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## Efforts to Increase the Interest of Junior High School Students in Mathematics Lessons Using the Tik Tok Learning Tool

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### ABSTRACTS

The lack of student interest in mathematics is caused by several factors such as student interest factors, student interaction factors, and learning media. The purpose of this research is to increase students' interest in mathematics by using tik tok learning media and a realistic approach. The research method with data collection using google form media to find out how much interest students have in mathematics. There are 15 questions given to 15 students, then students will be given tik tok learning media. Based on the results of our research, it was found that the number of students' interest in learning scores increased from 578 to 823. This happened because the tik tok learning media received a positive response from students. So that it can be concluded that the use of tik tok media in learning mathematics increases students' interest in learning.

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## 1. INTRODUCTION

Students' interest in learning mathematics is quite low. This could be due to the lack of interest of students in mathematics. Some students sometimes have given up before trying to understand mathematics lessons, even students think there is no point in studying mathematics because it will not be used in everyday life. This is a wrong assumption because mathematics lessons are very useful, one of which can sharpen the mindset. Other factors that cause a lack of student interest in mathematics are the interaction factor of students and the student's ability factor (Putra et al., 2019).

Indonesia's mathematics score in the PISA (Program for International Student Assessment) program has decreased. In 2018 the math score was ranked 72 out of 78 countries while in 2015 it was ranked 68. This is due to the low level of scientific literacy. The low level of scientific literacy is influenced by several factors such as student interest in learning and non-contextual learning (Fuadi et al., 2020). So the author tries to use tik tok social media as a learning tool to increase the interest of students in mathematics lessons in particular. Because the tik tok application as a learning medium gets a positive response from students.

Many studies discuss the use of tik tok learning media. Examples include the tik tok application as a learning medium for maharah kalam (Taubah, 2020), the use of the tik tok application as a learning medium for demonstrating drama texts (Fatimah et al., 2021), the tik tok application as a distance learning medium for university students. Indraprasta Indonesian Teachers Association (Puspitasari, 2021), The effectiveness of using tik tok as a learning medium in improving student learning outcomes (Hutamy et al., 2018), development of social media-based maharah al-kalam learning media using tik tok application (Zubaidi et al., 2021). But, some of these studies only focus on the subject matter. No one has used a realistic approach method yet. Realistic online learning of mathematics is better than conventional learning (lectures) because conventional learning makes students passive while realistic mathematics learning is basically the use of reality and the environment that students understand to facilitate the learning process of mathematics, so as to achieve the goals of mathematics education better (Fatimah et al., 2021). Using the tik tok application as a learning medium with a realistic mathematical approach is the perfect combination.

The purpose of this research is to increase the interest of students by using tik tok learning media. The focus of the method used is a realistic approach so that students know better the use of mathematics lessons in everyday life. To find out whether there is an increase in student interest, it is done by giving pre-test and post-test questions. The results obtained turned out to be an increase in the interest of students caused by the enthusiasm and sense of fun of the students.

## 2. THEORETICAL FRAMEWORK

### 2.1. Mathematics

Mathematics is not always just counting. But the ability to reason logically and critically in problem solving. Solving this problem is not merely a problem in the form of routine questions but rather problems in everyday life. The benefits of studying mathematics are many, one of which is a systematic mindset, more developed logic of thinking, trained in arithmetic and able to draw conclusions deductively. Students must have mathematical representation skills. Mathematical representation ability is defined as the ability to express or represent mathematical ideas/ideas as a tool to find solutions to mathematical problems (Syafri, 2017).

## 2.2. Learning Media

Learning media is a means of distributing messages or learning information to be conveyed by the message source to the target or recipient of the message (Mahnun, 2012). The use of interesting learning media can increase the interest of students. The use of media in teaching should be a part that must receive attention from the teacher as a facilitator in every learning activity. Therefore, every educator needs to learn how to choose and determine learning media so that the achievement of learning objectives in the teaching and learning process optimally. Even though this learning media is still often ignored for various reasons, including (Tafonao, 2018).

In today's modern learning system, students not only act as recipient of the message, but students also act as communicators or deliverers message. In such conditions, what is called communication occurs two-way and even multi-way communication. In media learning communication learning is needed to increase the effectiveness of achieving goals learning. That is, the learning process will occur if there is communication between the recipient of the message and the source / channel of the message through the media. The world of adult education is entering the era of the media world, where activities earning demands that the lecture method be reduced and replaced by the use of many media (Hasiru, 2018).

## 2.3. Tik Tok

The tik tok application is a media in the form of audio-visual, this media is an application that can be seen as well as heard. The tik tok application is a social network and Chinese music video platform launched in September 2016 (Susilowati, 2018). This application is an application for making short videos supported by music, which is very popular with many people including adults and underage children. Therefore, the tik tok application also has its own benefits for certain people, such as honing children's creativity in making short videos (Valiana, 2018). However, there are many negative impacts that arise in its use, as long as we can use it properly, the use of the tik tok application is very useful.

## 3. METHODS

This study focused on 51 junior high school children in Derwati, West Java, Indonesia, which was conducted in the first semester of 2021/2022. The subjects of this study were class 7 which amounted to 15 people. There are 8 male students and 7 female students. The purpose of this study was to determine whether there was an increase in students' interest in mathematics, especially when given the Tik Tok learning media.

Students will initially be given pre-test questions which aim to find out how much interest students have in mathematics. After that, mathematics teaching will be carried out in a realistic approach using tik tok learning media. After giving a tik tok video containing mathematics teaching, a post-test will be carried out which aims to see whether there is an increase in students' interest in mathematics.

**Table 1** shows the weighted value of each answer option. The questions using multiple choice answers. Each question has answer options strongly agree, agree, undecided, disagree, strongly disagree. Each answer option has a weighted value of each. Giving a weighting score for each answer option is done to make it easier to find out the total value of each student. So the highest score is 75 while the lowest is 15. The data collection method uses a form that will be given to 15 students. Google form contains 15 questions related to how much interest students have in mathematics.

**Table 1.** The weight of each answer option.

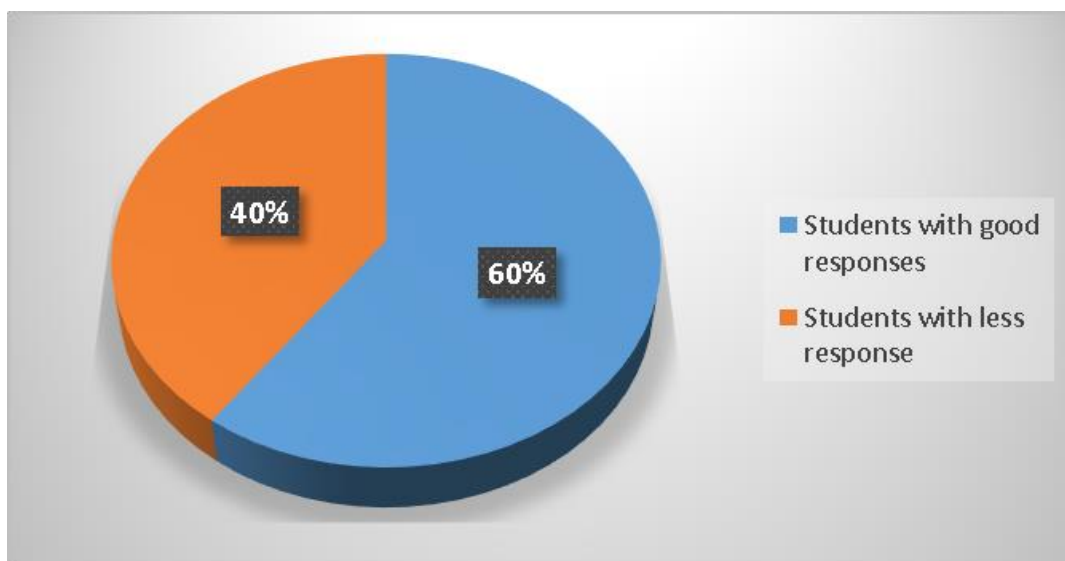
Name	Score
Strongly agree	5
Agree	4
Doubtful	3
Not agree	2
Strongly disagree	1

The research instrument uses questions about how much interest students have in mathematics. The questions are (1) I enjoy taking math lessons, (2) Learning math doesn't make me bored, (3) Mathematics lessons make me enjoy studying at school, (4) I always prepare math presentation materials with full responsibility, (5) Mathematics lessons are very important to me, (6) I take mathematics lessons on my own, (7) I am not sleepy when the teacher explains math lessons, (8) I am diligent in doing the assignments given by the teacher, (9) I actively ask questions when I don't understand, (10) I often read math textbooks before class, (11) I find math interesting, (12) I follow math lessons with great care, (13) I repeat math lessons at home, (14) I learn math without my parents asking, (15) I don't feel like bored when reading math books at home.

## 4. RESULTS AND DISCUSSION

### 4.1. Student Demography

**Figure 1** shows the percentage of student responses in online learning. The student's response is based on the student's interest in the learning provided. As many as 60% of students responded well. The students were very enthusiastic about the learning given, for example, being very active in the WhatsApp group media. The curiosity of these students is very high, they often ask anything related to the learning being carried out. As many as 40% of students are less responsive to the learning carried out. These students are very passive when they are in whatsapp group media, sometimes their teachers have to have a personal chat (PC) so that the tasks we give can be conveyed.

**Figure 1.** Shows the percentage of student responses.

## 4.2. Phenomena in the learning process

From Student Demographics, the situation of students is not too far away when learning. Some are difficult to put into a whatsapp group so it takes a long time to make a whatsapp group. This phenomenon also occurs in research (Muhammad *et al.*, 2021).

The stages of learning carried out are as follows:

- (i) At the beginning of the introduction, the students did not respond quickly, but after one of the students responded, the others responded.
- (ii) At the second meeting, the students were very enthusiastic about the tik tok learning media. Students really understand that mathematics can be used every day.
- (iii) After being given the tik tok learning media, some students were very active in asking more questions about mathematics lessons in everyday life.

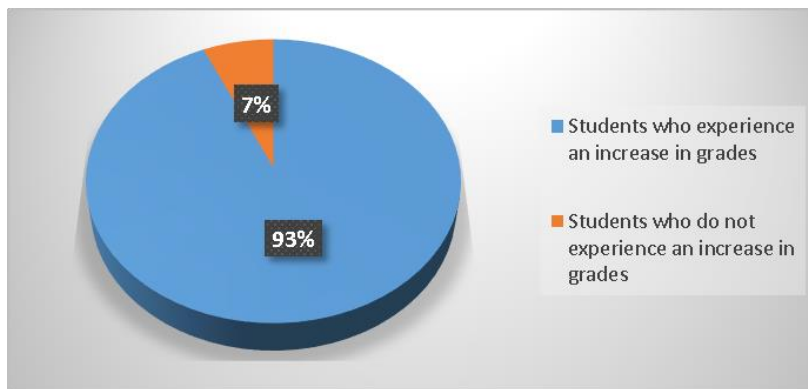
## 4.3. Data Analysis

**Table 2** shows the results of the students' pre-test and post-test. The results of the pre-test showed that 27% of the students scored more than 50. After the students were given a learning video using Tik Tok media, the post-test results showed 67% of the students had a score of more than 50. The total pre-test scores of the students were 578 with an average of 39. while the number of post-test scores is 823 with an average of 55. The increase in value is quite significant because the Tik Tok learning media gets a pretty good response from students.

**Figure 2** shows the percentage of students who experienced an increase in grades and who did not. 93% of students experienced an increase in grades after being given Tik Tok learning media while 7% of students did not experience an increase in grades. Only student J did not experience an increase in grades. Student J has a pre-test and post-test score of 56.

**Table 2.** Shows the students pre-test and post-test scores.

Name	Pre-test Score	Pos-test Score
A	21	27
B	60	70
C	31	55
D	15	55
E	71	73
F	29	34
G	27	50
H	46	66
I	50	67
J	56	56
K	35	62
L	31	59
M	58	60
N	24	50
O	24	39
<b>Sum</b>	578	823
<b>Average</b>	39	55



**Figure 2.** Shows the percentage of students who experience an increase in grades.

#### 4.3. Discussion results

Using tik tok learning media is very fun for students. If you use tik tok learning media with the right use, there are many benefits. Learners are easier to catch the lessons given because in tik tok there are interesting features (Asdiniah, 2020).

Based on the results of our research, before and after being given the tik tok learning media, it had a significant effect on students' interest in mathematics. This happens because the tik tok learning media gets high enthusiasm from students. Students are more comfortable in capturing the content of the lessons given (Mana, 2021). Some students if they are going to carry out school are lazy beforehand, this is one of the things that hinders students' interest in learning (Voneline et al., 2021). Meanwhile, by using the tik tok learning media, students are not solely studying for school but are combined with the preferences of most students. The tik tok application is no longer a foreign thing for students in this day and age (Adawiyah, 2020).

Based on the data obtained, 14 of 15 students experienced an increase in interest in mathematics while 1 in 15 students had the same interest in mathematics. This happened because the 14 students after being given realistic mathematics material with tik tok learning media felt curious about mathematics lessons and fostered a high sense of curiosity. Meanwhile, for 1 student who is interested in mathematics, the same can happen because of several factors, such as not wanting to learn mathematics from the start, not paying attention to tik tok learning media and indeed low interest in mathematics.

Therefore, the tik tok learning media is quite effective in increasing the interest of students in learning according to research conducted by (Amadhea, 2021). Students not only understand the material but increase the creativity of these students.

#### 5. CONCLUSION

Using the tik tok learning tool is indeed interesting. Make students more active. Using the tik tok learning media also got a positive response from students and very high enthusiasm. Using a realistic mathematical approach makes students' understanding more real in everyday life so that it makes curiosity about mathematics lessons high. Based on the results of our research, the interest of students before being given tik tok learning media had an average value of 39 while after being given tik tok learning media it became 55. Therefore, we conclude that tik tok learning media increases students' interest in mathematics.

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## 7. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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