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# The Influence of Interactive Media-based *Kahoots* Application with Islamic Questions on Students' Learning Outcomes

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Abstract

Learning mathematics has a significant role in forming the students' attitudes and mindsets and solving problems independently. The problems students face have low mathematics learning outcomes and feel that the material they are learning is complex and the way of learning mathematics is less effective. The teacher is still the center of mathematics's learning process. Therefore, this study aims to determine the effect of *Kahoot* learning media on the mathematics learning outcomes of fifth-grade students at MI Unwanul Huda. The *Kahoot* media application is interactive and exciting, so students do not feel bored and bored in learning. This application is a game in the form of a test. The method used is a quantitative experimental method in the form of a quasi-experimental design with one group pre-test and post-test design. The saturated technique sampling consisted of class V, with 28 students. The data collection technique used is the test. The results of the hypothesis test used the t-test with parametric statistics. It is known that the average post-test of student learning outcomes using *Kahoot* learning media is 65.00, and the average pre-test of student learning outcomes is 37.14. So it can be concluded that there is an influence on the mathematics learning outcomes of students who use *Kahoot* learning media.

## INTRODUCTION

Influence development technology and digital information that is very fast is part of globalization is becoming part of life society that cannot be released. Globalization targets not only the field of technology but in various sectors. One of life is education, the learning process that used to be sourced from a teacher and a book writer currently studying can be done more efficiently because development is so-called technology with the internet. It is a dynamically changing world Because technology exists to do something, including activity learning that supports digital innovations learning [1], [2].

Mathematics learning has an essential role in forming attitudes and pattering students. Results learning is an eliciting process of something impact and relevant with process activities learning done by someone student [3]–[5]. In something learning, for example, in mathematics class, students' ability from experience and the activities carried out during the learning process is called the mathematics learning results. A famous psychologist David Ausubel put forward a


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draft of meaningful learning [6], [7]. Active and independent learning is defined as meaningful learning. Experience students are greatly influenced by the way the teacher designs learning. Appropriate themes with the environment students can be used to pack experience learn.

Study results in low mathematics at MI Unwanul Huda align with previous research by Mbagho and Stefanus [8]. Results in low learning at SMP PGRI 3 Paga can not be evident Because complex material exists during the learning process of math, but it also can be caused process going on in it. For example, teacher-centered learning causes students not to participate actively. They tend to become passive learners Because they do not build understanding independently. That is one characteristic of learning that is still conventional often done and generated passive learners' attitudes toward learning.

Classifier objective education, examination setting, and curricula worldwide constitute a framework basis that can be arranged using Bloom's taxonomy in the cognitive realm. Results Study knowledge is as follows: Knowledge: capabilities student can identify or recognize an object, idea, principle, theory, or the previous procedure. Already they understand the learning process without doing something modification to matter. Understanding: capabilities every student to use to understand draft or equation to be outlined return with something understandable way student. Application: implement for understanding or even develop an understanding of something draft specific. Analysis: This competency lets somebody separate something fact or draft to get something understanding in a manner whole and thorough. Synthetic: this competency is an activity that connects knowledge with other than creating something new thought. Evaluation: the ability to show strengths and weaknesses on criteria based on his knowledge.

Media learning is tools and materials used in a learning process by a teacher to communicate related things to students in a framework to transfer their knowledge [9]–[11]. The development of interactive multimedia has advantages in the existence of an interesting dish in the form of simulation, video, audio, and pictures that can increase students' interest and motivation. Therefore, the content and material in the appropriate interactive multimedia with curriculum from the government and standards content of the inside math curriculum 2013 can be used online or offline so students can learn mathematics independently.

One component important in the learning process is a learning instrument. Instruments used integrated with existing values in Islamic religious education. So the integration of mathematics with Islam is a continuity between mathematics and Islam. If deep learning mathematics exists, continuity between material lesson mathematics with Islamic. In this study, the instrument used served in the application *Kahoots* with given features. In use as learning media, each question shown Can be accompanied by pictures and stories related to the questions based on Islamic values and can explain related Topics covered and add insight into religion. This application is based on the website, making it more comfortable to use Because it is simpler without needing to install something application memorable. Because of the points earned, students at *Kahoots* can be seen directly when answering the question. System assessment enables teachers to fast determine study results.

Application *Kahoot* is a game contained in learning media has Lots implemented by the institution's education Because access online is easy, and concept games offer attractive For use in the learning process teaching. Influence use of learning media *Kahoot* with questions deep


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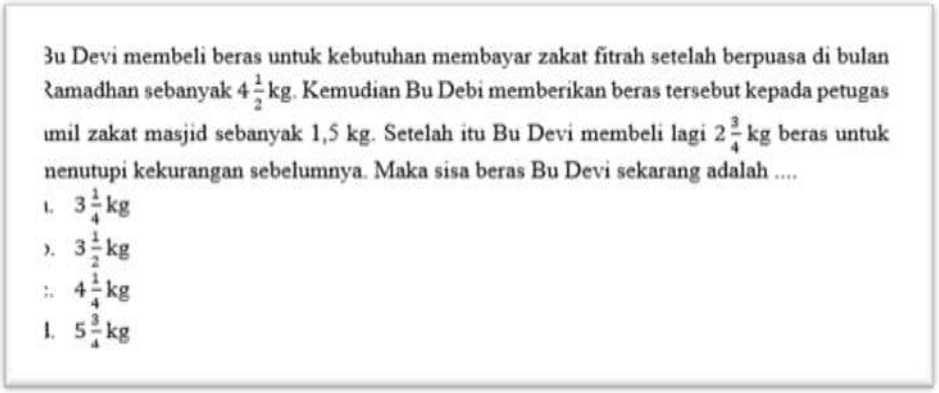
Islamic based learning thematic. To results, Study class V SDI Nurul Iman showed existing results Study with experience using this medium change but in better meaning. Because the given material is exciting and more straightforward, understood by students, and creates focus when doing something problem mathematics about Islam.

## METHOD

This research was conducted at MI Unwnaul. Huda South Jakarta is included in quantitative research applied in *Quasi Experiential Design*. The concept used to use *one group* pre-test *and* post-test *design*. Experiment with only One group and no There is group comparison design pre-test and post-test One group. In this research, the researcher uses a method collection illustration, namely a non-probability illustration that includes saturated sampling, namely as many as 28 grade V MI Unwanul Huda students. Related questions with Islamic values are composed of 5 questions with a choice double.

This study uses a structured procedure with a method gift test first (pre-test). First, students must know how to begin to master the material. Then learning is carried out with several meetings using learning media interactive Kahoots with questions based on Islamic values. After learning, can the post-test measure how to influence students' mathematics results with *Kahoot*.

Islamic questions given to students using *Kahoot* contain Islamic activities usually carried out by Muslims and become students' daily activities.


Bu Devi membeli beras untuk kebutuhan membayar zakat fitrah setelah berpuasa di bulan Ramadhan sebanyak $4\frac{1}{2}$ kg. Kemudian Bu Debi memberikan beras tersebut kepada petugas umil zakat masjid sebanyak 1,5 kg. Setelah itu Bu Devi membeli lagi $2\frac{3}{4}$ kg beras untuk menutupi kekurangan sebelumnya. Maka sisa beras Bu Devi sekarang adalah ....

a. $3\frac{1}{4}$ kg
b. $3\frac{1}{2}$ kg
c. $4\frac{1}{4}$ kg
d. $5\frac{3}{4}$ kg

*Mrs. Devi bought 4 ½ kg of rice to pay for zakat fitrah after fasting during Ramadan. Then Mrs. Devi gave the rice to the mosque Amil zakat officers as much as 1.5 kg. After that, Mrs. Devi bought another 2¾ kg of rice to cover the previous shortfall. Then Mrs. Devi's leftover rice now is....*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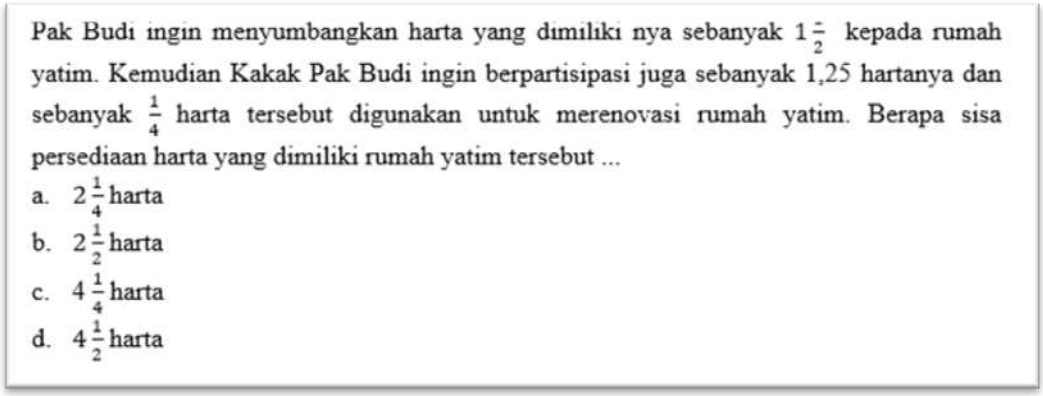
Pak Budi ingin menyumbangkan harta yang dimiliki nya sebanyak $1\frac{1}{2}$ kepada rumah yatim. Kemudian Kakak Pak Budi ingin berpartisipasi juga sebanyak 1,25 hartanya dan sebanyak $\frac{1}{4}$ harta tersebut digunakan untuk merenovasi rumah yatim. Berapa sisa persediaan harta yang dimiliki rumah yatim tersebut ...

a. $2\frac{1}{4}$ harta
b. $2\frac{1}{2}$ harta
c. $4\frac{1}{4}$ harta
d. $4\frac{1}{2}$ harta

*Mr. Budi wants to donate 1 ½ of his assets to an orphanage. Then Mr. Budi's brother also wanted to participate in as much as 1.25 of his wealth, and ¼ of the property was used to renovate the orphanage. How much stock does the orphanage have...*

## RESULTS AND DISCUSSION

Results of data collection mathematics in fifth-grade as 28 students. This research was conducted at MI Unwanul Huda, Jalan, KH. Muhasyim VI/86 RT.008/06 Kelurahan West Cilandak District Cilandak City of South Jakarta. Using interactive learning media on *Kahoots* produces results study in general with 65.00 details number highest 100 and figure lowest 20.

**Table 1.** Distribution Frequency

| No. | Mark | Frequency Absolute | Frequency cumulative | Frequency Relative (%) |
|---|---|---|---|---|
| 1. | 20 – 33 | 3 | 3 | 11 % |
| 2. | 34 – 47 | 5 | 8 | 18 % |
| 3. | 48 – 61 | 8 | 16 | 29 % |
| 4. | 62 – 75 | 0 | 16 | 0 % |
| 5. | 76 – 89 | 6 | 22 | 21 % |
| 6. | 90 – 100 | 6 | 28 | 21 % |
| | Amount | 28 | | 100 % |

Results from test mathematics done in material operation count fractions. The mixture for each indicator is shown in Table 2.

**Table 2.** Percentage of Learning Outcomes Mathematics Student Every Indicator

| No | Indicator | Amount Question | Gain Score | Max Score | percentage | Information |
|---|---|---|---|---|---|---|
| 1. | Understanding | 1 | 540 | 560 | 96.43% | High |
| 2. | Application | 1 | 380 | 560 | 67.86% | Low |
| 3. | Analysis | 1 | 320 | 560 | 57.14% | Low |
| 4. | Synthetic | 1 | 340 | 560 | 60.71% | Low |
| 5. | Evaluation | 1 | 240 | 560 | 42.86% | Low |
| | Amount | 5 | 1820 | 2800 | 65% | Low |


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The students' results achievements average in form the percentage that is in indicator C2 or comprehension is 96.43% or concluded results in the learning obtained on this indicator because students capable explain the model questions presented related studied material. On indicators application or application (C3), the results obtained is 67.86%, whichever from students not yet get mark maximum in application material inside life every day. Those results enter a low category.

Achievements results learn on indicator C4, or analysis, is equal to 57.14%, which shows the student's ability to finish question analysis. Still shallow. C5 analysis or synthesis shows the figure is 60.71%, which shows fewer results for students to connect their knowledge in the form of new thoughts and concepts. Study results in Students in C6 or evaluation showed an average score of 42.86%, which is the ability to finish questions as a conclusion is still shallow.

The study's scores were analyzed using the t-test SPSS 23.0 to analyze the effect of post-test results on Study students who use interactive Kahoots learning media. Study conclusion d claims significantly when $p < 0.05$. With That results, the Independent Sample T-test analysis is in Table 3.

**Table 3.** Independent Sample t-test

| Class | Average | t-test | P |
|---|---|---|---|
| Pre-test | 37,14 | -4,022 | 0.000 |
| Post-test | 65.00 | | |

From the *Independent Sample t-test* in Table 3, Mathematics results for fifth-grade students who use learning media interactive *Kahoots* based on Islamic value of 65.00 with a standard deviation of 25,892. While on students' results before interactive learning media, Kahoots with questions based on Islamic value equal 37.14 with a standard deviation 25,943. So, there is an influence on results Study Mathematics students after using interactive Kahoots learning media.

Learning outcomes are a form of experience gained from each student's skills. Skills in question form knowledge, attitudes, and other skills. In the results Study of mathematics, students' results are formed from their ability and knowledge. Those results related to how many good and faithful students can answer given questions and solve related math problems.

Education is required because it considerably influences students, so possible enhancement of sustainable quality. One action that can be done to increase education is making assessment media from the results Study students and learning media used to support material learning carried out by the teacher inside a class on the lessons taught. [5] The function of learning media as a tool for teaching impacts the atmosphere of learning in class.

*Kahoots* are a game to be a learning platform used by many institutions of education. Learning done using the game can make the learning process more reasonable and not monotone Because it is not considered a conventional subject, students are passive in learning. [10] Another advantage obtained from this use of *Kahoot* media is that the result or points earned by students can be directly displayed in the application, showing students' results measurement in the learning process [12], [13].


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**Figure 1.** Activities Learning Using *Kahoot* Media


**Figure 2.** Initial View *of Kahoot*


**Figure 3.** Example Question On *Kahoots*


**Figure 4.** Display Acquisition Points

For instrument collection information, used ten tests of multiple choice. After the question was tried on students of class V, possible questions tested are five multiple-choice questions. It was done in four meetings stare advance with details. One meeting was used for the pre-test, then two meetings furthermore carried out activity learning using learning media interactive *Kahoots* with questions based on Islamic values. The final meeting carried out a post-test to analyze whether there is or is no influence from using interactive *Kahoot*.

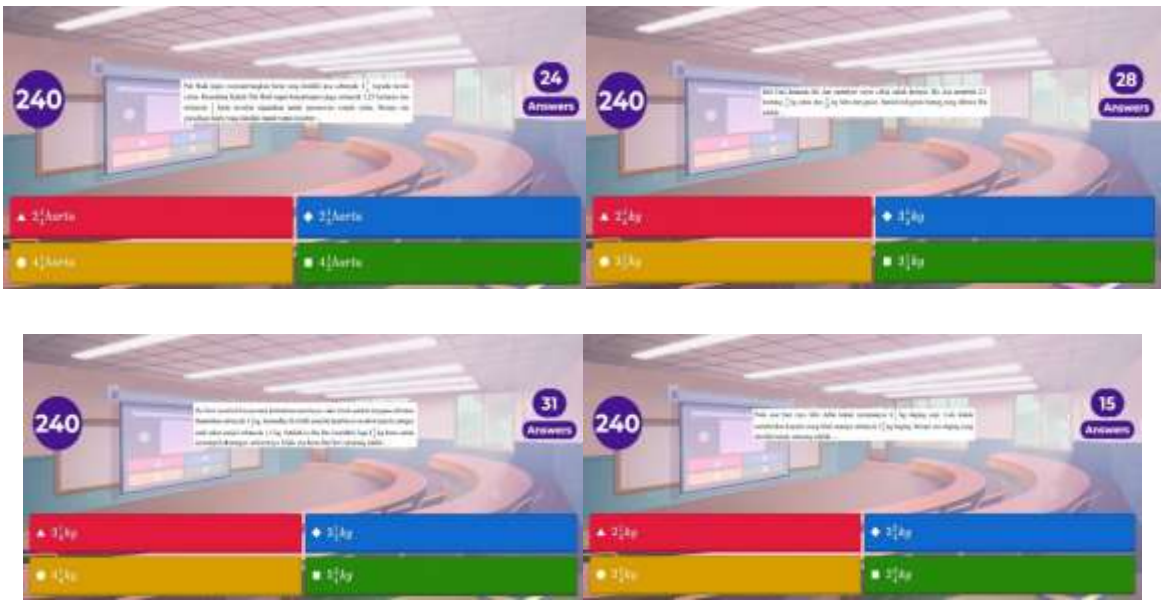


**Figure 5.** Question Interactive-based Application Question Based on Islamic Values


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Study results in Mathematics from class V students as many as 28 children before using learning media interactive *Kahoots* of 37.14. Whereas results Study Mathematics fifth grade students who use learning media interactive *Kahoots* with questions based Islamic value of 65.00. So, the students' results after using learning media interactive *Kahoots*. This goes hand in hand with that done by Ilmiyah and Sumbawati [21], which explains that matter influences results in Study students, motivating learning and learning media each other related. Kahoot media during learning makes the study environment more attractive and improves student participation.

Because students are involved directly and actively in activity learning activities with *Kahoot* media with questions based on Islamic values used shows that factor supporters worked to prove the hypothesis in this study—the moment they are learning in student classes, given quizzes in the form of *Kahoot* media with examples deep case life every day. Students faster understand the material learning because they use appropriate pictures with the material [15]–[17].

Several constraints are often found in the learning process while the researcher researches in class. Constraint: The initial finding is the student's permission to bring tool communication during learning process activities. Then the duration of the research process was not effective enough Because chance gave timeless. Ability fewer students to understand post-test questions because, at the moment, the researcher explains that there is no attention and honesty to students filling in post-test questions. Researchers complexly find suitable pictures and quality, the same picture with material learning.

The results can be used as a reference and input for teachers and candidates to increase students' mathematics results using the interactive learning media Kahoots. Hopefully, the teacher can introduce new learning, and students can be active and not quickly feel saturated during the activity.

In strengthening the character that can be grown in students in mathematics subjects, a teacher must recognize the characteristics of each mathematical concept that has a close relationship with human nature [18]–[21]. It can develop a teaching of mathematics by instilling the values of each mathematical concept. When instilled in students' lives, the mathematical concept's characteristic impact will undoubtedly positively impact students' religious attitudes.

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## CONCLUSION

The data analysis shows that the study results in material operation fractions in class V with Kahoot media with questions-based Islamic values have better results than any other class V that does not use the learning media use application *Kahoot*. Study with Kahoot media with questions based on Islamic values to increase results study students carry out the learning process in the classroom at once add outlook Islamic students, in particular, eye lesson mathematics as the main topic discussion. Learning media while playing improves learning.


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