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THE EFFECT OF INFOGRAPHIC LEARNING MEDIA ON STUDENT CREATIVITY AND LEARNING OUTCOMES IN THE TOPIC OF INDONESIAN ECONOMIC DEVELOPMENT IN SOCIAL STUDIES FOR GRADE VIII AT MTs SUNAN KALIJOGO MAYAN, KEDIRI REGENCY

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ABSTRACT

The selection of an appropriate learning medium plays an important role in determining the success of the classroom learning process. Teacher-centered learning tends to make students passive, which leads to low levels of creativity and learning outcomes. Therefore, learning innovation that actively engages students is required, one of which is the use of infographic media that presents information in a visual and attractive form. This study aims to: (1) examine the effect of infographic learning media on students' creativity in the topic of Indonesian Economic Development for Grade VIII at MTs Sunan Kalijogo Mayan, Kediri Regency; (2) examine the effect of infographic learning media on students' learning outcomes in the same topic; and (3) examine the effect of infographic learning media on both creativity and learning outcomes simultaneously. This study employed a quantitative approach with a quasi-experimental design. The research sample consisted of 68 students, namely class VIII-I as the experimental class and class VIII-J as the control class, selected through purposive sampling. Data were collected through a creativity questionnaire as well as pretest and posttest of learning outcomes. Normality and homogeneity tests were conducted as prerequisite tests prior to hypothesis testing. Hypothesis testing was carried out using the Independent Sample T-Test and MANOVA with the assistance of IBM SPSS Statistics 27. The findings indicate that: (1) there is an effect of infographic learning media on students' creativity with a Sig. (2-tailed) value of 0.001 < 0.05; (2) there is an effect of infographic learning media on students' learning outcomes with a Sig. (2-tailed) value of 0.001 < 0.05; and (3) there is an effect of infographic learning media on students' creativity and learning outcomes simultaneously with a Sig. value of 0.001 < 0.05, therefore H0 is rejected and H_a is accepted.

Keywords: Infographic Learning Media; Creativity; Learning Outcomes.

INTRODUCTION

Learning is an activity inherent in the world of education and serves as the primary means of developing students' potential. Law of the Republic of Indonesia Number 20 of 2003, Article 1, paragraph 20, states that learning is a process of interaction between students and educators with learning resources in a specific learning environment (Republic of Indonesia, 2003). This definition conveys that learning is not merely the transfer of information from teacher to student, but rather a series of activities involving many elements. Several elements that play a role in the learning process include materials, media, methods, and evaluation. Each of these elements affects the achievement of learning objectives (Darman, 2020). The success of these objectives can be seen from the competencies attained by students after participating in learning activities. The selection of appropriate learning media is one of the determining factors for this success.

Learning media plays a strategic role in helping students understand the material presented by the teacher in class. Many schools today still rely on traditional media such as textbooks, student worksheets, and blackboards in their instruction. This traditional, text-based and verbal approach often makes students feel bored, less motivated, and tends to be passive during learning. This condition leads to low student creativity because they are not given sufficient space to develop ideas. The lack of variation in learning media also contributes to low learning outcomes, especially when students face abstract material (Wati, 2025). Smaldino, as cited in Batubara (2021), states that infographics are one form of visual media widely used in the learning process because of their appealing appearance and ease of use. The use of visual media in learning should consider students' cognitive developmental stages and the characteristics of images that match students' interests.

Social Studies (IPS) has unique characteristics compared to other subjects in the school curriculum. Numan Somantri, as cited in Nashrullah (2022), explains that Social Studies is an integrated, multifaceted, interdisciplinary, and even cross-disciplinary subject. These characteristics require students to develop a deep understanding of various social concepts and events in their environment. Such understanding demands the development of critical and creative thinking skills throughout the learning process. In practice, Social Studies instruction still often focuses on verbal delivery and memorization activities, causing students to be generally less engaged (Nashrullah, 2022). Social Studies topics, including Indonesian Economic Development, contain many concepts that require analytical skills. Without appropriate media, students will struggle to grasp the core of the material presented.

Observations conducted at MTs Sunan Kalijogo Mayan, Kediri Regency, revealed several problems in Grade VIII Social Studies learning. Most students had not demonstrated optimal active participation during the learning process and displayed relatively low levels of creativity and learning outcomes. Many students tended to be passive, participated little in discussions, and were unable to express ideas creatively. The learning media used were still limited to textbooks, student worksheets, and blackboards. These media limitations caused students to show little interest and low learning motivation. Students' enthusiasm, attention, and participation during learning appeared suboptimal. This situation needs to be addressed so that Social Studies learning objectives can be achieved effectively.

One learning medium that can be selected to address these issues is infographic media. Infographic media is a visual medium that presents information concisely, systematically, and attractively through the combination of text and images (Nikmah, 2023). This type of presentation makes it easier for students to understand complex learning material. The application of infographic media is expected to reduce the dominance of verbal teaching methods in the classroom. A more interactive and student-centered learning environment can also be created through the use of this medium. Students not only act as receivers of information but are also actively involved in processing and presenting information creatively. Therefore, research into the use of infographic media in Social Studies learning is important to conduct.

Several prior studies have discussed the use of innovative media and learning models to improve the quality of instruction. Nabillah et al. (2025), in their research on the effect of the Snowball Throwing learning model assisted by infographic poster media, found that this medium was able to visualize abstract material, thereby increasing student activity. Nulhakim and Fatawi (2025) conducted research on the effect of project-based learning assisted by infographics on Grade V students at SDN 1 Warunggunung, Lebak Regency. The Independent Samples Test in that study yielded a significance value of 0.000, and the ANOVA test produced an F-value of 45.356 with a

significance of 0.000. Both values were less than 0.05, indicating a significant effect on student learning creativity before and after treatment. Both studies utilized infographics as visual media in learning and demonstrated positive impacts on the measured dependent variables.

Another relevant study was conducted by Mala et al. (2023), entitled "The Use of Digital Infographic Media Based on the Canva Application to Improve Student Learning Outcomes in Anecdote Text Learning." The results showed an increase in average scores and classical completeness at each learning cycle (Mala et al., 2023). In cycle I, student learning outcomes improved although the success indicators had not yet been met, while in cycle II a significant improvement occurred that met the classical completeness criteria. Zulkifli et al. (2024) also conducted research on the effect of static infographic learning media on student learning outcomes in history. The hypothesis test in that study yielded a significance value (Sig. 2-tailed) of 0.000, which is less than 0.05, so the alternative hypothesis was accepted. These findings confirm that infographic media contributes positively to improving student learning outcomes. However, studies on the effect of infographic media in Social Studies, particularly on the topic of Indonesian Economic Development at the MTs level, remain very limited.

Based on the problems and prior research reviewed, the researcher considers it necessary to conduct research on the effect of infographic learning media at MTs Sunan Kalijogo Mayan, Kediri Regency. This study has three main objectives to be achieved through quantitative procedures. The first objective is to determine the effect of infographic learning media on student creativity in the topic of Indonesian Economic Development for Grade VIII at MTs Sunan Kalijogo Mayan, Kediri Regency. The second objective is to determine the effect of infographic learning media on student learning outcomes in the same topic. The third objective is to determine the effect of infographic learning media on both student creativity and learning outcomes simultaneously. These three objectives are interconnected and provide a comprehensive picture of the benefits of infographic media in Social Studies learning. The results of this study are expected to serve as a reference for teachers and madrasah administrators in selecting appropriate learning media.

RESEARCH METHODS

Research Approach, Type, Location, Population, and Sample

This study employed a quantitative approach with a quasi-experimental design using a pretest-posttest design, aimed at determining the differences in student creativity and learning outcomes before and after the use of infographic learning media (Sugiyono, 2023). The quantitative approach was chosen because the data obtained were numerical, derived from the completion of creativity questionnaires and student learning test results. The research location was set at MTs Sunan Kalijogo Kranding, located at Dusun Mayan RT. 7 RW 2, Kranding Village, Mojo District, Kediri Regency, East Java Province, and the research was conducted from January 17 to February 10, 2026. The population in this study consisted of Grade VIII students of MTs Sunan Kalijogo Mayan, Kediri Regency, for the 2025/2026 academic year, while the sample was selected using purposive sampling based on the Social Studies teacher's recommendation, which considered students' initial abilities. The selected sample totaled 68 students, consisting of class VIII-I with 35 students as the experimental class and class VIII-J with 33 students as the control class.

Data Collection Techniques and Research Instruments

Data collection techniques in this study included tests, questionnaires, observation, and documentation. Tests were administered in the form of pretest and posttest to measure student learning outcomes on cognitive aspects related to the topic of Indonesian Economic Development. A questionnaire was used to measure students' level of creativity during the use of infographic media, using a four-level Likert scale. Observation was carried out to monitor the implementation of infographic media use as well as students' responses and activity during learning. Documentation was used as supporting data in the form of activity photos, attendance lists, questionnaire sheets, test sheets, and students' infographic works. The instruments used in this study consisted of two types. The first instrument was a student creativity questionnaire developed based on five indicators: fluency, flexibility, originality, redefinition, and elaboration. The second instrument was a multiple-choice test consisting of 25 items constructed based on cognitive levels from C1 to C6. Both instruments were piloted on 32 students of class XI-L before being used in the study.

Data Analysis Techniques

Data analysis in this study comprised three stages: prerequisite testing, validity and reliability testing of instruments, and hypothesis testing. Validity testing was conducted using the Pearson Product Moment correlation formula, with the criterion that an item is valid if r-count is greater than r-table. Reliability was calculated using Cronbach's Alpha, and an instrument is declared reliable if the reliability coefficient is greater than 0.70. The prerequisite tests for the hypothesis consisted of normality and homogeneity tests. The normality test used the Shapiro-Wilk test to determine whether the data were normally distributed, while the homogeneity test used Levene's test to examine the equality of variances. Hypothesis testing employed two types of tests: the Independent Sample T-Test for the first and second hypotheses, and MANOVA (Multivariate Analysis of Variance) for the third hypothesis. All data analysis processes were carried out using IBM SPSS Statistics 27.

RESULTS AND DISCUSSION

Results

The Effect of Infographic Learning Media on Student Creativity

Table 1. Independent Sample T-Test Results for Student Creativity

Variance Group	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Diff.
Equal variances assumed	11.881	66	0.001	16.900	1.422
Equal variances not assumed	11.930	65.594	0.001	16.900	1.417

Table 1 presents the results of the Independent Sample T-Test on the creativity questionnaire of students in the experimental and control classes. The t-value obtained was 11.881 for the equal variances assumed row, with a degree of freedom of 66. The significance value (Sig. 2-tailed) was 0.001, which is less than 0.05. The mean difference between the two classes was recorded at 16.900 with a standard error of 1.422. Based on the decision-making criteria, a significance value of 0.001 < 0.05 indicates that H0 is rejected and H1 is accepted, meaning there is an effect of infographic learning media on student creativity.

The Effect of Infographic Learning Media on Student Learning Outcomes

Table 2. Independent Sample T-Test Results for Student Learning Outcomes

Variance Group	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Diff.
Equal variances assumed	5.295	66	0.000	12.959	2.447
Equal variances not assumed	5.281	64.506	0.000	12.959	2.454

Table 2 presents the results of the Independent Sample T-Test on the posttest scores of student learning outcomes in the experimental and control classes. The t-value obtained was 5.295 with a degree of freedom of 66 in the equal variances assumed row. The significance value (Sig. 2-tailed) was 0.000, which is less than 0.05. The mean difference between the two classes reached 12.959 with a standard error of 2.447. Based on these decision-making criteria, it can be concluded that H0 is rejected and H1 is accepted, meaning there is an effect of infographic learning media on student learning outcomes.

The Effect of Infographic Learning Media on Student Creativity and Learning Outcomes

Table 3. MANOVA Results (Multivariate Tests)

Multivariate Statistic	Value	F	Sig.	Partial Eta Sq.
Pillai's Trace	0.723	84.902	0.000	0.723
Wilks' Lambda	0.277	84.902	0.000	0.723
Hotelling's Trace	2.612	84.902	0.000	0.723
Roy's Largest Root	2.612	84.902	0.000	0.723

Table 3 presents the MANOVA results for student creativity and learning outcomes jointly. The F-

value obtained for the infographic media effect was 84.902 across all four multivariate statistics: Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root. The significance value for all four statistics was 0.000, which is less than 0.05. The partial eta squared value of 0.723 indicates a large contribution of the independent variable to the dependent variables. These results indicate that H0 is rejected and H_a is accepted, meaning infographic learning media has an effect on student creativity and learning outcomes simultaneously.

Discussion

The Effect of Infographic Learning Media on Student Creativity

The results showed that infographic learning media had an effect on the creativity of Grade VIII students at MTs Sunan Kalijogo Mayan, Kediri Regency. This finding was obtained through analysis of creativity questionnaire data validated by experts and piloted on 32 students. The questionnaire instrument was developed based on five creativity indicators: fluency, flexibility, originality, redefinition, and elaboration. Testing of the data was conducted in stages, from prerequisite tests to hypothesis testing using IBM SPSS Statistics 27. The Independent Sample T-Test yielded a significance value of 0.001, which is less than the significance level of 0.05.

The positive effect of infographic media on student creativity can be explained through the characteristics of the media itself. Infographic media presents learning material in visual form that systematically combines text, icons, colors, and images. This type of visual presentation gives students room to process information differently from conventional learning. When students are asked to design infographics themselves, they are trained to organize ideas, select appropriate visual elements, and present information in a distinctive way. This activity directly fosters the growth of student creativity in Social Studies learning.

This finding is consistent with the study by Nabillah et al. (2025), which states that infographic media is used as a two-dimensional visual medium to present abstract and difficult-to-understand learning material. According to Nabillah et al. (2025), this visual presentation can increase student activity and creativity in understanding learning sub-themes. The combination of colors, icons, images, and text in infographics makes previously difficult material easier to grasp. This is relevant to the context of Social Studies learning, which contains many abstract concepts such as economic development. Therefore, infographics are appropriate for stimulating the creative aspects of students.

The study by Nulhakim and Fatawi (2025), entitled "The Effect of Project-Based Learning Assisted by Infographics on the Creativity of Grade V Students at SDN 1 Warunggunung, Lebak Regency," also reinforces this finding. The Independent Samples Test in that study produced a significance value of 0.000, while the ANOVA test obtained an F-value of 45.356 with a significance of 0.000. Both values were less than 0.05, indicating a significant effect on student learning creativity before and after treatment. Although the educational level and subject matter differ, the working principle of infographic media still produces similar effects. This strengthens the argument that infographic media plays a role in developing student creativity across various educational levels.

Based on the above discussion, it can be concluded that infographic learning media has a significant effect on student creativity at MTs Sunan Kalijogo Mayan, Kediri Regency. The attractive visual presentation and students' involvement in designing infographics are the two main factors supporting the improvement of creativity. Thus, the first hypothesis, which states that infographic learning media has an effect on student creativity, is accepted. This result also opens opportunities for Social Studies teachers at madrasah to utilize infographics as an alternative medium in learning. The application of appropriate media will support the long-term growth of students' creative potential.

The Effect of Infographic Learning Media on Student Learning Outcomes

The results showed that infographic learning media had an effect on the learning outcomes of Grade VIII students at MTs Sunan Kalijogo Mayan, Kediri Regency. Student learning outcomes were measured through pretest and posttest items validated by experts and piloted on 32 respondents. The test consisted of 25 multiple-choice items constructed based on cognitive levels C1 to C6. After meeting the requirements of normality and homogeneity, data were analyzed using the Independent Sample T-Test. The test results showed a significance value of 0.001, which is less than 0.05, so H1 is accepted.

This significant effect is evident from the difference in average scores between the experimental and control classes. In the experimental class, the average pretest score of 56.57 increased to 86.17

in the posttest. Meanwhile, the control class only improved from 56.72 to 73.21. The difference in average posttest scores between the experimental and control classes reached 12.96 points. This difference shows that learning with infographic media is more effective than conventional learning in improving student learning outcomes.

This finding is supported by the study by Mala et al. (2023), entitled "The Use of Digital Infographic Media Based on the Canva Application to Improve Student Learning Outcomes in Anecdote Text Learning." Mala et al. (2023) reported an increase in average scores and classical completeness at each learning cycle. In cycle I, student learning outcomes improved although the success indicators had not yet been met. In cycle II, a significant improvement occurred that met the classical completeness criteria. The presentation of material through attractive, visual, and interactive digital infographics made the learning process more effective as well as enjoyable.

Reinforcement of this finding is also obtained from the study by Zulkifli et al. (2024), entitled "The Effect of Static Infographic Learning Media on Student Learning Outcomes in History." The hypothesis test in that study yielded a significance value (Sig. 2-tailed) of 0.000, which is less than 0.05, so the alternative hypothesis was accepted. There was a significant difference in learning outcomes between the experimental class that used static infographic media and the control class that did not. Both studies reinforce the belief that infographic media works effectively across subjects. Student learning outcomes improve when material is presented in a concise and structured visual form.

Based on the above discussion, it can be concluded that infographic learning media has a significant effect on student learning outcomes at MTs Sunan Kalijogo Mayan, Kediri Regency. The concise and systematic visual form of infographics helps students better understand Social Studies concepts. The second hypothesis, which states that infographic learning media has an effect on student learning outcomes, is therefore accepted. This result provides empirical evidence that the selection of appropriate media contributes to students' academic achievement. Social Studies teachers can utilize infographic media as a means to improve the quality of classroom learning.

The Effect of Infographic Learning Media on Student Creativity and Learning Outcomes

The results of MANOVA analysis showed that infographic learning media had an effect on student creativity and learning outcomes simultaneously. The significance values for Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root were all 0.000, with an F-value of 84.902. The partial eta squared value of 0.723 indicates a large contribution of the independent variable to both dependent variables. Since the significance value is less than 0.05, H0 is rejected and H_a is accepted. The application of infographic learning media therefore has a simultaneous effect on student creativity and learning outcomes.

This dual effect can be understood through the mechanism by which infographic media affects two aspects of learning simultaneously. On the creative aspect, students are trained to organize, select, and present information in a distinctive visual form. On the cognitive aspect, students gain ease of understanding material because it is presented concisely and systematically. Both aspects move together when students are actively engaged in infographic-assisted learning. As a result, improvements in creativity occur simultaneously with improvements in understanding of the material.

The study by Affandi et al. (2024), entitled "Development of Infographic Media-Based Learning Media Using the Canva Application to Improve Student Creativity and Learning Outcomes at SMKN 6 Surabaya," reinforces this finding. Affandi et al. (2024) state that Canva-based infographic learning media is one of the learning innovations capable of improving student creativity and learning outcomes. The visual, attractive, and systematic presentation of material makes students more active and engaged in the learning process. Through the use of infographics, students are encouraged to think creatively in understanding, processing, and presenting information. Students' comprehension and retention of material also improve.

Consistent with these findings, the study by Aryani (2022) at SMPN 1 Kandeman showed an increase in student creativity and learning outcomes at each cycle of infographic Canva-assisted learning. In cycle I, student learning creativity averaged 23.00 or 72.00% in the creative category, then increased in cycle II to 27.75 or 86.72% in the very creative category. The increase in creativity reached 4.75 points or 14.84%. Learning outcome completeness in cycle I was 68.75% with an average of 72.50, then increased to 87.50% with an average of 82.66 in cycle II. The increase in

learning outcome completeness reached 18.75% with an average increase of 10.16 (Aryani, 2022).

Based on the above discussion, it can be concluded that infographic learning media simultaneously affects student creativity and learning outcomes at MTs Sunan Kalijogo Mayan, Kediri Regency. The concise, visual, and systematic presentation of material is the key to this medium's success in improving two variables at once. The third hypothesis, which states that infographic learning media has an effect on student creativity and learning outcomes, is therefore accepted. This finding provides an empirical basis for the development of higher-quality Social Studies learning at madrasah. The use of infographic media is a strategic choice to support comprehensive student academic achievement.

CONCLUSIONS

Based on the research results and discussion, three conclusions can be drawn in accordance with the research objectives. First, infographic learning media has an effect on the creativity of Grade VIII students in the topic of Indonesian Economic Development at MTs Sunan Kalijogo Mayan, Kediri Regency. This is indicated by a Sig. (2-tailed) value of 0.001, which is less than 0.05, so H0 is rejected and H_a is accepted. Second, infographic learning media has an effect on the learning outcomes of Grade VIII students in the topic of Indonesian Economic Development at MTs Sunan Kalijogo Mayan, Kediri Regency. This is demonstrated by a Sig. (2-tailed) value of 0.001, which is less than 0.05, so H0 is rejected and H_a is accepted. Third, infographic learning media has an effect on student creativity and learning outcomes simultaneously in the topic of Indonesian Economic Development at MTs Sunan Kalijogo Mayan, Kediri Regency. The MANOVA test produced a significance value of 0.001, which is less than 0.05, so H0 is rejected and H_a is accepted.

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