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The Correlation Between Junior High School Students' Multimedia Engagement and Their Speaking Performance

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A B S T R A C T

In today's digital era, multimedia is readily accessible through digital platforms and serves as a resource of language acquisition. This study examines how junior high school students' engagement with multimedia, specifically English movies or English-language videos, influences their speaking performance. Therefore, this study aimed to investigate the correlation between junior high school students' multimedia engagement and speaking performance. A quantitative correlational design was employed to describe and quantify the degree of the correlation between junior high school students' multimedia engagement and their speaking performance. Participants included 96 students of ninth-grade students from MTSN 1 Kota Surabaya, selected by convenience sampling. Data were collected through two techniques: a questionnaire and a speaking performance test. The findings indicated that it rejected the null hypothesis and accepted the alternative hypothesis, which can be seen from the Pearson Product-Moment Correlation Analysis result of .789, with a p-value less than .001, indicating a high degree of positive correlation. It means that as students' multimedia engagement increases, their speaking performance also improves. This high positive correlation implies that students' engagement with multimedia, especially English movies or English-language videos, positively influences students' speaking performance.

Keywords: *Multimedia Engagement, Speaking Performance, Correlation*

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INTRODUCTION

In today's technological era, a broader range of information is easily accessible on various digital platforms. Through digitalization and internet platforms, language learning has revolutionized from traditional teaching to e-learning. In its development, e-learning has undergone many changes. Learners abandon traditional e-learning, such as DVDs, CDs, and e-books, due to a lack of interest and inability to stimulate enthusiasm. Among the diverse forms of e-learning, multimedia captures students' attention as it is an impactful and engaging way of learning. Multimedia allows us to receive information through two primary senses, auditory and visual channels, where the auditory channel processes spoken language and the visual channel processes visual elements like images, text, and animation (Mayer, 2005). This separation makes information processing more efficient as it does not overwhelm a single cognitive pathway. Further, the emergence of multimedia with entertainment elements and learning through audio, video, and animation provides more engaging and interactive learning experiences (Yuan et al., 2025).

Multimedia refers to a combination of more than one type of media, including images, audio, text, videos, and animations that use technology to enhance comprehension (Abdulrahaman et al., 2020). Integrating multimedia, such as movies, can be a source to overcome the shortage of exposure to authentic spoken material in foreign language classes, which can develop students' listening and speaking skills (Galimberti et al., 2023). Based on the findings of Dong et al. (2024), multimedia assists learners in enhancing memory and

information processing, enriching the learning experience by providing more information in the learning process. Moreover, the integration of visual elements with auditory narration can significantly enhance memory retention. Using animations, graphics, and sound can create memorable associations that facilitate recall, thus enabling learners to retain the information presented, especially in this era where technology development makes learning easier, since learners can access many fun and engaging media resources (Nazhifah & Lubis, 2024). Therefore, incorporating multimedia in language learning can assist students to understand abstract concepts, visualize scenarios, and connect language to real-world contexts.

On the other hand, the term 'speaking performance' encompasses various aspects including speech accuracy and coherence, wide grammatical range, good fluency and pronunciation (Asratie et al., 2023), which are influenced by cognitive aspects such as L2 grit, strong motivation, and interest to speak (Sun et al., 2024). Learners can be said they successfully acquire language if they can produce and utilize it. As often perceived as the challenging part of learning a language, speaking is a valuable skill that enhances learners' advancement in language use (Jin & Qin, 2024). However, learners may have minimal opportunities to hear and practice spoken English in countries where English is not widely spoken. It requires the process of cognitive abilities and implementation of linguistic structure as it involves complex language structure and cognitive abilities process (Wang & Lee, 2025). This lack of exposure can hinder their ability to develop accurate pronunciation, fluency, and natural intonation. Also, foreign language learners often have difficulties having the same intonation of the language as native speakers due to a lack of explicit knowledge and limited understanding of communicative function, perceived foreignness, and irrelevance (Zhi et al., 2024).

The acquisition of a language necessitates substantial language input to achieve effective speaking performance. The rise of digital media allows foreign language learners to get real-word context input from a variety of sources. There are many benefits of listening to multimedia where learners not only construct meaning from the spoken language, along with the grammatical structure, and recognize the various sounds of the language but also visualizations in images and videos help students visualize vocabulary and language concepts. Videos and films provide real contexts for students to understand language in different situations. Through regular exposure to such performances, students obtain valuable insights into the nuances of the language that are provided with models for their speech, helping them refine both comprehension and articulation.

Over the past few years, researchers have conducted some studies related to multimedia and speaking. The studies conducted by Hamad et al, (2019) examined the impact of using YouTube and audio track imitation towards Arabian university students' speaking skills. The findings showed it significantly enhances learners' speaking, fluency, and pronunciation. Saed et al, (2021) also examined experimental research on Jordanian students' use of YouTube to develop their speaking skills. The findings showed a significant improvement in fluent speaking, structure, and pronunciation. Additionally, Fadhillah & Rusmiati, (2022), in their study about utilizing YouTube to enhance speaking, revealed that the students feel more expressive, interesting, and confident when speaking. Moreover, Tahmina (2023) and Albargash & Algraini (2024), who examined students' perceptions of YouTube's impact, revealed that YouTube positively helps the students systemize talk points, increases confidence, and increases fluency, motivates them to learn, and enhances their speaking skills.

The previous studies highlighted the positive impact of multimedia platforms on enhancing learners' speaking skills; however, a significant gap remains. The understanding of how students' engagement with various multimedia videos affects their speaking performance remains limited. Therefore, this study aimed to address this gap by investigating the correlation between junior high school students' multimedia engagement, specifically English movies or English-language videos, and their speaking performance. This study uses a correlational design to provide new insight into the students' experience with multimedia and its correlation with their speaking performance. The research question was established as follows: Is there a significant correlation between junior high school students' multimedia

engagement and their speaking performance? In addition, the null hypothesis (H0) stated that there is no significant correlation between junior high school students' multimedia engagement and their speaking performance; otherwise, the alternative hypothesis (H1) stated that there is a significant correlation between junior high school students' multimedia engagement and their speaking performance.

METHOD

A correlational study was employed to investigate the correlation between junior high school students' multimedia engagement and their speaking performance. A correlational study was chosen because this design typically examines the association between two variables (Fraenkel & Wallen, 2009). In addition, this study utilizes correlational statistics to measure the level of correlation between the two variables (Creswell, 2015). Understanding the strength of both variables contributes to a deeper understanding of the role of junior high school students' multimedia engagement in influencing their speaking performance.

Respondents

The study was carried out at MTsN 1 Kota Surabaya. The study population (N=310) was collected from 9th-grade students in the academic year 2024-2025. In this study, the researcher utilized a convenience sampling, a non-probability technique that selected readily accessible individuals. Specifically, students from three classes were included in the sample, resulting in 96 participants. By selecting this method, it is more practical and easier to implement in a school setting, and the researcher could capture a diverse range of students with multimedia engagement and speaking performance, allowing for efficient data collection from available groups of students.

Instruments

Data were collected through two techniques: questionnaire and speaking performance test.

Questionnaire

A close-ended questionnaire was given to the participants through Google Forms. This questionnaire was administered to assess junior high school students' multimedia engagement. This study employed an adapted questionnaire that was conducted by Irana et al. (2021), which contained 24 questions to obtain primary data on students' multimedia engagement. The participants selected an option out of five options available: Always (A), Sometimes (S), Often (O), Rarely (R), and Never (N), based on their experiences. Moreover, the questionnaire already surpassed the minimum requirement of a reliability level of 0.6; the Cronbach's alpha showed a coefficient of 0.895. It indicates that the questionnaire is acceptable at the reliability level

Table 1 Reliability Statistic

Cronbach's Alpha	N of Items
.895	24

Speaking Performance Test

A speaking performance test was conducted to measure the ability of students in speaking. The evaluation utilized a scoring rubric adapted from Hughes (2002) to measure the students' speaking performance, including several aspects such as comprehension, fluency, vocabulary, grammar, and accent.

Data analysis

Prerequisite Test Analysis

Homogeneity Test

Homogeneity test was conducted through SPSS 30, employing the Levene test to find out that the variability of the different groups was equal. The result of homogeneity test was described as follows:

Table 2 Tests of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Multimedia_Engagement	.705	2	93	.497
Speaking_Performance	.274	2	93	.761

Levene's test results for students' multimedia engagement (p=.705) and speaking performance (p=.274) both exceeded 0.05. Therefore, the variability of both variable across the different group was equal or homogeneous.

Normality Test

Normality test was conducted to determine that the data had a normal distribution. In this study, SPSS 30 was utilized to measure the normality of the data. Moreover, the Kolmogorov-Smirnov test was employed because the sample size was more than 50. The result of the normality test was described as follows:

Table 3 One-Sample Kolmogorov-Smirnov Test

			Unstandardized Predicted Value
N			96
Normal Parameters[a,b]	Mean		80.6770833
	Std. Deviation		8.18525420
Most Extreme Differences	Absolute		.086
	Positive		.050
	Negative		-.086
Test Statistic			.086
Asymp. Sig. (2-tailed)[c]			.076
Monte Carlo Sig. (2-tailed)[d]	Sig.		.082
	99% Confidence Interval	Lower Bound	.075
		Upper Bound	.089

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

As a result, the significance value of the normality test was 0.082. Since this value is greater than 0.05, the data can be considered normally distributed.

Linearity Test

To determine that both variables follow the magnitude of the linear association. A linearity test was conducted employing a scatterplot to visualize the linearity between the two variables. The result of the linearity test was described as follows:

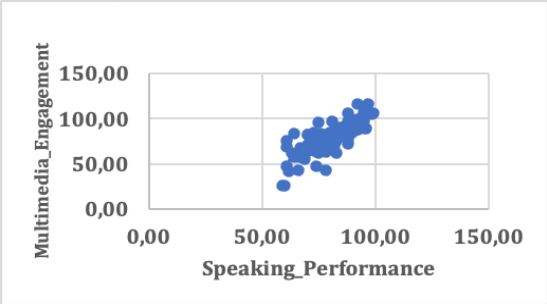

Figure 1 Scatterplot

Based on the linearity test result using a scatterplot in SPSS 30, the data points of the scatter plot appear to roughly follow a straight line. This suggests a linear relationship between junior high school students' Multimedia Engagement and their Speaking Performance. However, the points are somewhat scattered around the line, indicating that the relationship isn't perfectly.

Pearson Product-Moment Correlation Analysis

The data were indicated homogeneous, normal, and linear following the prerequisite test analyses. Therefore, the primary analysis could be calculated using Pearson's product-moment correlation analysis to determine the correlation coefficient and strength between junior high school students' multimedia engagement and speaking performance. Also, the data could be interpreted following the interpretation framework established by Witz et al. (1990).

Table 4 Interpretation of Correlation Value

Correlation Value	Interpretation
0.00 to 0.30 (-0.00 to -0.30)	Little if any correlation
0.30 to 0.50 (-0.30 to -0.50)	Low positive (negative) correlation
0.50 to 0.70 (-0.50 to -0.70)	Moderate positive (negative) correlation
0.70 to 0.90 (-0.70 to -0.90)	High positive (negative) correlation
0.90 to 1.00 (-0.90 to -1.00)	Very high positive (negative) correlation

FINDINGS AND DISCUSSION

Findings

The primary analysis was calculated utilizing SPSS 30. The result of Pearson product-moment correlation analysis was described as follows:

Table 5 Correlations

		Multimedia_ Engagement	Speaking_ Performance
Multimedia_Engagement	Pearson Correlation	1	.789**
	Sig. (2-tailed)		<.001
	N	96	96
Speaking_Performance	Pearson Correlation	.789**	1
	Sig. (2-tailed)	<.001	
	N	96	96

**. Correlation is significant at the 0.01 level (2-tailed).

The data presented in the table above generates Pearson correlation analysis r = .789, which indicates a high positive correlation between junior high school students' multimedia engagement and their speaking performance, with a p-value of < .001. The significance level (Sig. 2-tailed) at α = 0.01 indicates that the correlation is statistically significant at the 0.01 level. This strong statistical significance emphasizes the reliability of the relationship, as it demonstrates less than a 0.1% probability that this correlation is due to chance. To test the hypothesis, the researcher follows some assumptions: 1. If the p-value < α, then H0 is rejected, and H1 is accepted, 2. If the p-value > α, H0 cannot be rejected, and H1 cannot be accepted. The calculated p-value above is lower than the significance level; it rejects the null hypothesis (H0). Therefore, this study accepts the alternative hypothesis (H1), indicating a significant positive correlation between the two variables. This finding suggests that as multimedia engagement increases, speaking performance also tends to improve.

Discussion

This study aims to investigate the correlation between junior high school students' multimedia engagement and their speaking performance. To gather the necessary data, two primary instruments were employed. The first instrument was a multimedia engagement questionnaire, adapted from Irana et al. (2021). This questionnaire evaluated five key aspects of student engagement: frequency, material, attitude, automaticity, competence, and image. The results indicated that most students frequently watch English movies and English-language videos, typically 3-4 times per week, especially during their free time. The second instrument used was a speaking performance test. Among the five skills assessed, competence was identified as the area where students demonstrated the most proficiency. Otherwise, grammar and accent were the areas where students showed the least mastery. As Kusuma (2021) found, Indonesian students speaking problems are mainly related to linguistic knowledge.

Furthermore, data analysis revealed a correlation coefficient of .789. It tell us how much of one variable's total variance is associated with another variable's variance. Based on the interpretation of the correlation coefficient by Witz et al. (1990), it revealed a statistically high positive correlation between junior high school students' multimedia engagement and speaking performance. According to Fraenkel & Wallen (2009), positive correlation refers to a

relationship between two variables where they tend to move in the same direction; as one variable increases, the other also increases. In this study, both variables, students' multimedia engagement and speaking performance, move in the same direction. In addition, it was discovered through hypothesis testing that the p-value is less than 0.01, which is lower than the significance level of 0.01. This result indicates that it rejects the null hypothesis and accepts the alternative hypothesis: "There is a significant correlation between junior high school students' multimedia engagement and speaking performance".

Some previous studies, such as Hamad et al. (2019), Saed et al. (2021), and Fadhillah and Rusmiati (2022), have explored the impact of multimedia platforms like YouTube, which can enhance students' speaking skills. This study identifies new insights that have not been explored. This study examined the students' frequent experience engaging with multimedia, specifically English movies and English-language videos, and how it influences their speaking performance. It showed that the more students are exposed to multimedia content, the better their speaking performance is. Thus, learners can practice speaking English through English movies and English-language videos. This helps engage students more deeply with the material, leading to better retention and application of language skills. Further, Tahmina (2023) and Albargash & Algraini (2024), who examined students' perceptions of multimedia impact, said that multimedia helps the students systemize talk points, increases confidence, increases fluency, motivates them to learn, and enhances their speaking skills.

Additionally, this study serves as a model for further research that will be conducted research of a similar nature. As the engagement of the students with multimedia increases, their speaking performance tends to improve. Notice that based on some previous studies stated that integrating multimedia can enhance students' learning experience and can provide diverse learning experiences that cater to varied learning styles. This study aligns with those, as multimedia can be beneficial in language acquisition, especially helping learners to practice speaking from their native through English movies and English-language content and helps to engage students more deeply with the material, leading to more excellent retention and application of language skills. The significant correlation noted implies that the more students are exposed to multimedia content, the more active their engagement becomes. This active participation is likely to enhance overall speaking performance. This study serves as a foundational model for future research focusing on multimedia's role in language education.

CONCLUSIONS

Based on the findings of the study, it can be concluded that this study rejected the null hypothesis (H0) and accepted the alternative hypothesis (H1), which can be seen from the r value of .789, with a p-value less than .001, indicating a high degree of positive correlation. It means that as students' multimedia engagement increases, their speaking performance also tends to improve. This high degree of correlation implies that the engagement of students with multimedia, especially English movies or English-language videos, has a positive influence on students' speaking performance. This finding showed the positive influence of multimedia in language acquisition, especially speaking. Educational institutions could develop and provide high-quality learning resources such as learning videos and interactive online platforms that assist learners in acquiring language. Moreover, multimedia involvement could develop learner's motivation to learn a language. This implication showed that teachers should consider integrating interactive and relevant multimedia that increase student's motivation to practice speaking so that it can create a more positive learning experience. Teachers can also design group activities that involve the integration of multimedia, such as video or presentation projects, to encourage students to interact and practice speaking in a social context. This study also encourages parental involvement in their children's learning process by providing access to multimedia under their control to create a more supportive learning experience. Several suggestions can be made for future research. Future researchers could employ longitudinal studies to explore the long-term effects which can provide insight into how sustainable multimedia integration is impacting language development over time.

Further, educational institutions should provide training programs for teachers that focus on the effective use of multimedia. Also, incorporating students' feedback on the use of multimedia resources can help select which tools resonate most to catch their engagement in learning and improve learning outcomes.

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