easier to learn. Student learning outcomes are achievements that must be accomplished by students academically through exams and assignments, the liveliness of answering and asking questions supports these learning outcomes (Abhishek et al., 2023). Factors that can affect student learning outcomes are influenced by various factors, both from within themselves (*internal*) and from outside themselves (*external*) (Fauzi et al., 2018). It can be said that the existence of high quality learning outcomes is the result of a quality learning process as well, for a quality learning process, an educator needs the ability to apply learning methods where the method is in accordance with the needs in the classroom (Montenegro-Rueda et al., 2023).

In the era of rapid technological advances, teachers will find it more difficult to compete with machines, therefore teachers need to change their teaching methods from traditional to multistimulan learning. However, not all machines can replace the duties of teachers, for example, instilling character values and building teamwork and social empathy, these aspects are important for teachers because they cannot be carried out by machines (Alifiyarti et al., 2023). Low student learning outcomes and also a less pleasant and meaningful learning atmosphere affect student learning outcomes, learning media are currently rarely used by teachers, teachers only stick to one source of books, so students find it difficult to understand abstract mathematics.

Conclusion

In this research, analysis was carried out on three variables, namely two independent variables and 1 dependent variable. For analysis purposes the name of each variable is changed to one symbol. The learning motivation variable is given the symbol X1, the learning outcome variable is given the symbol Data collection techniques use interview techniques, observation and distribution of questionnaires and also secondary data. Data analysis in this research was carried out by testing validity, reliability, classical assumptions and hypotheses. In this research hypothesis testing was carried out using the t test to obtain the influence between variables X1 on Y, the influence of media on learning motivation. From the results of the Constant media t test on motivation, an R Square value of 0.45 was obtained, meaning that media variables influenced student learning motivation by 45.20% and the remainder was influenced by other factors. From the results of the media t coefficients test, the significance value is $0.000 < 0.05$, meaning that there is an influence of the media on learning outcomes. From the results of the Constant media t test on the results, an R Square value of 0.202 was obtained. This means that media variables influence student learning outcomes by 20.2% and the rest is influenced by other factors. Based on the results of data analysis, it can be concluded that the use of digital learning media in elementary schools, especially for elementary school students in class V, Gugus Wijaya Kusuma, has an effect on increasing the motivation and learning outcomes of class V students in the Gugus Wijaya Kusuma social studies lesson.

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Conflicts of Interest

The authors declare no conflict of interest.

References

- Abdulrahman, M. D., Faruk, N., Oloyede, A. A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V., Imam-Fulani, Y. O., Fahm, A. O., & Azeez, A. L. (2020). Multimedia tools in the teaching and learning processes: A systematic review. *Heliyon*, 6(11), e05312. <https://doi.org/10.1016/j.heliyon.2020.e05312>
- Abhishek, N., Kulal, A., Divyashree, M. S., & Dinesh, S. (2023). Effectiveness of MOOCs on learning efficiency of students: a perception study. *Journal of Research in Innovative Teaching & Learning*. <https://doi.org/10.1108/JRIT-12-2022-0091>
- Alifiyarti, T., Wuryandani, W., & Retnawati, H. (2023). How the Teacher's Efforts to Instilling Responsibility Character in Learning from Home Era? *JPI (Jurnal Pendidikan Indonesia)*, 12(1), 10-19. <https://doi.org/10.23887/jpiundiksha.v12i1.40078>
- Alyahyan, E., & Düşteğör, D. (2020). Predicting academic success in higher education: literature review and best practices. *International Journal of Educational Technology in Higher Education*, 17(1), 3. <https://doi.org/10.1186/s41239-020-0177-7>
- Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learning Environments*, 7(1), 9. <https://doi.org/10.1186/s40561-020-00118-7>
- Beemt, A. Van Den, Thurlings, M., & Willems, M. (2020). Towards an understanding of social media use in the classroom: a literature review. *Technology, Pedagogy and Education*, 29(1), 35-55. <https://doi.org/10.1080/1475939X.2019.1695657>
- Cachia, M., Lynam, S., & Stock, R. (2018). Academic success: Is it just about the grades? *Higher Education Pedagogies*, 3(1), 434-439. <https://doi.org/10.1080/23752696.2018.1462096>
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5-22. <https://doi.org/10.1177/0047239520934018>
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koochang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). Opinion Paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>

- Ernawati, M. D. W., Sudarmin, S., Asrial, A., Haryanto, H., Sanova, A., Kurniawan, D. A., & Azzahra, M. Z. (2022). The Influence of Student Interest on Student Learning Outcomes in Science Subjects. *Jurnal Pendidikan Sains Indonesia*, 10(4), 849–861. <https://doi.org/10.24815/jpsi.v10i4.25306>
- Fauzi, A., & Widjajanti, D. B. (2018). Self-regulated learning: the effect on student's mathematics achievement. *Journal of Physics: Conference Series*, 1097, 012139. <https://doi.org/10.1088/1742-6596/1097/1/012139>
- Granić, A. (2022). Educational Technology Adoption: A systematic review. *Education and Information Technologies*, 27(7), 9725–9744. <https://doi.org/10.1007/s10639-022-10951-7>
- Hadi, A., Marniati, M., Ngindana, R., Kurdi, M. S., Kurdi, M. S., & Fauziah, F. (2023). New Paradigm of Merdeka Belajar Curriculum in Schools. *AL-ISHLAH: Jurnal Pendidikan*, 15(2), 1497–1510. <https://doi.org/10.35445/alishlah.v15i2.3126>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285. <https://doi.org/10.1016/j.susoc.2022.05.004>
- Handayani, S., Nur Amalina, E., Nur Asiah, A., & Prasetyo Wati, A. (2024). Study of "Merdeka Belajar" Curriculum for Cultivating Student Character: Evidence from Indonesia. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v9i4.15086>
- Hollister, B., Nair, P., Hill-Lindsay, S., & Chukoskie, L. (2022). Engagement in Online Learning: Student Attitudes and Behavior During COVID-19. *Frontiers in Education*, 7, 851019. <https://doi.org/10.3389/feduc.2022.851019>
- Khatun, N. (2021). Applications of Normality Test in Statistical Analysis. *Open Journal of Statistics*, 11(01), 113–122. <https://doi.org/10.4236/ojs.2021.111006>
- Marpanaji, E., Mahali, M. I., & Putra, R. A. S. (2018). Survey on How to Select and Develop Learning Media Conducted by Teacher Professional Education Participants. *Journal of Physics: Conference Series*, 1140, 012014. <https://doi.org/10.1088/1742-6596/1140/1/012014>
- McKenna, R. (2022). Is knowledge a social phenomenon? *Inquiry*, 1–25. <https://doi.org/10.1080/0020174X.2022.2135823>
- Montenegro-Rueda, M., Fernández-Cerero, J., Fernández-Batanero, J. M., & López-Meneses, E. (2023). Impact of the Implementation of ChatGPT in Education: A Systematic Review. *Computers*, 12(8), 153. <https://doi.org/10.3390/computers12080153>
- Näher, A.-F., Vorisek, C. N., Klopfenstein, S. A. I., Lehne, M., Thun, S., Alsalamah, S., Pujari, S., Heider, D., Ahrens, W., Pigeot, I., Marckmann, G., Jenny, M. A., Renard, B. Y., Von Kleist, M., Wieler, L. H., Balzer, F., & Grabenhenrich, L. (2023). Secondary data for global health digitalisation. *The Lancet Digital Health*, 5(2), e93–e101. [https://doi.org/10.1016/S2589-7500\(22\)00195-9](https://doi.org/10.1016/S2589-7500(22)00195-9)
- Octaberlina, L. R. (2023). Exploring the Use of Digital Technology in English Language Teaching: Strategies and Methods for Effective Implementation. *English Franca : Academic Journal of English Language and Education*, 7(1), 175. <https://doi.org/10.29240/ef.v7i1.6977>
- Osman, A., Ydhag, C. C., & Månsson, N. (2021). Recipe for educational success: a study of successful school performance of students from low social cultural background. *International Studies in Sociology of Education*, 30(4), 422–439. <https://doi.org/10.1080/09620214.2020.1764379>
- Petricevic, O., & Teece, D. J. (2019). The structural reshaping of globalization: Implications for strategic sectors, profiting from innovation, and the multinational enterprise. *Journal of International Business Studies*, 50(9), 1487–1512. <https://doi.org/10.1057/s41267-019-00269-x>
- Pho, D. H., Nguyen, H. T., Nguyen, H. M., & Nguyen, T. T. N. (2021). The use of learning station method according to competency development for elementary students in Vietnam. *Cogent Education*, 8(1), 1870799. <https://doi.org/10.1080/2331186X.2020.1870799>
- Rasmani, U. E. E., Jumiatmoko, J., Eka Nurjanah, N., Agustina, P., Widiastuti, Y. K. W., Nazidah, M. D. P., & Prashanti, N. A. S. (2023). Pentingnya Guru Penggerak bagi Guru PAUD dalam Eksistensi Kurikulum Merdeka. *Murhum : Jurnal Pendidikan Anak Usia Dini*, 4(1), 482–496. <https://doi.org/10.37985/murhum.v4i1.257>
- Reischauer, G., & Ringel, L. (2023). Unmanaged Transparency in a Digital Society: Swiss army knife or double-edged sword? *Organization Studies*, 44(1), 77–104. <https://doi.org/10.1177/01708406221106329>
- Sailer, M., Murböck, J., & Fischer, F. (2021). Digital learning in schools: What does it take beyond digital technology? *Teaching and Teacher Education*, 103, 103346. <https://doi.org/10.1016/j.tate.2021.103346>
- Sandika, T. W. (2021). Pengaruh Pembelajaran Daring dan Motivasi Belajar terhadap Hasil Belajar Siswa di Sekolah Dasar. *Invention: Journal Research and Education Studies*, 1–13. <https://doi.org/10.51178/invention.v2i2.474>
- Santos, J. M., & Castro, R. D. R. (2021). Technological Pedagogical content knowledge (TPACK) in

- action: Application of learning in the classroom by pre-service teachers (PST). *Social Sciences & Humanities Open*, 3(1), 100110. <https://doi.org/10.1016/j.ssaho.2021.100110>
- Sivakumar, A., Jayasingh, S., & Shaik, S. (2023). Social Media Influence on Students' Knowledge Sharing and Learning: An Empirical Study. *Education Sciences*, 13(7), 745. <https://doi.org/10.3390/educsci13070745>
- Steinmayr, R., Weidinger, A. F., Schwinger, M., & Spinath, B. (2019). The Importance of Students' Motivation for Their Academic Achievement – Replicating and Extending Previous Findings. *Frontiers in Psychology*, 10, 1730. <https://doi.org/10.3389/fpsyg.2019.01730>
- Urhahne, D., & Wijnia, L. (2023). Theories of Motivation in Education: an Integrative Framework. *Educational Psychology Review*, 35(2), 45. <https://doi.org/10.1007/s10648-023-09767-9>
- Utami, F. T., & Zanah, M. (2021). Youtube Sebagai Sumber Informasi Bagi Peserta Didik di Masa Pandemi Covid-19. *Jurnal Sinestesia*, 11(1), 78–84. <https://doi.org/10.53696/27219283.64>
- Valverde-Berrocoso, J., Acevedo-Borrega, J., & Cerezo-Pizarro, M. (2022). Educational Technology and Student Performance: A Systematic Review. *Frontiers in Education*, 7, 916502. <https://doi.org/10.3389/feduc.2022.916502>
- Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, 18(1), 148. <https://doi.org/10.1186/s12874-018-0594-7>
- Verma, A., & Venkatesan, M. (2022). HR factors for the successful implementation of Industry 4.0: A systematic literature review. *Journal of General Management*, 47(2), 73–85. <https://doi.org/10.1177/03063070211019141>
- Wahyuningsih, D., Wahyono, S. B., & Nugroho, A. A. (2021). Teachers' Difficulties in Developing Learning Resources. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v6i2.10024>
- Yanti, B., Wahyudi, E., Wahiduddin, W., Novika, R. G. H., Arina, Y. M. D., Martani, N. S., & Nawan, N. (2020). Community Knowledge, Attitudes, And Behavior Towards Social Distancing Policy As Prevention Transmission of Covid-19 in Indonesia. *Jurnal Administrasi Kesehatan Indonesia*, 8(2), 4. <https://doi.org/10.20473/jaki.v8i2.2020.4-14>
- Zamiri, M., & Esmaeili, A. (2024). Methods and Technologies for Supporting Knowledge Sharing within Learning Communities: A Systematic Literature Review. *Administrative Sciences*, 14(1), 17. <https://doi.org/10.3390/admsci14010017>