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THE RELATIONSHIP BETWEEN STUDENTS' PERCEPTIONS OF THE USE OF INTERACTIVE LEARNING MEDIA AND TEACHER ACTIVENESS WITH LEARNING OUTCOMES AT SMAN 1 KUBU

Sari Wulandari[1], Nurfaisal Nurfaisal[2], Junaidi Junaidi[3]

[1] Lancang Kuning University; sari.wulandari63@gmail.com
[2] Lancang Kuning University; nurfaisalfaisal11@gmail.com
[3] Lancang Kuning Universiti; junaidi@unilak.ac.id

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ABSTRACT

The development of technology has become an important factor in driving the transformation of 21st-century learning. The use of interactive learning media and teacher activeness is believed to improve student learning outcomes. This study aims to analyze the relationship between students' perceptions of the use of interactive learning media and teacher activeness with Mathematics learning outcomes at SMAN 1 Kubu. The research employed a quantitative approach with a correlational method. The sample consisted of 84 students selected using the Slovin formula. Data were collected through questionnaires on students' perceptions and teacher activeness, as well as documentation of learning outcome scores. The results showed that (1) there is a positive relationship between students' perceptions of the use of interactive learning media and learning outcomes; (2) there is a positive relationship between teacher activeness and learning outcomes; and (3) there is a significant simultaneous relationship between the two independent variables and student learning outcomes. This study underscores the importance of integrating interactive learning media and the active role of teachers as key factors in improving the quality of learning in schools.

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Corresponding Author:
Sari Wulandari
[1] Universitas Lncang Kuning; sari.wulandari63@gmail.com

1. INTRODUCTION

The changes brought by digital technology have had a significant impact on the field of education, particularly in the methods used to deliver learning materials. Conventional teacher-centered learning is gradually shifting toward interactive learning that utilizes technology. Interactive learning media that combine text, images, animations, and audio have been proven to enhance

students' motivation, interest, and comprehension.

On the other hand, teacher activeness is also an important factor that influences learning outcomes. Active teachers—those who engage in intensive interaction, provide

feedback, and facilitate discussions—are able to create a lively and engaging learning atmosphere. In Mathematics learning at SMAN 1 Kubu, there are still students who remain passive, lack motivation, and have not yet reached the minimum mastery criteria (KKM) optimally. This indicates the need for more effective learning innovations.

Previous studies have shown that interactive media and teacher activeness have a positive effect on learning outcomes. However, there has been limited research that analyzes the relationship between these two variables simultaneously, particularly in the context of Mathematics learning in senior high schools. Therefore, this study was conducted to fill that gap.bab itu, penelitian ini dilakukan untuk mengisi kekosongan tersebut.

2. METHODS

This study employs a quantitative approach with a correlational design to analyze the relationship between students' perceptions of interactive learning media (X1) and teacher activeness (X2) with learning outcomes (Y).

This study uses a quantitative approach with a correlational method to examine the relationships among variables. The research population consists of all students of SMAN 1 Kubu, totaling 519 students. The sample was determined using the Slovin formula, resulting in 84 respondents.

2.1 Research Instruments

Students' perceptions of interactive learning media — measured using a questionnaire covering aspects of ease of use, display quality, interactivity, and material relevance. Teacher activeness — measured using a questionnaire including indicators of planning, variation of teaching methods, classroom management, interaction, and feedback. Student learning outcomes — obtained from Mathematics daily test scores and mastery of the minimum competency criteria (KKM). All instruments were tested for validity and reliability, with Cronbach's Alpha values greater than 0.70, indicating that they are suitable for use.

2.2 Data Analysis

All analyses were conducted using SPSS and the analysis includes, Descriptive statistics, Classical assumption tests (Kolmogorov–Smirnov normality test) Pearson correlation test, Multiple linear regression analysis (partial and simultaneous)

3. FINDINGS AND DISCUSSION

The research question; The results of this study reinforce the theory that interactive media can enhance students' focus, motivation, and understanding. Engaging media helps students learn more independently and actively. The results of the study show that students' perceptions of interactive media and teacher activeness contribute positively to improving learning outcomes. This is in line with various learning theories which state that media interactivity and the active role of

teachers can enhance students' cognitive engagement.

Interactive learning media help visualize abstract concepts and make learning more engaging, thus having a more dominant impact compared to teacher activeness (as indicated by a higher beta coefficient).

Teacher activeness is proven to play an important role in maximizing the function of interactive media. Active teachers can guide students to use the media effectively, create meaningful interactions, and address students' difficulties. Teacher activeness also exerts a positive influence, although to a lesser extent. Teachers who are active in explaining, motivating, and managing the classroom can increase student participation, thereby improving academic achievement.

3.1 Students' Perceptions of Interactive Learning Media

Most students gave positive evaluations of the interactive learning media. They felt that the media were engaging, easy to use, and helped them understand Mathematics concepts better.

3.2 Teacher Activeness

Teachers were considered sufficiently active in delivering material, providing feedback, and encouraging students to ask questions and engage in discussions. Teacher activeness plays an important role in creating interactive learning.

3.3 Student Learning Outcomes

Of the 32 students initially analyzed in the class, 56.25% achieved mastery, while 43.75% had not yet achieved it. This indicates a need to improve the quality of learning.

3.4 Relationships Among Variables

Inferential analysis shows:
X1 → Y: There is a significant relationship between students' perceptions of interactive media and learning outcomes.
X2 → Y: Teacher activeness has a positive relationship with learning outcomes.
X1 and X2 → Y: Both variables contribute significantly and simultaneously to influencing student learning outcomes.

3.5 Descriptive Statistics

The mean scores of the three variables fall into the
high category: Students' perceptions of interactive media:
mean = 92.02 Teacher activeness: mean = 92.43
Student learning outcomes: mean = 92.00, with a range of 75–100 (high category

3.6 Normality Test

All three variables are normally distributed ($p > 0.05$), allowing the use of parametric analysis.

3.7 Pearson Correlation

Relationship between X1 (teacher activeness) and Y: $r = 0.133$, significant ($p = 0.014$) Relationship between X2 (students' perceptions of interactive media) and Y: $r = 0.242$, significant ($p = 0.013$)
Correlation between X1 and X2: $r = 0.419$, significant ($p = 0.000$)

3.8 Multiple Linear Regression

Partially, both variables have a positive and significant effect on learning outcomes. Simultaneously, the effect is not significant (p = 0.083).

The R Square value = 0.060, indicating that both variables contribute only 6% to learning outcomes, while the remaining percentage is influenced by other variables outside the model.

Simultaneously, the combination of interactive media and active teachers has a strong impact on student learning outcomes. This indicates that learning technology cannot stand alone without the role of professional and communicative teachers.

However, the low R Square value (6%) indicates that learning outcomes are influenced by many other variables, such as motivation, prior ability, learning environment, and students' psychological and social factors. These findings emphasize that effective learning is the result of multifactor interactions, not solely the media or the teacher's role.

Berikut adalah tabel-tabel hasil analisis SPSS:

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error	F Change	Sig. F Change
1	0.244	0.060	0.036	6.35625	2.567	0.083
1	0.244	0.060	0.036	6.35625	2.567	0.083

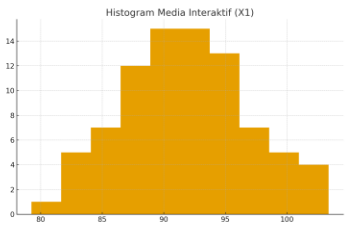
Tabel 2. Coefficients

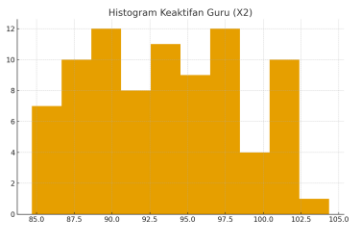
Model	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
Constant	68.914	12.348	-	5.581	0.000	-	-
X1	0.044	0.135	0.038	0.323	0.047	0.825	1.213
X2	0.207	0.109	0.226	1.921	0.021	0.825	1.213

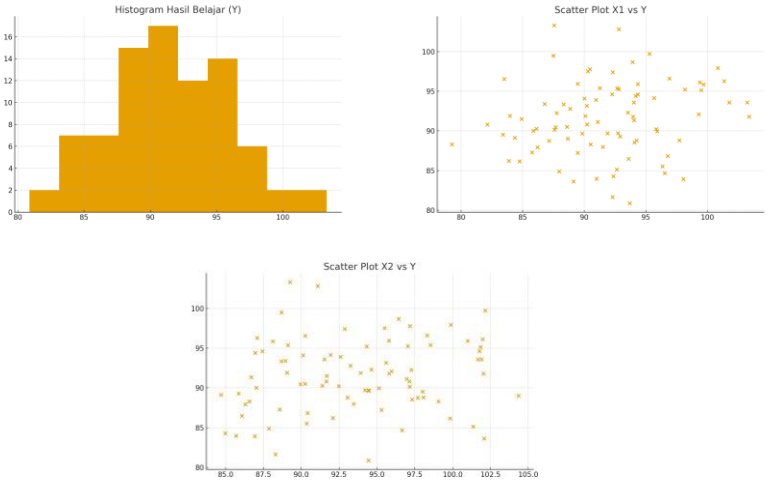
Tabel 3. Korelasi Pearson

	Y	X1	X2
Y	1.000	0.133	0.242
X1	0.133	1.000	0.419
X2	0.242	0.419	1.000

Grafik Analisis







4. CONCLUSION

This research attempts to answer (1) There is a positive and significant relationship between students' perceptions of the use of interactive learning media and Mathematics learning outcomes. (2) Teacher activeness also has a significant relationship with learning outcomes. (3)Students' perceptions of interactive learning media and teacher activeness jointly contribute to the improvement of learning outcomes. The study shows that interactive media and teacher activeness have a significant positive partial effect on student learning outcomes. The simultaneous contribution of 6% indicates that many other external factors also influence learning outcomes. Nevertheless, both variables remain important in improving the quality of learning.

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CONFLICTS OF INTEREST:

The author declares that there are no personal, financial, or professional conflicts of interest that could influence the research findings, analysis, or publication of this article. All procedures and interpretations were conducted objectively and independently to ensure the integrity of the study.

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