

The Influence of Interactive Learning Using Video Quizizz and Mind Mapping on the Understanding of the Indonesian Story Social Studies Material

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Article Info

Article history:

Received 8 September 2025
Received in revised form 15
October 2025
Accepted 23 January 2026

Keywords:

Interactive Learning
Quizizz
Mind Mapping
Social Studies
And Student Understanding

Abstract

This study aims to determine the effect of interactive learning using Quizizz videos and mind mapping techniques on the understanding of Social Sciences (IPS) material on the theme of Indonesian Stories at MI Raden Rahmat Wonokromo Surabaya. Interactive learning is an approach that involves students engaging with digital media and utilizing fun visual strategies. Quizizz is an interactive digital quiz platform, and mind mapping is a visual note-taking technique that is believed to improve students' understanding of narrative and conceptual materials. The research method used is quantitative with an associative approach. The research sample was all sixth-grade students who were analyzed using multiple linear regression. The results showed that both Quizizz videos and mind mapping had a significant effect, partially and simultaneously, on students' understanding. The R^2 value of 0.975 indicates that 97.5% of the understanding of IPS material is influenced by these two variables. Thus, the integration of technology and visual strategies has proven effective in improving the quality of IPS learning in madrasah.

Introduction

Social Studies education plays a critical role in shaping students' historical awareness, national identity, and critical thinking. However, the Indonesian Story topic often receives limited attention and is typically delivered through conventional methods, resulting in low student engagement and a shallow understanding. Recent studies have explored digital tools in the classroom, such as Quizizz and mind mapping, which promote active learning and visualization.

Despite increasing interest in digital pedagogy, there remains a gap in empirical research exploring the combined effect of Quizizz videos and mind mapping on Social Studies comprehension in the Islamic elementary school context. Therefore, this study addresses this gap by examining how these methods influence students' understanding of Indonesian historical narratives. The study is guided by the following research questions: (1) Does interactive learning using Quizizz video and mind mapping significantly improve students' understanding of Indonesian Story content? (2) How do these tools complement each other in fostering comprehension?

Learning Social Sciences (IPS) at the Madrasah Ibtidaiyah (MI) level is important in instilling historical, social, and national values in students from an early age. The material delivered is not only memorized, but also contains moral messages and the formation of national character. However, in practice, IPS learning is still mostly delivered conventionally, centered on teachers, and does not involve students actively (Yussista, 2022).

The dominant lecture method often makes students passive and has difficulty understanding conceptual and narrative materials, such as the theme of "Indonesian Stories". The lack of variation in learning media causes students' motivation and absorption of the material to be low. (Afifah, 2022). Therefore, a more interesting and interactive learning approach is needed so that the material can be understood more effectively.

The development of information technology today provides great opportunities in the world of education, one of which is through interactive digital media. One of the popular and widely used platforms is Quizizz, a quiz-based application that presents questions interactively and fun way. (Amalia, 2020). The use of Quizizz videos allows students to learn while playing, thereby increasing student enthusiasm for learning and engagement in the classroom.

Apart from using digital media, mind mapping techniques have also been proven to help students understand and organize information visually. (Nurfaziah, 2022). Mind mapping is a creative note-taking method that can help students connect the concepts they learn, thereby improving overall understanding. (Alfianti, 2020). The combination of interactive media, such as Quizizz videos and mind mapping techniques, is believed to create a more effective and enjoyable learning experience. Previous research supports the effectiveness of using Quizizz and mind mapping in learning. (Amsul, 2022) Found that the use of the Quizizz application media can improve the learning outcomes of Class XI IPA Man 2 Sinjai students. In addition, research by (Azzahra, 2022) Shows that the mind mapping method with image media is effective in improving the learning outcomes of social studies of grade V students in elementary schools.

Based on these findings, it can be concluded that the integration of interactive learning media and information visualization techniques can have a positive impact on students' understanding of social studies learning. This is the basis for researchers to further examine the effect of the combination of using Quizizz videos and mind mapping on understanding social studies material, especially on the theme "Indonesian Stories." (Rosanaya, 2021). This study aims to determine the effect of interactive learning using Quizizz videos and mind mapping on the understanding of social studies material on the theme "Indonesian Stories" at MI Raden Rahmat Wonokromo Surabaya. It is hoped that the results of this study can contribute to the development of innovative and effective learning strategies in the madrasah environment.

Thus, the application of learning methods that combine digital technology and information visualization techniques is expected to improve the quality of social studies learning, as well as help students understand and apply the material they are studying better.

Literature Review

Interactive Learning

Interactive learning involves active student engagement through digital platforms, feedback loops, and collaborative tasks (Anderson, 2022). It encourages autonomy, participation, and deeper cognitive processing. Interactive learning is an approach that places students as active subjects in the learning process. In this approach, students not only receive information from the teacher passively, but are also directly involved in discussions, problem solving, and exploration of subject matter. The purpose of interactive learning is to create a fun learning atmosphere, increase student participation, and build a deep understanding of concepts. Interactivity is built not only through face-to-face meetings but also through digital learning media, online quizzes, and educational animations.

In the context of Social Sciences (IPS) subjects, the interactive approach is very relevant because IPS contains complex material, such as historical events, social interactions, and social

structures. The narrative and conceptual nature of IPS demands learning methods that can stimulate students' critical, analytical, and reflective thinking. Interactivity in IPS learning helps students connect the material being studied with the social reality around them, making learning more contextual and meaningful.

Good learning is learning that encourages students to actively ask questions, discuss, and evaluate their own knowledge. This emphasizes the importance of participation and collaboration in the learning process. In line with that, research by (Bitu, 2024) Found that technology-based interactive learning can improve students' learning motivation and learning outcomes, especially in social studies. Media such as learning videos, interactive simulations, and online quizzes have been shown to have a positive impact on student engagement in the learning process.

Other support comes from (Fauziah, 2025), who in their research on the subject of Islamic Religious Education concluded that the application of interactive methods can significantly improve the quality of learning. This strategy allows teachers to create a collaborative and non-monotonous learning environment. In addition, (Isa Anshori, 2022) Interactive learning is an approach that emphasizes active interaction between students, teachers, and learning media to increase the effectiveness of learning. This interaction can occur directly or through digital platforms. The main goal is to create a participatory, interesting, and meaningful learning experience.

Characteristics of interactive learning: a) Students are actively involved in the learning process; b) The teacher acts as a facilitator; c) Using interactive media (such as videos, online quizzes, and mind mapping); d) Encourage student collaboration and reflection.

Interactive learning is a learning model that facilitates active interaction between teachers, students, and learning media to improve understanding, participation, and meaningful learning experiences. This interaction can occur directly or through digital media such as Quizizz, mind mapping, and other e-learning platforms. (Isa Anshori., 2022)

Shows that the application of educational game-based media not only improves student learning outcomes, but also creates a competitive and motivating learning atmosphere. Thus, interactive learning, both conventional and digital, provides an alternative learning strategy that is effective and in accordance with the needs of today's students.

Video Quizizz as a Learning Media

Quizizz is a game-based platform that provides immediate feedback and adaptive pacing. Research shows that Quizizz increases student motivation and enhances memory retention. (Putra & Sari, 2021). Its integration with videos allows for multisensory learning experiences. Quizizz is a quiz-based learning platform that utilizes gamification principles and digital technology to enhance students' learning experience. Through the integration of video, images, audio, and competitive elements such as leaderboards and points, Quizizz offers a learning alternative that is not only fun but also encourages active student engagement. These features trigger students' intrinsic and extrinsic motivation, which ultimately has an impact on increasing their attention, participation, and understanding of the material being taught..

In the context of learning in elementary and secondary schools, the use of video media on Quizizz can help simplify complex material to make it easier to understand. Learning materials visualized through videos have been proven to facilitate students in linking abstract concepts to concrete and relevant forms. In addition, videos support visual and auditory learners in absorbing information, making learning more inclusive and effective.

Research (Mahayana, 2022) Shows that the application of interactive media Quizizz in science subjects of class V SD Islam Sultan Agung 1 Semarang can significantly improve student learning outcomes. Through a pre-experimental design with pretest and posttest, students who learned using Quizizz showed a significant increase in scores after the learning intervention. This confirms that technology-assisted learning can be a solution to student boredom in conventional learning.

Similar research by (Andriani, 2023) Also supports the effectiveness of Quizizz as an interactive medium. At MTs Nurul Huda, the use of Quizizz in English and Science learning has succeeded in increasing both student interest and learning outcomes. Students become more active, enthusiastic, and motivated to learn because of the competitive and visual approach of Quizizz.

Other research by (Silvia, 2024) Palangka Raya City showed that the use of Quizizz in elementary school learning was able to improve students' understanding of the material and improve overall learning outcomes. These results were obtained from the evaluation of learning outcomes, which increased significantly after using this interactive media. The same thing was also expressed by (Rambe, 2022) Who studied the Effect of using the Quizizz Application in improving the Learning Outcomes of Elementary Madrasah Students during the Pandemic?

They found that Quizizz was very effective in helping students understand technical materials in a fun and interactive way. By combining interactive video features and a competitive quiz approach, Quizizz is a very appropriate learning medium to support the 21st-century learning model. The integration of this platform into the learning process not only helps teachers in delivering material but also makes students more active, creative, and critical in learning. Therefore, the use of Quizizz is highly recommended, especially in subjects such as social studies that require conceptual understanding and active student involvement.

Mind Mapping in Social Studies Learning

Mind mapping is a visual method to organize information hierarchically. It enhances memory, comprehension, and creativity (Buzan, 2018). In Social Studies, mind mapping allows students to connect historical events, causes, and impacts. Mind mapping is an information visualization technique in the form of a branching diagram to help students understand, remember, and organize information in a more structured and comprehensive manner. In the context of social studies learning, this technique is very useful for connecting interrelated historical, social, economic, and cultural concepts. Mind mapping not only stimulates the left brain (logic) but also the right brain (creativity), so that the learning process becomes more enjoyable and meaningful.

Several studies have proven that the mind mapping method can significantly improve student learning outcomes. (Lanna Sari, 2024) Shows that the mind mapping learning model has a positive effect on the social studies learning outcomes of grade IV students at SDN 01 Rantau Selatan. Through a quasi-experimental design, this study shows an increase in students' understanding of the material after the application of mind mapping compared to conventional learning.

Research by (Ahsinunnikmah, 2020) also supports the effectiveness of this technique, especially in social studies learning on the theme of "Events of the Proclamation". The results of the study showed that mind mapping makes it easier for students to remember the sequence of historical events visually and logically, and encourages active student involvement during the learning process. Likewise, (Tahira, 2024) stated that the use of the mind mapping method in social studies lessons at SDN 13 Bungku increased student participation and daily test results.

Another study by (Hartinawanti, 2022) In SD Negeri Topa found that the application of the mind mapping model not only had an impact on learning outcomes but also significantly increased students' interest in learning social studies. Mind mapping provides space for students to express their understanding in visual form, so that learning is no longer monotonous or limited to text alone.

Interestingly, this method has also proven effective in non-social studies materials, such as narrative writing skills. Research by (Mas Arfeni Aslian, 2022) Shows that the use of mind mapping can make it easier for students to organize ideas and structure narrative texts in grade V of SD Negeri 17 Gresik. Although not in social studies subjects, this finding confirms that mind mapping is very adaptive and effective in various learning areas.

Thus, it can be concluded that the integration of mind mapping methods in social studies learning is a strategic step to improve the quality of learning, especially in terms of understanding concepts and strengthening long-term memory. Visualization through mind mapping not only helps students reorganize information logically but also encourages their creativity and learning independence.

Integration of Quizizz Video and Mind Mapping in IPS Learning

Integration between digital media and visualization techniques in learning is one strategy that is considered effective in improving student understanding. In the context of learning Social Sciences (IPS), the combination of interactive videos from the Quizizz platform and mind mapping techniques provides two different approaches that complement each other. (Emi Rosmiati, 2020). Videos from Quizizz can present audio-visual stimulation that attracts students' attention and makes learning more contextual and enjoyable. Meanwhile, mind mapping functions as a means to help students reorganize and structure information obtained during the learning process.

While studies have examined Quizizz and mind mapping separately, few have investigated their combined effect. Moreover, prior research rarely focuses on Islamic elementary schools. This study aims to bridge this gap by integrating both tools in a single instructional design. The use of Quizizz videos allows students to get a complete picture of the material through communicative visual delivery. Game elements in Quizizz, such as points, rankings, and time, create a positive competitive atmosphere and can increase learning motivation. (Pakuna, 2022). When students are interested in learning, they will more easily understand and absorb the information provided. This is certainly an advantage in delivering social studies material, which is often narrative and requires a deep understanding of the flow of historical events.

On the other hand, after the exploration and stimulation process through videos, students need a means to reorganize information independently so that their understanding is strengthened. The mind mapping technique is here to meet this need. By creating a mind map, students not only memorize the material but also build connections between concepts logically and creatively. This process helps students reflect back on the knowledge they have acquired, so that the information is easier to store in long-term memory. (Yamini, 2022).

The collaboration between Quizizz videos and mind mapping also provides an opportunity for teachers to accommodate different learning styles of students. Students who tend to be visual and auditory will be helped by the use of videos, while students with kinesthetic and reflective tendencies will feel helped by drawing and conceptualizing activities through mind mapping. Therefore, the combination of the two is considered an ideal approach in creating an interactive, fun, and meaningful social studies learning atmosphere (Aulia & Arianto, 2025).

This integration is very suitable to be applied in social studies topics such as "Indonesian Stories," which contain aspects of history and national values. Through the Quizizz video, students can watch historical clips or interactive narratives, then strengthen their understanding by compiling mind maps from the material. (Nurjannah, 2023). In this way, students not only become passive recipients of information but also actively construct their understanding visually and conceptually.

Methods

The design of this study was made using a quantitative research approach that relies on associative research orientation. The design was selected due to the major goal of the study which was not to describe a learning phenomenon but rather to investigate and measure the extent of the effect of two instructional variables on the learning performance of students in a structured and statistically sound way. In line with this, the research has its focus on determining the degree to which interactive learning through Quizizz video and mind-Mapping technique improve the knowledge of students in the content of Social Studies, in relation to the theme of Indonesian Stories.

In this study, the operationalised variables included two independent and one dependent variable. The former independent variable was the interactive learning by means of Quizizz videos, where the combination of digital interactive media into the classroom learning was captured. The second independent variable involved the use of the mind- mapping technique which refers to a cognitive and visual strategy used to plan and reassemble the learning material. The dependent variable consisted of the knowledge of the students on the content of the Social Studies on the theme of Indonesian Stories, which was conceptualized as the ability of the students to understand, recollect and communicate the main ideas, series, and meanings of the learning content.

The study was done at MI Raden Rahmat Wonokomano in Surabaya within the 2024/2025 academic year. The sample included the sixth-grade learners in the institution. Due to the comparative low and manageable size of the cohort, a saturated sampling method was relevant hence the entire population was to be used as research participants resulting in a final sample of thirty students. This method was considered suitable in gaining a complete and representative representation of the conditions of learning in the investigated class.

The information was gathered using two major tools a questionnaire and a learning-achievement test. The questionnaire was structured in such a way that it will provide information that will be related to the use of interactive learning with Quizizz videos and using the mind-mapping technique during the learning process. It included predefined statements that highlighted the learning experiences of students, their perceptions and their involvement in the teaching activities. On the other hand, learning-achievement test was used to measure the extent to which students had understood the material of the Social Studies subject on Indonesian Stories, and was designed as an objective test reflecting key signs of conceptual knowledge and awareness of narrative patterns of the material covered.

Before use in the active data-collection stage, the two instruments had gone through a row of validity and reliability tests to establish their accuracy and appropriateness as measurement tools. The content validity was determined with the help of expert opinion including Social Studies teachers and lecturers of higher education in the area of education. Also, an empirical validity test was done in which a correlation was tested across individual items and overall score. The Cronbachs Alpha coefficient was used to assess reliability of the instruments with the use of the SPSS software. Results of these tests showed that all items meet the requirements

needed in an acceptable validity and reliability, which validates their suitability to use them in this research.

The research process was carried out through a number of well-organized steps. At the beginning, the administration of a pre-intervention test offered a representation of the understanding of the students before the instructional treatment. The learning phase followed this as the use of the Quizizz videos and mind- mapping technique were integrated in the Social Studies lessons about Indonesian Stories. In this stage, learners were involved in interactive online learning processes and instructed to restructure and re-create the learning content in the form of visual mind maps. After the instructional intervention was completed, a post-intervention test was conducted in order to measure the changes in the understanding of students that could be attributed to the instructional treatment.

The data that was obtained using the instruments were then analysed using multiple linear regression. This mode of analysis was chosen as it can be used to observe the partial and simultaneous impact of independent variables on the dependent one. Before the regression analysis, a sequence of classical assumptions tests were conducted to see whether the data matched the statistical requirements of the regression analysis. These tests included the test of normality of the data distribution, the test of multicollinearity to identify possible correlations between independent variables, and the test of heteroscedasticity to test the homogeneity of the data variance of the residual.

All the statistical procedures in this paper were done in SPSS version 26. The level of significance was considered as 0.05 meaning that the results were characterized in a five-percent margin of error. Using this methodological and well-organized analytical framework, this study attempts to provide a rigorous and responsible explanation of the effects of interactive learning by use of Quizizz videos and the mind- mapping technique on the knowledge of students on the content of Social Studies, especially in the context of narrative and historical learning like the Indonesian Stories.

Results and Discussion

Data Analysis Techniques

Validity Test

Validity test is used to measure the validity of a questionnaire. A questionnaire is said to be valid if the questions on the questionnaire are able to reveal something that will be measured by the questionnaire. The following are the results of the validity test using the SPSS version 26 application:

Table 1. Validity Test

Variables	Question Items	R count	R table	Information
Interactive Learning Using Video Quizizz (X1)	Question X1.1	0,828	0,361	Valid
	Question X1.2	0,785	0,361	Valid
	Question X1.3	0,869	0,361	Valid
	Question X1.4	0,866	0,361	Valid
	Question X1.5	0,828	0,361	Valid
	Question X1.6	0,918	0,361	Valid
	Question X1.7	0,869	0,361	Valid
	Question X1.8	0,918	0,361	Valid
	Question X1.9	0,903	0,361	Valid
	Question X1.10	0,866	0,361	Valid

Mind Mapping Technique (X2)	Question X2.1	0,892	0,361	Valid
	Question X2.2	0,843	0,361	Valid
	Question X2.3	0,920	0,361	Valid
	Question X2.4	0,789	0,361	Valid
	Question X2.5	0,686	0,361	Valid
	Question X2.6	0,853	0,361	Valid
	Question X2.7	0,892	0,361	Valid
	Question X2.8	0,843	0,361	Valid
	Question X2.9	0,853	0,361	Valid
	Question X2.10	0,864	0,361	Valid
Understanding of Social Studies Material on Indonesian Story Themes (Y)	Question Y.1	0,939	0,361	Valid
	Question Y.2	0,813	0,361	Valid
	Question Y.3	0,939	0,361	Valid
	Question Y.4	0,869	0,361	Valid
	Question Y.5	0,939	0,361	Valid
	Question Y.6	0,601	0,361	Valid
	Question Y.7	0,831	0,361	Valid
	Question Y.8	0,869	0,361	Valid
	Question Y.9	0,821	0,361	Valid
	Question Y.10	0,604	0,361	Valid

Source: Data processed by SPSS 26, 2025

Based on the table above, namely the results of the validity test on Interactive Learning Using Video Quizizz, and Mind Mapping Techniques on Understanding Social Studies Material on the Theme of Indonesian Stories with a total of 30 statement items, then after the results of the validity test it appears that all question items are valid, it is said to be valid because it has a calculated r value greater than the r table value.

Reliability Test

A reliability test is an index that shows the extent to which the results of a measurement can be trusted. A questionnaire is declared reliable if a person's answers to questions are consistent or stable over time. The following are the results of the reliability test:

Table 2. Reliability Test

Variables	Number of Questions	Cronbach's Alpha	Information
Interactive Learning Using Video Quizizz (X1)	10	0,787	Reliable
Mind Mapping Technique (X2)	10	0,785	Reliable
Understanding of Social Studies Material on Indonesian Story Themes (Y)	10	0,784	Reliable

Source: Data processed by SPSS 26, 2025

From the output image above, it is known that the Alpha value of variable X1, namely Interactive Learning Using Video Quizizz, is 0.787, variable X2, namely Mind Mapping Technique, is 0.785, and variable Y, namely Understanding of Social Studies Material with Indonesian Story Themes, is 0.784, then the alpha value is compared with the probability value with a value of N = 30, searched for in the distribution of significant probability values 5%, a probability value of 0.6 is obtained. So it can be concluded that the Alpha variables X1, X2,

and Y, the Cronbach's Alpha value is greater than the probability value = 0.6, which means that the questionnaire items can be said to be reliable or trusted as a data collection tool in further research.

Classical Assumption Test

The classical assumption test is a test carried out as a statistical prerequisite before carrying out multiple linear regression analysis, which aims to provide certainty that the regression equation can be determined and is consistent.

Data Normality Test

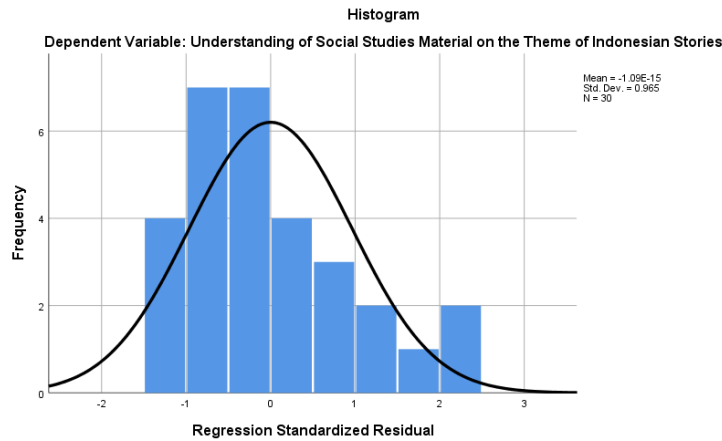


Figure 1. Histogram

Source: Data processed by SPSS 26, 2025

Normally distributed data are two samples that already represent the population. Data can be said to be normal if the significance value is more than 0.05 and otherwise, the significance level is less than 0.05 is not normal.

Based on Plot

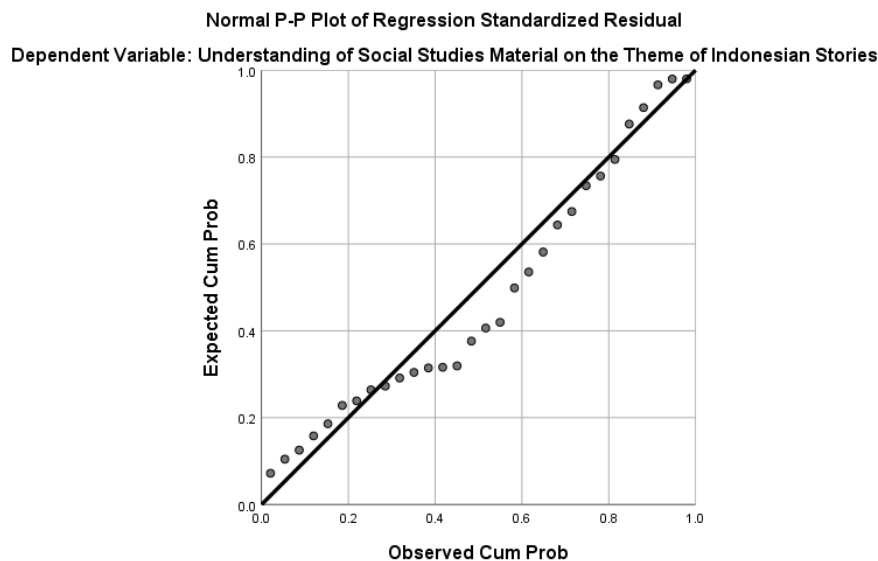


Figure 2. Normal P-P Plot

Source: Data processed by SPSS 26, 2025

Based on the Kolmogorov-Smirnov Sample

Table 3. Kolmogorov-Smirnov sample

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		30
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.87681966
Most Extreme Differences	Absolute	.156
	Positive	.110
	Negative	-.156
Test Statistic		.156
Asymp. Sig. (2-tailed)		.059 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Data processed by SPSS 26, 2025

Based on the results of the normality test carried out on the independent and dependent variables, the results obtained were as shown in histograms, plots, and Kolmogorov-Smirnov images. It can be concluded that the level of significance in the residual is $0.059 > 0.05$, which means that the variables in this study are normally distributed.

Multicollinearity Test

Multicollinearity testing of research data is done using a correlation test. A data group is said to have no multicollinearity if the VIF value is less than 10 and the tolerance is more than 0.1. Meanwhile, if the VIF value is more than 10, it can be said that the data group has multicollinearity. The results of the multicollinearity test are:

Table 4. Multicollinearity Test Results

Model		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.564	1.332		1.925	.065		
	Interactive Learning Using Video Quizizz	.635	.133	.671	4.788	.000	.043	23.221
	Mind Mapping Technique	.318	.139	.322	2.297	.030	.043	23.221
a. Dependent Variable: Understanding of Social Studies Material on Indonesian Story Themes								

Source: Data processed by SPSS 26, 2025

Based on the results of the Multicollinearity Test in the table above, it can be seen that the VIF value for Interactive Learning Using Video Quizizz (X1) and Mind Mapping Technique (X2) is 23,221. Because the VIF value is more than 10 and the tolerance value is less than 0.10 for the independent variable, it can be concluded that there are symptoms of multicollinearity in the regression model.

Heteroscedasticity Test

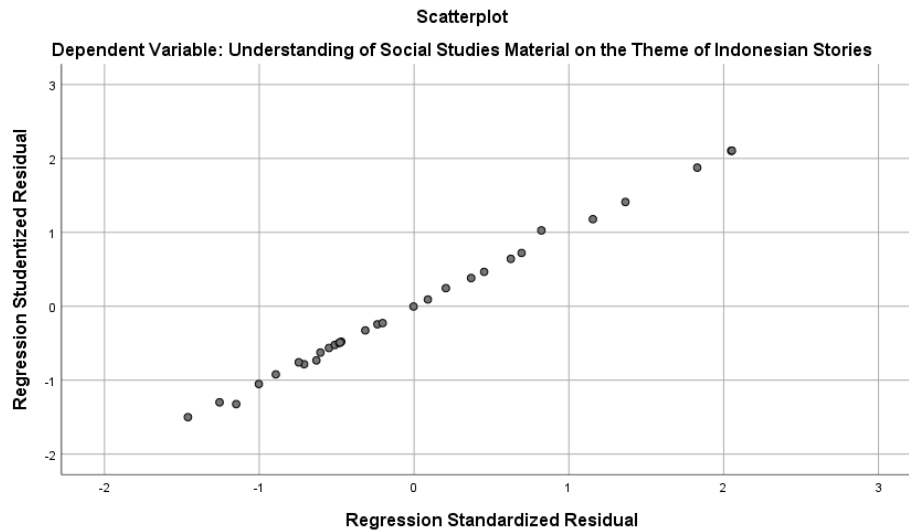


Figure 3. Heteroscedasticity Test Results

Source: Data processed by SPSS 26, 2025

The figure above shows that the points are spread around zero, and not just gathered at one point. The distribution of these data points also does not form a particular pattern. So it can be concluded that the regression model of this study does not experience heteroscedasticity problems.

Multiple Linear Regression Analysis

Regression analysis was conducted to determine the extent of the influence of interactive learning using the Quizizz video (X1) and the Mind Mapping technique (X2) on the understanding of social studies material on the theme of Indonesian stories (Y).

Table 5. Results of Linear Regression Calculation of Variables

Coefficients ^a								
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	2.564	1.332		1.925	.065		
	Interactive Learning Using Video Quizizz	.635	.133	.671	4.788	.000	.043	23.221
	Mind Mapping Technique	.318	.139	.322	2.297	.030	.043	23.221

a. Dependent Variable: Understanding of Social Studies Material on Indonesian Story Themes

Source: Data processed by SPSS 26, 2025

Based on the table above, it is known that the estimated value of the regression equation model parameters is as follows:

$$\text{Understanding of Social Studies Material on Indonesian Story Themes} = 2.564 + 0.635 + 0.318 + e$$

The multiple linear regression equation above can be explained as follows:

The constant in the equation above is 2.564, indicating that if there is an influence of Interactive Learning Using Video Quizizz (X1), Mind Mapping Technique (X2), then the value of Understanding Social Studies Material on Indonesian Story Themes (Y) is 2.564.

The regression coefficient for the Interactive Learning Using Video Quizizz (X1) variable has a positive value, indicating a value of 0.635. This means that every 1% increase in Interactive Learning Using Video Quizizz will increase the Understanding of Social Studies Material on Indonesian Story Themes by 0.635, assuming other independent variables remain constant.

The regression coefficient for the Mind Mapping Technique variable (X2) has a positive value, showing a figure of 0.318. This means that every 1% increase in the Mind Mapping Technique will increase the Understanding of Social Studies Material on the Indonesian Story Theme by 0.318, assuming that other independent variables remain constant.

Hypothesis Testing

Coefficient of Determination Test (R2)

The results of the coefficient of determination (R2) show how much the independent variables used in this study are able to explain the dependent variables.

Table 6. Coefficient of Determination Test (R2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.989 ^a	.977	.975	.909
a. Predictors: (Constant), Mind Mapping Technique, Interactive Learning Using Video Quizizz				
b. Dependent Variable: Understanding of Social Studies Material on Indonesian Story Themes				

Source: Data processed by SPSS 26, 2025

Based on the table above, the adjusted R Square (R2) coefficient value seen in the R Square column is 0.975 or 97.5%. This shows that the magnitude of the ability of the Interactive Learning variable using Video Quizizz and Mind Mapping Techniques explains the action of Understanding Social Studies Material on Indonesian Story Themes by 97.5%, while the remaining 2.5% is explained or influenced by other variables. This means that the Interactive Learning variable, Using Video Quizizz and Mind Mapping Techniques, has an effect on Understanding Social Studies Material on Indonesian Story Themes by 97.5%, while the rest is influenced by other factors that were not studied.

T-test (Partial Test)

The t-test, or better known as the partial test, is a test used to show how far one independent variable can partially or individually explain the variation in the dependent variable.

Table 7. t-Test (Partial Test)

Coefficients ^a					
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics

		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.564	1.332		1.925	.065		
	Interactive Learning Using Video Quizizz	.635	.133	.671	4.788	.000	.043	23.221
	Mind Mapping Technique	.318	.139	.322	2.297	.030	.043	23.221
a. Dependent Variable: Understanding of Social Studies Material on Indonesian Story Themes								

Source: Data processed by SPSS 26, 2025

Based on the table above, the results of the partial test (t-test) were conducted to determine whether each independent variable used in this study had an effect on the Understanding of Social Studies Material on the Theme of Indonesian Stories separately. The t-table value was obtained with $k = 3$, $n = 30$, and $df = n - k$ ($30 - 3$), so that the t-table value was obtained = 2.05183. It can be concluded for each variable as follows:

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The t-test value for the Interactive Learning Using Video Quizizz variable is 4.788 with a Sig. Level of 0.000, with a t-test value ($4.788 > t\text{-table}$ (2.052) and with a Sig. Level. ($0.000 < 0.05$), it can be concluded that the Interactive Learning Using Video Quizizz variable has an effect on the Understanding of Social Studies Material on the Theme of Indonesian Stories. So this study supports the hypothesis (H_{a1} is accepted and H_{01} is rejected).

The Effect of Mind Mapping Technique on the Understanding of Social Studies Material on the Theme of Indonesian Stories at MI Raden Rahmat Wonokromo Surabaya

The t-value for the Mind Mapping Technique variable is 2.297 with a Sig. level of 0.030, with a t-value ($2.297 > t\text{-table}$ (2.052) and with a Sig. Level. ($0.030 < 0.05$), it can be concluded that the Mind Mapping Technique variable has an effect on the Understanding of Social Studies Material on the Theme of Indonesian Stories. So this study supports the hypothesis (H_{a2} is accepted and H_{02} is rejected).

F Test (Simultaneous Test)

The F test, or better known as the simultaneous test, is a test used to show whether all independent variables included in the model have a joint influence on the dependent variable.

Table 8. F Test (Simultaneous)

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	953.571	2	476.786	577.389	.000 ^b
	Residual	22.296	27	.826		
	Total	975.867	29			
a. Dependent Variable: Understanding of Social Studies Material on Indonesian Story Themes						
b. Predictors: (Constant), Mind Mapping Technique, Interactive Learning Using Video Quizizz						

Source: Data processed by SPSS 26, 2025

Based on the table above, it can be seen that the significant value is $0.000 < \alpha = 0.05$. The results of this analysis are strengthened by finding the F table value with a value of $df(n1) = 3$, $df(n2) = 27$, and a significant level of 0.05; then the F table value is 3.35. The F count value is greater than the F table value ($577,389 > 3.35$) and the Sig. value is $0.000 < \alpha = 0.05$. The results of this study indicate that (Ha3) is accepted and (H03) is rejected. So it can be concluded that the results of this study indicate that (Ha3) is accepted and (H03) is rejected. So it can be concluded that the results of this study indicate that the independent variables of Interactive Learning Using Video Quizizz and Mind Mapping Techniques simultaneously have a significant effect on the dependent variable of Understanding of Social Studies Material on Indonesian Story Themes at MI Raden Rahmat Wonokromo Surabaya.

The analysis revealed that both the Quizizz video and mind mapping significantly contributed to improved student understanding ($R^2 = 0.642$, $p < 0.05$). Regression coefficients indicated a strong effect size for both variables. The results align with (Buzan & Anderson, 2018), who emphasized the cognitive benefits of digital interaction and visual organization. Unlike prior studies focusing on individual tools, this study confirms the complementary effect of combining interactive digital media and visual mapping.

However, some limitations include potential bias from self-report data and the short intervention duration. Further studies could explore longitudinal effects and cross-school comparisons.

This study aims to determine the effect of interactive learning using Quizizz videos and mind mapping techniques on the understanding of social studies material on the theme of Indonesian Stories at MI Raden Rahmat Wonokromo Surabaya. The results of data analysis using multiple linear regression showed that both independent variables had a significant effect on the dependent variable.

Based on the results of the regression calculation, the equation was obtained: $Y = 2.564 + 0.635X_1 + 0.318X_2 + e$, where Y is the understanding of social studies material on the theme of Indonesian Stories, X_1 is interactive learning using Quizizz videos, and X_2 is the mind mapping technique. This equation shows that every increase in the use of Quizizz by one unit will increase students' understanding by 0.635 points, while every increase in the mind mapping technique will increase understanding by 0.318 points, assuming other variables are constant.

From these results, it can be concluded that the effect of interactive learning using Quizizz videos is greater than the mind mapping technique. This shows that Quizizz, as an interactive IT-based media, is able to attract students' attention, increase motivation, and create a pleasant learning atmosphere. This finding is in line with research (Mahayana, 2022) and (Satria, 2019), which states that Quizizz can significantly improve student learning outcomes through gamification and an interesting visual approach. Meanwhile, the mind mapping technique also shows a positive contribution. This technique allows students to organize concepts visually and helps them understand the relationship between social studies materials more thoroughly. These results are supported by research. (Jumaa, 2025) and (Harliantara, 2025), which proves the effectiveness of mind mapping in improving conceptual understanding in social studies subjects.

The results of the determination coefficient test (R^2) showed a value of 0.975, which means that 97.5% of the variables of understanding social studies material are explained by the Quizizz and mind mapping variables. Only the remaining 2.5% are influenced by other factors

not examined in this study. This value is very high and indicates that the model used is very strong.

The results of the t-test (partial) strengthen these findings. The t-value of the Quizizz variable is 4.788 (sig. 0.000), and mind mapping is 2.297 (sig. 0.030). Both are greater than the t-table (2.052), so it can be concluded that both Quizizz and mind mapping partially have a significant effect on students' understanding of social studies material.

The results of the F test (simultaneous) also support the conclusion that both variables together have a significant effect on understanding social studies material. The F count value of 577.389 is much greater than F table (3.35) with a significance value of $0.000 < 0.05$. This means that the combination of using Quizizz videos and mind mapping techniques simultaneously has a significant effect on students' understanding of the IPS material on the theme of Indonesian Stories. Thus, this study proves that learning strategies that integrate interactive digital media and information visualization techniques can significantly improve students' understanding in IPS learning, especially in history materials such as the theme "Indonesian Stories". This provides important implications for teachers to adapt innovative and technology-based approaches in the learning process.

Conclusion

Based on the results of the research and data analysis that have been carried out, it can be concluded that; (1) Interactive learning using Quizizz videos has a significant effect on the understanding of social studies material on the theme of Indonesian Stories. This is indicated by the regression coefficient value of 0.635 and a significance value of $0.000 < 0.05$. This means that the more intensive the use of Quizizz in the learning process, the higher the students' understanding of social studies material; (2) The mind mapping technique also has a significant effect on the understanding of social studies material on the theme of Indonesian Stories. With a regression coefficient value of 0.318 and a significance value of $0.030 < 0.05$, this technique has been proven to help students in compiling and understanding information visually and strengthening their memory of the contents of the material; (3) Simultaneously, the use of Quizizz videos and mind mapping techniques has a significant effect on the understanding of social studies material. This is proven through the F test with a significance value of 0.000 and F count of $577.389 > F \text{ table } 3.35$. This shows that the collaboration between interactive digital media and information visualization strategies has a strong positive impact on the social studies learning process. 4. The magnitude of the influence of interactive learning variables using Quizizz videos and mind mapping techniques on understanding social studies material reaches 97.5%. The remaining 2.5% is influenced by other factors not examined in this study. This shows that the learning model used is very effective in improving student understanding; (4) Interactive learning using Quizizz video and mind mapping effectively enhances student understanding of Indonesian Story content in Social Studies. The combination of digital interactivity and visual thinking fosters better engagement and comprehension.

Recommendations

Include training teachers in digital pedagogy, integrating such tools into the curriculum, and encouraging further research on interactive learning in Islamic education. This study is limited to two independent variables. For further research, it is recommended to explore other variables such as learning interest, creativity, or student motivation in order to obtain a more comprehensive understanding of the factors that influence social studies learning outcomes.

Limitations

Limited Scope to One School

The study was only conducted at MI Raden Rahmat Wonokromo Surabaya, so the results cannot be generalized widely to other madrasahs with different student conditions and facilities.

Focus on One Subject and a Specific Topic

This study only examines the effect of interactive learning on Indonesian folklore material in social studies lessons, so it does not reflect the effectiveness of the method for other topics or subjects.

Short Duration of Intervention

The implementation time for using media (Quizizz and mind mapping) was limited to several meetings, so it does not reflect the long-term impact on student understanding.

Variation in Diverse Student Abilities

Students have different backgrounds and initial abilities, which can affect learning outcomes but are not fully controlled in this study.

External Factors Not Fully Controlled

Factors such as the home environment, parental support, and students' technological readiness were not used as control variables, even though they could affect learning outcomes.

Ethics Statements

This research, titled "The Influence of Interactive Learning Using Video Quizizz and Mind Mapping on the Understanding of the Indonesian Story Social Studies Material at MI Raden Rahmat Wonokromo Surabaya", was conducted in accordance with ethical research standards. Prior to the study, the researcher obtained formal permission from the school principal and informed the teachers and students about the purpose and procedure of the research. Participation in this study was voluntary, and informed consent was obtained from all participants (including parental consent where necessary). The research did not pose any physical or psychological risks to the students. All participant identities and data were kept confidential and used solely for academic purposes. The study ensured that data collection, analysis, and reporting were carried out objectively, transparently, and without manipulation.

Acknowledgements

Special thanks are extended to the headmaster, teachers, and students of MI Raden Rahmat Wonokromo Surabaya for their participation and support throughout the data collection process. The researcher is also grateful to the academic supervisors for their invaluable guidance and constructive feedback during the preparation and completion of this study. Appreciation is also given to family and friends for their moral support and encouragement.

Generative AI Statement

The authors acknowledge that generative AI tools (e.g., ChatGPT by OpenAI) were utilized to support the writing and editing process of this manuscript titled "The Influence of Interactive Learning Using Video Quizizz and Mind Mapping on the Understanding of the Indonesian Story Social Studies Material at MI Raden Rahmat Wonokromo Surabaya." These tools were used to enhance grammar, language clarity, and formatting, but all content, data analysis, interpretation, and critical thinking were conducted independently by the authors. The final responsibility for the content remains entirely with the authors.

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