

THE INFLUENCE OF KAHOOT MEDIA ON LEARNING OUTCOMES STUDENTS IN LEARNING MATHEMATICS FRACTION MATERIAL FOR GRADE V

Redina Wila Wardana Rumahorbo¹, Hetdy Sitio², Jon Roi Tua Purba³

¹ Pendidikan Guru Sekolah Dasar, Fakultas Keguruan Dan Ilmu Pendidikan Universitas HKBP Nommensen Pematangsiantar, Indonesia, Indonesia

² Pendidikan Guru Sekolah Dasar, Fakultas Keguruan Dan Ilmu Pendidikan, Universitas HKBP Nommensen Pematangsiantar Pematangsiantar, Indonesia

³ Pendidikan Guru Sekolah Dasar, Fakultas Keguruan Dan Ilmu Pendidikan, Universitas HKBP Nommensen Pematangsiantar Pematangsiantar, Indonesia

Corresponden E-mail: redina.wardanarumahorbo@gmail.com

ARTICLE INFO	ABSTRACT
Diterima: 05 juni 2025 Direvisi: 10 Juni 2025 Disetujui: 18 Juni 2025 Tersedia Daring: 22 Juli 2026 Keywords: <i>Kahoot, Learning Outcomes, Mathematics, Fractions</i>	<i>This study aims to determine the effect of Kahoot media on student learning outcomes in fraction mathematics learning for grade V of SD Negeri 091263 Karang Sari, Academic Year 2025/2026. This study uses a quantitative approach with a pre-experimental design and a One Group Pretest-Posttest Design. The sample in this study were all grade V students of SD Negeri 091263 Karang Sari, totaling 23 people. The data collection technique used tests in the form of pretest and posttest in the form of multiple choices of 25 questions. The results showed that the average student pretest score was 40.39 with an incomplete category, while the average posttest score was 84.69 with a complete category, which resulted in an increase in student learning outcomes. In addition, an N-Gain value of 0.72 was obtained with a high category, which indicated an increase in student learning outcomes. Based on the normality test using Shapiro-Wilk, a pretest significance value of 0.580 and a posttest significance value of 0.376 were obtained, so the data were normally distributed. Furthermore, the results of the paired sample t-test showed a significance value of $0.000 < 0.05$, which means there is a significant difference between the pretest and posttest results. Thus, it can be concluded that the use of Kahoot learning media has a significant effect on improving student learning outcomes in mathematics learning on fractions in grade V of SD Negeri 091263 Karang Sari</i>

	ABSTRAK
Kata Kunci: <i>Kahoot, Hasil Belajar, Matematika, Pecahan</i>	Penelitian ini bertujuan untuk mengetahui pengaruh media Kahoot terhadap hasil belajar siswa dalam pembelajaran matematika pecahan untuk kelas V SD Negeri 091263 Karang Sari, Tahun Ajaran 2025/2026. Penelitian ini menggunakan pendekatan kuantitatif dengan desain pra-eksperimental dan Desain Pretest-Posttest Satu Kelompok. Sampel dalam penelitian ini adalah seluruh siswa kelas V SD Negeri 091263 Karang Sari, berjumlah 23 orang. Teknik pengumpulan data menggunakan tes dalam bentuk pretest dan posttest dalam bentuk pilihan ganda sebanyak 25 pertanyaan. Hasil penelitian menunjukkan bahwa rata-rata skor pretest siswa adalah 40,39 dengan kategori tidak lengkap, sedangkan rata-rata skor posttest adalah 84,69 dengan kategori lengkap, yang mengakibatkan peningkatan hasil belajar siswa. Selain itu, diperoleh nilai N-Gain sebesar 0,72 dengan kategori tinggi, yang menunjukkan peningkatan hasil belajar siswa. Berdasarkan uji normalitas menggunakan Shapiro-Wilk, diperoleh nilai signifikansi pretest sebesar 0,580 dan nilai signifikansi posttest sebesar 0,376, sehingga data terdistribusi normal. Selanjutnya, hasil uji t sampel berpasangan menunjukkan nilai signifikansi $0,000 < 0,05$, yang berarti

terdapat perbedaan signifikan antara hasil pretest dan posttest. Dengan demikian, dapat disimpulkan bahwa penggunaan media pembelajaran Kahoot berpengaruh signifikan terhadap peningkatan hasil belajar siswa dalam pembelajaran matematika materi pecahan di kelas V SD Negeri 091263 Karang Sari..

© 2023

This Is An Open Access Article Under CC-BY License



1. INTRODUCTION

Preparing the younger generation to welcome and face developments in the global era is the meaning of education, where education is the foundation of a nation and state, because education is the key to a nation's success. According to Sadulloh et al (Janattaka & Tiwana, 2022), education is a process of growth and development that is the result of an individual's interaction with their social and physical environment, and continues throughout a person's life from birth. According to Purnama et al (Firdausi, 2020), the only asset for building quality human resources is education.

Through education, Indonesia must aim to build prosperous, just, prosperous, and moral human resources. Education must be implemented as well as possible to produce quality education and improve the quality of human resources (Siahaan et al., 2024). Article 40 paragraph 2a of Law No. 20 of 2003 states that educators and education personnel are obliged to create a meaningful, enjoyable, creative, dynamic, and dialogical educational environment. One way that teachers as educators can create an effective learning atmosphere is by using appropriate learning media that are appropriate to the conditions of the learning environment, as well as supporting facilities and infrastructure. In Law Number 20 of 2003, Article 1 states that the curriculum is a set of plans and arrangements regarding the objectives, content, and learning materials as well as methods used as guidelines for organizing learning activities to achieve certain educational goals. So the curriculum is a guideline regarding a series of activities that will be carried out in the teaching and learning process to achieve the desired educational goals (Putra & Afrilia, 2020).

One of the important factors in improving the quality of human resources is education. Based on data from the Central Statistics Agency (BPS), the school participation rate (APS) for elementary school students (7-12 years) in Indonesia has reached around 97% to 99%, indicating that almost all elementary school-aged children have access to education. Furthermore, the net enrollment rate (APM) at the elementary school level is also relatively high, at around 93% to 95% (BPS, 2022). However, this high participation rate has not been fully matched by optimal learning outcomes. This is evident from the results of the Programme for International Student Assessment (PISA), which shows that Indonesian students' mathematics abilities are still below the international average (Nurdiansyah et al., 2021).

Based on the relevant article on the education system, it is explained that education plays a crucial role in improving the quality of human resources. Through education, students are guided to develop their potential, thinking skills, and the skills needed in social life. Basic education, especially in elementary schools, is a very strategic level of education because it serves as the foundation for the development of students' cognitive, affective, and psychomotor abilities (Hidayah, 2019). The core subject in elementary schools that functions to train logical, systematic, critical, and creative thinking skills is mathematics (Sundayana, 2018). As one of the basic subjects that plays a crucial role in developing students' logical thinking and problem-solving skills, the quality of mathematics learning in elementary schools is one of the most important indicators of the success of basic education (Putri Yulianti, Akhmad Riadi, Fadia Zahratunnisa, Nur Aulia Amanda Fatimah, 2024).

Mathematics learning certainly includes several important topics discussed. One of the important topics in the elementary school mathematics curriculum is fractions, because they will later form the basis for various continuing competencies. One of the mathematics topics that often causes difficulties for fifth-grade elementary school students is fractions. This difficulty in fractions is often related to a low understanding of the concept, a lack of supporting visualization, and limited variety of media and learning strategies used by teachers. Fractions are abstract and require a strong conceptual understanding, especially in distinguishing fraction forms and performing fraction arithmetic operations. According to (Putri et al., 2025), students' low understanding of the concept of fractions is caused by the lack of use of concrete and interesting learning media.

With the advancement of science and technology, learning in schools is required to keep pace with these advancements. The use of technology in learning can help teachers deliver material more effectively and efficiently (Downie et al., 2021a). Learning media is anything that can be used to convey information in the teaching and learning process, stimulating students' cognitive abilities, learning interests, and feelings in achieving learning objectives. However, it cannot be denied that there is a possibility of failure in conveying information to students. Therefore, appropriate media are needed to convey information so that the teaching and learning process runs effectively.

Based on research conducted by the author in grade V of SD Negeri 091263 Karang Sari, it was found that students' effectiveness and enthusiasm in participating in the learning process were still low, resulting in low learning outcomes, falling below the minimum competency criteria (KKTP). This is due to the lack of teacher innovation in using learning media. This, of course, makes teaching and learning activities less engaging, boring, and ineffective (Downie et al., 2021b).

When researchers conducted research at SD Negeri 091263 Karang Sari, researchers found that many students at the school were not serious in the teaching and learning process in Mathematics. Among them, students were sleepy during the learning process, there was no interactive response in learning, the use of printed textbooks that were difficult for students to understand, so that student learning outcomes were still lacking. This was seen when the teacher explained the material to students, there was a

lack of good response to learning, then student grades on daily tests where several students received poor grades. This is a special concern for a teacher when teaching in the classroom (Konstantakis et al., 2022).

The percentage of students completing their learning only reached 13.0%, while the percentage of students who had not yet completed the course reached 86.9%. This data indicates that the level of student achievement in mathematics is still very low. The majority of students have not been able to meet the competency standards set by the school, thus concluding that mathematics learning in this class is not running optimally.

A low level of learning completion indicates problems in the learning process, whether related to students' conceptual understanding, teacher-implemented learning strategies, or active student participation during teaching and learning activities. This condition requires serious attention because it can impact the continuity of mathematics material at the next level (Qasserras & Qasserras, 2023).

Therefore, improvement efforts are needed through the implementation of more effective, innovative, and student-centered learning strategies. To overcome these problems, it is necessary to use interesting learning media to increase student activity in the learning and teaching process. Learning media is a tool that can assist the teaching and learning process so that the meaning of the message conveyed becomes clearer and learning objectives can be achieved effectively and efficiently. Learning media has an important role in the learning process, this is because teachers do not utilize the projector facilities from the school to deliver learning materials (Sari & Lestari, 2018).

One of the developing learning media is the Kahoot application, an interactive game-based quiz platform that can be used to review material and increase student participation in learning. The use of the Kahoot application as a learning media is effective and easy to use during the teaching and learning process at the elementary school level via smartphones and can even be accessed using laptops online. Kahoot is an educational game site for reviewing material so that students better understand the topic or material being discussed. Teachers can create various learning templates that can be designed in the form of games. The advantage of this application is that it has various quiz templates in the form of games, this can improve student learning outcomes so that the teaching and learning process runs effectively and interactively. This is what makes researchers interested in conducting research on the effect of Kahoot media on student learning outcomes in mathematics learning on fractions in grade V (ISYAROH, 2020).

One innovation needed by teachers is the use of learning media. By using learning media, the teaching and learning process runs effectively. Therefore, media acts as an intermediary for teachers in conveying information to students. Kahoot media also needs to be used as a learning aid, and its application should be appropriate to the subject matter and student characteristics. The selection and use of these media in the teaching and learning process is expected to increase student interest in learning, improve student understanding of the learning, and improve cognitive learning outcomes.

Based on the background above, the author in this study determined the research title "The Influence of Kahoot Media on Student Learning Outcomes in Mathematics Learning Fraction Material for Class V SD Negeri 091263 Karang Sari"

2. METHOD

This study employed a quantitative approach with an experimental method. This approach was chosen to test the effect of Kahoot on student learning outcomes. Research methods can be defined as a scientific way to obtain valid data with the goal of discovering, developing, and proving specific knowledge that can be used to understand, solve, and anticipate problems in education (Fujiastuti, 2022).

The research design used in this study is a pre-experimental design, which is a type of research that only involves one class as an experimental class and is carried out without a comparison group with the aim of gaining an understanding of the effect of Kahoot Media on Student Learning Outcomes in Mathematics learning for grade V of SD Negeri 091263 Karang Sari. This research design uses a One-Group Pretest-Posttest Design. In this study, one class was used, where the class was an experimental class. The first step was to provide pre-test questions and then given an action. Therefore, the researcher decided to use this design and the results of the action obtained were more accurate because they could be compared with the conditions before an action was carried out. The design model can be described as follows:

This research was conducted at SD NEGERI 091263 Karang Sari, Karang Anyer Village, Gunung Maligas District, Simalungun Regency, North Sumatra Province. The class used by the researcher was grade V. The research time is the implementation span of all research activities that are arranged in a planned manner starting from the preparation stage, implementation, to the preparation of the research report. Systematic time planning is needed so that each stage of the research can be carried out effectively and in accordance with the conditions and activity schedule at the research location (Sugiyono, 2017). Determining a clear schedule also helps researchers control the course of the research so that it remains in accordance with the predetermined plan (Irfan, 2024).

The author conducted the research in April of the even semester of the 2025/2026 academic year in class V of SD Negeri 091263 Karang Sari. The selection of the time in the even semester was based on the consideration that the fraction material was being taught to students, thus allowing the researcher to apply the treatment in the form of using Kahoot application-based media in mathematics learning (Angreini et al., 2020).

According to Sugiyono (Trisna Yanti et al., 2020) Population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn. Basically, the population is not only humans but also objects and other natural objects. Based on the opinion above, the population in this study is all fifth grade students of SD Negeri 091263 Karang Sari with a total of 23 students. The N-Gain test is used to determine the magnitude of the increase in student learning outcomes between before and after being given treatment. In this study, the increase is seen from the comparison of the pretest and posttest scores obtained by students. In this study, the N-Gain test was carried out using the assistance of the IBM SPSS version 24 program. The N-Gain calculation was carried out to determine the effectiveness of using Kahoot media on improving student learning outcomes.

3. RESULT AND DISCUSSION

This research is a quantitative research with an experimental method that describes student learning outcomes in Mathematics learning, with the provision of Kahoot media. This research was conducted on April 7-8, 2026. This research was aimed at fifth grade students of Sd Negeri 091263 Karang Sari, to determine the effect of Kahoot media on student learning outcomes. This research uses a one-Group Pretest-Posttest research design. Conducting a pretest to see students' abilities before being given treatment and a posttest was conducted to see students' abilities after being given treatment. The data from this research are presented in the form of descriptions and tables which will be described in detail below. The instrument test in this study was carried out at the UPTD SD Negeri 122345 Pematangsiantar (Andini, 2022). The selection of this school was based on similar characteristics with the research subjects, both in terms of curriculum, grade level, and student academic ability. The instrument test aims to determine the validity, reliability, level of difficulty, and the discriminatory power of the questions before being used in the main research. The results of the instrument test conducted by the researcher are described below: Validity Test is a test that functions to see whether a research measuring instrument (instrument) is valid or invalid (Sampoerna et al., 2022). It can be interpreted that validity is a measure used to see the level of validity of a test instrument. The test item is said to be valid if the calculated r value is $> r$ table, using a significance rate of 5% or 0.05 with a sample size of 23 students, then the r table value in this study is 0.413.

Research result

Normality Test Results

The normality test was conducted to determine whether the data from the *pretest* and *posttest* from the sample were normally distributed or not. The normality test in this study used the Shapiro-Wilk because the number of samples was > 50 . According to Ghozali (2016), Shapiro-Wilk is more appropriate for small samples. The following researchers present the results of the normality test from the *pretest* and *posttest* data in the study in the table below (Kurniawan et al., 2023) :

Table 1. Normality Test Results

	Shapiro-Wilk		
	Statistics	df	Sig.
Pretest	.965	23	.580
Posttes	.955	23	.376

Based on the sample size in this study ($n=23 < 50$), the normality test in this study used the *Shapiro-Wilk test* with the help of IBM SPSS version 24. The significance value for the *pretest* data was (0.580) and the *posttest* t-value was (0.376). The use of the *Shapiro-Wilk test* in this study was based on a sample size of less than 50, namely 23 students. This is in accordance with the opinion of Imam Ghozali (Janattaka & Tiyana, 2022) who stated that the *Shapiro-Wilk test* is more appropriate for small samples ($n < 50$).

Based on the decision-making criteria in the normality test, if the significance value (Sig.) Is greater than 0.05, then the data is declared normally distributed. Conversely, if the significance value (Sig.) Is less than 0.05, then the data is not normally distributed. The results show that the significance value of the pretest (0.580), and posttest (0.376), where both are greater than 0.05. Thus, it can be concluded that this study is **normally distributed**. Therefore, the data in this study meets the requirements for parametric statistical tests, namely the *Paired Sample t-test*.

Hypothesis Test Results

The hypothesis testing in this study used the *Paired Simple t-test*. According to Imam Ghozali (2016), the *Paired Simple t-test* is used to determine the difference in means between two related samples. The decision-making process in this study is as follows:

1. H_0 : There was no difference in student learning outcomes before and after treatment was given.
2. H_a : There is a difference in student learning outcomes before and after being given treatment.

According to Sugiyono (2017), the basis for decision making is as follows:

1. If the significance value (Sig. 2-tailed) < 0.05, then H_0 is rejected and H_a is accepted.
2. If the significance value (Sig. 2-tailed) > 0.05, then H_0 is accepted and H_a is rejected.

Table 2. Hypothesis Test Results

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Standard Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper		
Pair 1	Pretest - Posttest	-44,261	16,449	3,430	-51.374	-37.148	-12.905	.000

Based on the results of data analysis using the *Paired Sample t-test* with the help of the IBM SPSS version 24 program, the mean difference value was obtained at -44.261, with a standard deviation of 16.449 and a standard error of 3.430, the calculated t value was obtained at -12.905 with a degree of freedom (df) of 22 and a significance value of 0.000. Therefore, based on the decision-making criteria if the significance value (Sig. 2-tailed) < 0.05 then H_0 is rejected and H_a is accepted. The results of the study show that the significance value is 0.000 < 0.05, so H_0 is rejected and H_a is accepted (Pamungkas & Koeswanti, 2021).

Thus, it can be concluded that there is a significant difference between student learning outcomes before and after treatment. This indicates that the use of *Kahoot learning media* has an impact on improving student learning outcomes in mathematics learning on fractions for grade V of SD Negeri 091263 Karang Sari.

N-Gain Test

Normalized gain or abbreviated as N-gain is the comparison of the actual gain score with the maximum gain score. Where the classification of Gain (g) is 0.00-0.29 is said to be low, 0.30-0.70 is said to be moderate, and 0.70-1 is said to be high (Harsono et al., 2009). The N-gain test is conducted to determine the magnitude of the increase in student learning outcomes after being given treatment. The N-Gain calculation is obtained from the difference in *pretest* and *posttest scores* which are then compared with the maximum possible score. To determine the increase in student learning outcomes as follows:

Table 3. N-Gain Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Standard Deviation
Ngain_Score	23	.18	.91	.7223	.16432
Ngain_Persen	23	17.65	91.11	72.230	16.43235
				4	
Valid N (listwise)	23				

Based on the calculation results using SPSS, the N-Gain (g) value was obtained with a minimum value of 0.18 and a maximum value of 0.7223 with a standard deviation of 0.16432 with a sample size of 23 students. So based on the N-Gain interpretation criteria, the average value of 0.7223 is included in the high category ($g > 0.70$). This shows that the increase in student learning outcomes after being given treatment is in the high category. Thus, it can be concluded that the use of *Kahoot learning media* has an influence on improving student learning outcomes in mathematics learning on fractions for grade V of SD Negeri 091263 Karang Sari.

Discussion

In this section, the results found in the study will be described. Where the results found are conclusions drawn based on the collected data and data analysis that has been done. This study aims to determine the Effect of *Kahoot Media* on Student Learning Outcomes in mathematics learning on fractions in grade V of SD Negeri 091263 Karang Sari. With a sample in this study of 23 students. Thus, it can be concluded that the feasibility of the question instrument where the results of the validity test show that of the 30 questions given, there are 5 invalid questions and 25 questions are declared valid and appropriate to be given to the 23 students studied (Djaha & Darmastuti, 2020). For the results of the reliability test, a *Cronbach's Alpha value* of 0.88 was obtained where > 0.60 , so the question instrument was declared reliable (Very high). And the results of the discrimination test showed that most of the questions made were in the good and sufficient categories (Maulidya, 2017), this shows that the questions are able to differentiate students with high and low abilities. The results of the test on the difficulty level of the questions were obtained from 25 questions that had been given. The analysis of the difficulty level of the questions on the "fraction" material showed that the questions were divided into easy, medium, and difficult categories. Of the 25 questions,

19 were in the medium category, and 6 were in the difficult category. This indicates that the level of difficulty of the questions is quite balanced, making it suitable for use in measuring student abilities.

In this section, I will describe the results found in the research conducted. Based on the results of the students' *pretest learning*, it can be seen that the highest score in the *pretest* was 72 while the lowest score was 16. The average student score in the *pretest* was 40.39. Where there was 1 student who obtained a score above the KKTP. While students who obtained a score below the KKTP were 22 students. Looking at the results obtained before using the *Kahoot media*, student learning outcomes were very low. Furthermore, student learning outcomes from the *posttest score*, the highest score in the *post-test* was 96, while the lowest score was 72. The average in the *post-test* was 84.69, students who obtained a score above the KKTP were 23 students, and there were no students who did not complete. So, after using the *Kahoot media*, students had higher learning outcomes than before using the *Kahoot media*. So based on the data, student learning outcomes from 40.39 increased to 84.69.

After conducting the descriptive test, the researcher also conducted an analysis prerequisite test. The tests used in this study were data normality tests and hypothesis tests, namely the t-test. To see the increase in pretest and posttest scores, the researcher also used the N-Gain test to see the increase in student learning outcomes. Data distribution analysis was carried out using a normality test with the number of samples in this study $n = 23 < \text{of } 50$, so the normality test in this study used the *Shapiro-Wilk method* with the help of IBM SPSS version 24, so the significance value for the *pretest data* was (0.580) and the *posttest data* t was (0.376). The use of the *Shapiro-Wilk test* in this study was based on the number of samples less than 50, namely 23 students. This is in accordance with the opinion of Imam Ghozali (Angela & Subektir, 2022) who stated that the *Shapiro-Wilk test* is more appropriate for small samples ($n < 50$).

Based on the decision-making criteria in the normality test, if the significance value (Sig.) Is greater than 0.05, then the data is declared normally distributed (Budyanti et al., 2023). Conversely, if the significance value (Sig.) Is less than 0.05, then the data is not normally distributed. The results show that the significance value of the pretest (0.580), and posttest (0.376), where both are greater than 0.05. Thus, it can be concluded that this study is normally distributed. Therefore, the data in this study meets the requirements for parametric statistical tests, namely the *Paired Sample t-test* (Siswanto & Mustofa, 2012).

After the normality test was conducted, a hypothesis test was conducted using the *Paired Program t- test, a pre-metric statistical test* (Oktavia, 2021). This test uses the SPSS 24 program with a significance level of 0.05. Based on the results of data analysis using the *Paired Sample t-test*, the mean difference value was obtained at -44.261, with a standard deviation of 16.449 and a standard error of 3.430. The calculated t-value was obtained at -12.905 with a degree of freedom (df) of 22 and a significance value of 0.000. Therefore, based on the decision-making criteria, if the significance value (Sig. 2-tailed) is 0.05, then H_0 is rejected and H_a is accepted. The results of the study show that the significance value is $0.000 < 0.05$, so H_0 is rejected and H_a is accepted (Simbolon, 2019).

Thus, it can be concluded that there is a significant difference between student learning outcomes before and after treatment. This indicates that the use of *Kahoot learning media* has an impact on improving student learning outcomes in mathematics learning on fractions for grade V of SD Negeri 091263 Karang Sari.

N-gain is the comparison of the actual gain score with the maximum gain score. Where the classification of Gain (g) is 0.00-0.29 is said to be low, 0.30-0.70 is said to be moderate, and 0.70-1 is said to be high. The N-gain test was conducted to determine the magnitude of the increase in student learning outcomes after being given treatment. The N-Gain calculation is obtained from the difference between *the pretest* and *posttest scores* which are then compared with the maximum possible score. To determine the increase in student learning outcomes, with the results of calculations using SPSS version 24, the N-Gain (g) value was obtained with a minimum value of 0.18 and a maximum value of 0.7223 with a standard deviation of 0.16432 with a sample size of 23 students (Patmawati et al., 2018).

Therefore, based on the N-Gain interpretation criteria, the average value of 0.7223 is included in the high category ($g > 0.70$). This indicates that the increase in student learning outcomes after being given treatment is in the high category. Thus, it can be concluded that the use of *Kahoot learning media* has an effect on improving student learning outcomes in mathematics learning on fractions for grade V of SD Negeri 091263 Karang Sari.

4. CONCLUSION

The conclusion is the result of a statement containing the results of the end of the research obtained based on data analysis and discussion that has been done. Based on the results of research on the influence of *Kahoot media* on student learning outcomes in mathematics learning on fractions of class V of SD Negeri 091263 Karang Sari, it can be concluded as follows for the feasibility of the instrument, the results of the validity test show that of the 30 questions given to the Instrument at UPTD SD Negeri 122345 Pematangsiantar, there are 25 questions declared valid and 5 questions declared invalid. For the results of the reliability test, Cronbach's Alpha was obtained at $0.88 > 0.60$, so the results of the reliability test were declared reliable (Very High). in the test of the level of difficulty of the questions, which is a calculation of the 25 questions that have been given, the results of the analysis of the level of difficulty of the "fraction" material questions, it was found that the questions consisted of medium and difficult categories. Of the 25 questions, there were 19 questions in the medium category, and 6 questions in the difficult category. This indicates that the level of difficulty of the questions is balanced enough to be used to measure student abilities. The results of the discrimination test show that most of the questions are in the good and sufficient categories. This indicates that the questions are able to differentiate between high-ability students and low-ability students. Of the 25 questions, the results showed that most of the questions were in the good category (14 questions) and 11 were in the sufficient category. This indicates that overall the questions were able to differentiate between high-ability students and low-

ability students well. After using the Kahoot media, student learning outcomes in *the pretest* increased from 40.39 in the posttest to 84.69 in *the posttest*.

Based on the results of the research and data analysis that have been carried out, it can be concluded that the results of the normality test show that the pretest and posttest data are normally distributed so that they meet the requirements for parametric statistical tests. The results of the hypothesis test using the t test show a significant value of $0.000 < 0.05$, so that H_0 is rejected and H_a is accepted. This shows that there is a significant value between student learning outcomes before and after treatment. The results of the N-Gain calculation show an average value of 0.722 which is included in the high category. This shows that there is an increase in student learning outcomes in the high category after being given learning treatment.

Thus, it can be concluded that "there is an influence of *Kahoot media* on student learning outcomes in mathematics learning on fraction material for class V of SD Negeri 091263 Karang Sari". Therefore, Kahoot media can be recommended as an alternative to improve student learning outcomes in elementary schools.

Suggestion

After considering the field data through analysis and conclusions, the author provides several suggestions, including:

1. For Schools. It is hoped that the provision of *Kahoot media* will become one of the strategies used at SD Negeri 091263 Karang Sari.
2. For Teachers: Teachers should use learning media that are appropriate to the subject matter to encourage students to be more enthusiastic about learning activities, thus making it easier for them to understand the material.
3. For students: They should be able to pay attention and follow the learning process delivered by the teacher well and be able to develop their learning creativity so that they achieve better learning outcomes.
4. For Researchers: Future researchers are advised to develop *Kahoot media* with more varied innovations and test its effectiveness at different levels or subjects to broaden the scope of the media's benefits.

REFERENCES

- Andini, A. N. (2022). Pengaruh Media Flashcard Terhadap Kemampuan Mengenal Huruf Anak Usia 5-6 Tahun. *Jurnal Penelitian Anak Usia Dini*, 1(1), 1–11. <https://doi.org/10.18860/Jpau.V1i1.1076>
- Angela, H., & Subektir, F. E. (2022). Systematic Literature Review: Efektifitas Media Pembelajaran Untuk Mendorong Kemampuan Komunikasi Matematis Siswa. *Jurnal Pendidikan Matematika Raflesia*, 7(3), 13–25. <https://doi.org/10.33369/Jpmr.V7i3.22190>
- Angreini, D., Muhiddin, M., & Nurlina, N. (2020). Pengaruh Penggunaan Media Audio Visual Terhadap Motivasi Dan Hasil Belajar Ipa Siswa Kelas V Sd Negeri Bontoramba. *Edumaspul: Jurnal Pendidikan*, 4(1), 42–49. <https://doi.org/https://ummaspul.E-Journal.Id/Maspuljr/Issue/View/16>
- Budiyaniti, F., Mohzana, M., & Aminah, A. (2023). Penerapan Model Pembelajaran Pjbl
- ISIHMOR : Jurnal Ilmu Sosial dan Humaniora, Vol. 3, No. 3 Juli 2025 | 246

- Dengan Media Audio Visual Untuk Meningkatkan Kemampuan Menulis Teks Diskusi. *Jurnal Kajian Bahasa, Sastra Dan Pengajaran (Kibasp)*, 7(1), 154–166. <https://doi.org/10.31539/Kibasp.V7i1.6875>
- Djaha, I., & Darmastuti, R. (2020). Branding Sumba Barat Melalui Media Interaktif Berbasis Kearifan Lokal Budaya Pasola Untuk Pengembangan Pariwisata Di Kabupaten Ini. *Jurnal Jurnalisa*, 6(1). <https://doi.org/https://doi.org/10.24252/Jurnalisa.V6i1.12465>
- Downie, S., Gao, X., Bedford, S., Bell, K., & Kuit, T. (2021a). Technology Enhanced Learning Environments In Higher Education: A Cross-Discipline Study On Teacher And Student Perceptions. *Journal Of University Teaching And Learning Practice*, 18(4). <https://doi.org/10.53761/1.18.4.12>
- Downie, S., Gao, X., Bedford, S., Bell, K., & Kuit, T. (2021b). Technology Enhanced Learning Environments In Higher Education: A Cross-Discipline Study On Teacher And Student Perceptions. *Journal Of University Teaching And Learning Practice*, 18(4), 9437–9441. <https://doi.org/10.53761/1.18.4.12>
- Firdausi, N. I. (2020). Pemanfaatan Aplikasi Kahoot! Sebagai Media Pembelajaran Matematika Kreatif. *Kaos Gl Dergisi*, 8(75), 147–154.
- Fujiastuti, A. (2022). Pelatihan Pembuatan Media Pembelajaran Berbasis Komik Untuk Guru Sd Dan Tk. *Masyarakat Berdaya Dan Inovasi*, 3(1), 82–85.
- Harsono, B., Soesanto, & Samsudi. (2009). Perbedaan Hasil Belajar Antara Metode Ceramah Konvensional Dengan Ceramah Berbantuan Media Animasi Pada Pembelajaran Kompetensi Perakitan Dan Pemasangan Sistem Rem. *Jurnal Pendidikan Teknik Mesin*, 9(2), 99.
- Hidayah, K. M. N. (2019). *Pengembangan Media Komik Digital Menggunakan Pixton Disertai Quiz (Kahoot) Pada Konsep Sistem Gerak*. Jakarta: Fitk Uin Syarif Hidayatullah Jakarta.
- Irfan, M. (2024). Efektivitas Penggunaan Media Sosial Twitter Sebagai Media Komunikasi. *Jurnal Ilmu Komunikasi*, 2(2), 28–38.
- Isyaroh, L. (2020). *Pengaruh Media Visual Kartu Huruf Dan Kartu Kata Bergambar Terhadap Kemampuan Membaca Siswa Di Mi Al Huda Rejowinangun Trenggalek*. <http://repo.uinsatu.ac.id/id/eprint/14688>
- Janattaka, N., & Tiyan, F. A. D. (2022). Pemanfaatan Aplikasi Kahoot Sebagai Media Pembelajaran Matematika Kelas 2 Di Sdi Aisyiyah. *Arus Jurnal Pendidikan*, 2(2), 116–123. <https://doi.org/10.57250/Ajup.V2i2.78>
- Konstantakis, M., Lykiardopoulou, A., Lykiardopoulou, E., Tasiouli, G., & Heliades, G. (2022). An Exploratory Study Of Mobile-Based Scenarios For Foreign Language Teaching In Early Childhood. *Education Sciences*, 12(5), 306. <https://doi.org/10.3390/Educsci12050306>
- Kurniawan, A. H., Puspita, N., Yusmaniar, Y., & Rajendra, F. (2023). The Effectiveness Of Using Digital Applications For Diabetes Mellitus With Augmented Reality Models As Learning Media In Pharmacy Education. *Pharmacy Education*, 23(2), 53–59. <https://doi.org/10.46542/Pe.2023.232.5359>
- Maulidya, H. (2017). Persepsi Mahasiswa Terhadap Penggunaan Google Translate Sebagai Media Menerjemahkan Materi Berbahasa Inggris. *Jurnal Saintekom*, 7(1), 57–66.

- Nurdiansyah, N. M., Arief, A., Agustin, F. R., Hudriyah, H., Muassomah, M., & Mustofa, S. (2021). Education Reconstruction: A Collaboration Of Quiz Team And Kahoot Methods In Learning Arabic. *Komposisi*, 22(2), 93–106. <https://doi.org/10.33394/jp.v6i1.2525>
- Oktavia, R. A. (2021). Pemanfaatan Digital Content Media Sosial Tiktok Dalam Proses Pemasaran Produk. *Technopreneuship*. [Http://repository.untag-sby.ac.id/Id/Eprint/7436](http://repository.untag-sby.ac.id/Id/Eprint/7436)
- Pamungkas, W. A. D., & Koeswanti, H. D. (2021). Penggunaan Media Pembelajaran Video Terhadap Hasil Belajar Siswa Sekolah Dasar. *Jurnal Ilmiah Pendidikan Profesi Guru*, 4(3), 346. <https://doi.org/10.23887/jippg.v4i3.41223>
- Patmawati, D., Rustono, R., & Halimah, M. (2018). Pengaruh Media Audio Visual Terhadap Hasil Belajar Siswa Pada Materi Jenis-Jenis Pekerjaan Di Sekolah Dasar. *Pedagogik: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 5(2), 308–316.
- Putra, A., & Afrilia, K. (2020). Systematic Literature Review : Penggunaan Kahoot Pada Pembelajaran Matematika. *Jurnal Ilmiah Pendidikan Matematika Al Qalasadi*, 4(2), 110–122. <https://doi.org/10.32505/qalasadi.v4i2.2127>
- Putri, M. A., Herpratiwi, H., & Firdaus, R. (2025). The Influence Of Game Based Learning On Student Motivation In The Digital Era: Literature Review. *Jurnal Teknologi Pendidikan : Jurnal Penelitian Dan Pengembangan Pembelajaran*, 10(1), 122. <https://doi.org/10.33394/jtp.v10i1.13814>
- Putri Yulianti, Akhmad Riadi, Fadia Zahratunnisa, Nur Aulia Amanda Fatimah, A. A. (2024). Kajian Literatur : Penggunaan Media Sosial Sebagai Sarana Dalam Meningkatkan Pembelajaran Pendidikan Agama Islam Pada Generasi Muda. *Indonesian Journal Of Islamic Education*, 2(1), 113–123.
- Qasserras, L., & Qasserras, M. (2023). Teachers' Experiences With Using Online Games In Efl Classrooms: A Study Of Moroccan Teachers. *International Journal Of Research Publication And Reviews*, 4(4), 3043–3052. <https://doi.org/10.55248/gengpi.4.423.36737>
- Sampoerna, S. T., Rahardja, U., Mardiana, Devana, V. T., & Lestari Santoso, N. P. (2022). Pelatihan Inovasi Media Pembelajaran Ilearning 2.0 Sebagai Pengabdian Masyarakat Terhadap Pendidikan Tinggi. *Adi Pengabdian Kepada Masyarakat*, 2(2), 46–55. <https://doi.org/10.34306/adimas.v2i2.567>
- Sari, D., & Lestari, N. D. (2018). Pengaruh Media Pembelajaran Visual Terhadap Hasil Belajar Ekonomi Siswa. *Jurnal Neraca: Jurnal Pendidikan Dan Ilmu Ekonomi Akuntansi*, 2(2). <https://doi.org/10.31851/neraca.v2i2.2690>
- Siahaan, Y. W., Murdiyanto, T., & Meidianingsih, Q. (2024). Pengaruh Model Pembelajaran Cooperative Tipe Teams Games Tournament Berbantuan Kahoot! Terhadap Kemampuan Berpikir Kritis Matematis Siswa Sma Negeri 27 Jakarta. *Jurnal Riset Pembelajaran Matematika Sekolah*, 8(2), 63–70. <https://doi.org/10.21009/jrpms.082.08>
- Simbolon, Y. C. A. (2019). Pengaruh "Media Tayangan Jejak Anak Negeri Di Trans 7 Terhadap Kemampuan Menulis Teks Deskripsi Oleh Siswa Kelas Vii Smp Negeri 37 Medan Tahun Ajaran 2019/2020. <http://repository.uhn.ac.id/handle/123456789/3281>
- Siswanto, J., & Mustofa, A. W. (2012). Pengaruh Penggunaan Model Pembelajaran

Kontekstual Dengan Media Audio-Visual Terhadap Kemampuan Berpikir Kritis Dan Kreatif Siswa. *Media Penelitian Pendidikan*, 6(1), 1–9.

Trisna Yanti, N. M. D., Jayanta, I. N. L., & Suarjana, I. M. (2020). Pengaruh Model Pembelajaran Course Review Horay Berbantuan Media Visual Terhadap Hasil Belajar Matematika. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 4(3), 463. <https://doi.org/10.23887/jppp.V4i3.27462>