

Pop Up Book Learning Media to Increase Learning Interest of MTsS Alwasliyah Students Bangun Purba

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Abstract

This article aims to increase students' interest in learning mathematics by using pop up book learning media. The research was conducted at MTsS Alwasliyah Bangun Purba class VII. The research method used is a descriptive qualitative method. The instruments in this study are observation sheets and questionnaires of students' interest in learning mathematics. The results of the study obtained that there was an increase in students' interest in learning after the learning process was carried out using pop-up book media.

Keywords: *Pop Up Book; Learning Media Pop Up Book; Interest in Learning; Interest in Learning Mathematics.*

Abstrak

Artikel ini bertujuan untuk meningkatkan minat belajar matematika siswa dengan menggunakan media pembelajaran pop up book. Penelitian dilakukan di MTsS Alwasliyah Bangun Purba kelas VII. Metode penelitian yang digunakan adalah metode kualitatif diskriptif. Instrumen pada penelitian ini adalah lembar observasi dan angket minat belajar matematika siswa. Hasil penelitian diperoleh bahwa terjadi peningkatan minat belajar siswa setelah di lakukan proses pembelajaran dengan menggunakan media pop up book.

Kata Kunci: *Pop Up Book; Media Pembelajaran Pop Up Book; Minat Belajar; Minat Belajar Matematika.*

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INTRODUCTION

Mathematics is one of the subjects that has the most important role in the world of education. In terms of the time used during the learning process at school, mathematics lessons are longer than other subjects. Mathematics materials are also studied at all levels of education from elementary, junior high, high school to college. The amount of time given and the importance of learning mathematics, require that the process of learning mathematics must be interesting and fun so that students feel interested and interested in learning mathematics material.

Unfortunately, many students think that mathematics is a lesson that is very difficult for students to understand and to comprehend. The students feel bored and stressed in learning it.

Based on a survey that has been conducted, there are as many as 87% of students who do not like mathematics lessons. This is because students think that mathematical materials are very difficult to understand, the response of teachers as educators is also not good when students are unable to understand the subject matter taught, the number of symbols that must be understood how to read them and also the many formulas that are so complicated to understand and tiered. So that it causes students' interest in mathematics learning itself tends to obey, even when learning mathematics will take place, there will be a sense of anxiety and worry in the students.

Feeling bored, stressed and thinking difficult about mathematics lessons is a negative suggestion to students' thinking, which causes students' interest in learning will not be interested in learning. In this case, interest in learning is one of the important things in a student to maximize his learning outcomes during the learning process.

According to Pramono (2001: 6) interest is a person's desire to know, learn, and prove something that is accompanied by a great desire. Meanwhile, according to Zusnani (2013: 79) interest is a strong and deep concern accompanied by a feeling of pleasure towards an activity so as to direct the child to carry out the activity of his own accord. Furthermore, Syah (2005: 151) in his

book Educational Psychology defines interest as referring to a desire that is not a little bit towards something. If a person already has a great desire for something then anything will be done.

Based on some of these understandings, it is clear that this interest is in a person, but can be influenced by some pleasant things from outside himself, both seen, heard and felt. So it is clear that this interest is very influential on the way students learn based on their experience of learning in their classrooms.

The high and low interest in learning of a student will greatly affect the student's achievement and learning outcomes. This is in accordance with what was said by Djamarah (2002: 157) which states that if a person's interest is high, then the person's achievement is high, but if someone's interest is low, then someone's achievement is low. His desire to learn will be directly proportional to the learning results he has obtained. Then Komariyah stated that student achievement will be better if they have a great interest in the lessons taught. If education faces the problem of low interest in learning students, this condition will hinder the achievement of learning goals, namely to achieve cognitive, affective and psychomotor changes in themselves. Because interest is related to learning achievement, teachers should pay more attention to students' interest in learning (Komariyah, Siti, 2018). Furthermore, Hasni and Potvin showed a high interest in science and technology and students preferred student-centered learning methods. The study examined the relationship between students' interest in science and technology and learning methods (Hasni, A& Potvin, 2015).

The various research results mentioned above, it is clear that this interest really needs to be considered. The high and low interest of a student in learning will greatly affect student learning achievement in the future. Where one of the learning achievements is the student's learning outcomes.

Apart from the aspect of being able to influence the increase or decrease in student achievement, the role of interest in terms of teachers in the learning process is to make it easier for teachers to transfer knowledge to students because interest can be a benchmark in achieving learning goals (Zusnani, 2013: 89). If students are interested in learning, the teacher as a teacher and educator will be

very easy to convey the content of the subject matter, which will have implications for the purpose of learning that will be achieved as expected. Therefore, it is very important for a teacher to stimulate students' interest in learning, so that students can learn easily and pleasantly so that learning goals can be achieved as expected.

One of the drivers in successful learning is high interest. Interest does not present itself but many factors can influence the emergence of interest. Both factors that come from within a person or interests that arise from external influences, both other people and the surrounding environment.

There are several factors that can influence students' interest in learning, including: (1) Motivation, (2) Learning, (3) Learning Materials and Teacher Attitudes, (4) Family, (5) Social Friends, (6) Environment, (7) Ideals, (8) Talents, (9) Hobbies, (10) Mass Media, (11) Facilities (Katampunge, 2013: 70). All of these factors greatly affect students' desire for interest in learning. For example, in terms of learning materials and teacher attitudes, if this lesson material is designed as attractive as possible as it is looked at as pleasing, reads easily and is fun, it will cause interest and interest in the lesson, plus the teacher's attitude in responding to student questions, responded well and kindly. The indicators of interest in learning are feelings of pleasure in learning, attention in learning, as well as participation in learning (Siska, 2015: 2).

One of the things that is considered to stimulate students' interest in learning apart from the learning methods, strategies and models that have been chosen by a teacher, using learning media is also a very important thing in the learning process, especially mathematics learning. The selection of the right learning media used for the subject matter will encourage students to be willing and eager in learning mathematics, so that students' interest in learning mathematics will increase. Through this appropriate learning media, it will arouse students' interest in learning mathematics, so that it will greatly affect the students' mathematics learning outcomes in the future. If a student's interest increases or students are enthusiastic in learning, the results obtained will increase, so that the objectives of the learning will be achieved well. Learning media that is considered

capable of increasing students' interest in building space materials is pop up book learning media.

Pop up book learning media is one of the media in the form of cards or books designed like three dimensions that are able to provide an interesting and fun effect, because each page when opened will show an embossed image and the material contained in the pop up book can be adjusted to the teaching material you want to convey. The pop-up book learning media, which is a three-dimensional prop, can stimulate students' imagination and increase knowledge so that it can make it easier for students to know the depiction of the shape of an object, enrich the vocabulary and increase student understanding.

Based on this explanation, it can be concluded that the pop up book media is a three dimension-book that has one that can move when the page is opened, and provides visualizations and a more attractive appearance to increase students' understanding of the material. With the increase in students' understanding of the material, the results of student learning related to the material taught using pop up book media will also increase.

This pop up medium is useful for developing a love of reading; help students understand real-life situations with understandable symbols or images; develop students to think critically and creatively as well as; helping students who have barriers to learning such as language inadequacy through attractive visual representations that encourage students' desire to read. Through an attractive look and if opened gives surprises to students, it will make students interested and feel love, happy and happy in learning mathematics.

The material designed in this pop up book is about building a flat side room. Among them, cubes, beams, pyramids, and prisms of the shape of the flat side room in the pop up book are sub-materials and in each sub-material consists of understanding, formulas, the nature of the nets, and each sub-material there is a question training, and there are also available forms of nets and those that are not nets and from the available nets it is hoped that students can form nets and can distinguish which are said to be nets and which are not the nets will be formed groups and whose groups are the fastest to put in envelopes that are nets or who

are not nets build space for the winning group and all the answers to the laying of nets are placed in the correct diamplop, so that students will be more enthusiastic in learning, especially learning mathematics, after all the subs have been studied, students are asked to write down the conclusion of the flat side room building material and place it in the conclusion envelope contained on the last page of the pop up book. This is where educators are required to be able to increase the effectiveness of learning so that the learning can be meaningful.

Based on the explanation above, it is clear that this pop-up book learning media can increase students' interest in learning mathematics during the learning process. This is because, apart from the attractive appearance of the pop up book, it also makes it easier for students to understand the subject matter being taught by the teacher with a light vocabulary in the kantu or book in the pop up book.

RESEARCH METHODS

This research uses a description method with a qualitative approach. A qualitative approach is an approach that aims to understand several phenomena that occur to the research subject during the study, for example student behavior, interests, motivations and actions of students during the research by describing them in language or words. The research was carried out at MTsS Alwasliyah Bangun Purba in Class VII which totaled 22 people.

The instrument used in this study to collect data on students' interest in learning mathematics was to use questionnaires and observation sheets (observation sheets). In this research questionnaire, it contains 15 points of statements about students' interest in learning mathematics submitted to students (respondents) of class VII MTsS Alwasliyah Bangun Purba. This questionnaire is given twice, namely at the time before learning using pop up book learning media, and when after the completion of the learning process by using pop up book media. The questionnaire used is a closed questionnaire in the form of a likert scale model questionnaire which has been equipped with five answer choices that have been adjusted to the material and the use of pop up book learning media. The

guidelines for the scoring of the student's mathematics interest in learning mathematics for each item of the questionnaire statement are as follows:

Table 1. Guidelines for Questionnaires on Learning Interests

Criteria	Score
Strongly Agree	5
Agree	4
Doubt	3
Disagree	2
Strongly Disagree	1

RESULTS AND DISCUSSION

The results of observations made by researchers on the teaching and learning process of students during mathematics lessons before the pop-up book media is used to see students' interest in learning mathematics consist of 8 aspects of observation based on the characteristics of the learning applied, namely: (1) the teacher explains the material to students; (2) students use learning media and understand each function of the learning media; (3) students read and understand the material presented; (4) the participation of the students is seen from being active in the learning process; (5) students do assignments given by the teacher in the form of questions in the form of student worksheets; (6) students ask questions and discuss during the learning process; (7) students are able to solve problems or solve problems given by the teacher; (8) students focus and reconcile in following the learning process. (9) the student can solve the problem in the given question exercise; (10) students can process the information and concepts that have been obtained to solve the practice questions. Based on the results of observations that have been made by researchers, it can be concluded that the interest in learning mathematics students obtained is still relatively low, this can be seen in the following table:

Table 2. Tendency to Interest in Learning Mathematics Students

No	Category	Before the Action is Performed (%)
1	High	0
2	Enough	20
3	Less	26
4	Low	54
Sum		100

In the results of the observations made, it can be seen that the level of interest in learning mathematics students is still low, this is because the teaching and learning process presented is not in the form of learning that is able to attract students' interests and desires, the learning carried out is in the form of explanations of material presented by teachers (teachers) using media that cannot make students more active. Students tend to only listen to the explanations given by the teacher, for this reason, so that students' interest in learning mathematics can increase when the learning process will take place will be presented using pop up book media.

This pup up book media is a three-dimensional teaching tool media that is able to stimulate students' imagination to want and want to learn. This media is able to increase students' knowledge of the materials presented in the pop-up book so that it can make it easier for students in terms of how to draw the shape of an object and is able to enrich the vocabulary and students' understanding of the material designed in the pup up book. This pop up book is in the form of a book, just like a binder book that when opened by students will provide surprises and interesting effects as well as fun because the pictures arise. The color giving to each building is also very varied and attracts students to open other parts of the book, so that by itself it can make students curious and will continuously want to open and read faithfully the sheet from the pup up book. In this article, the material contained in the pop up book is flat side room material as shown in Figure 1 below:

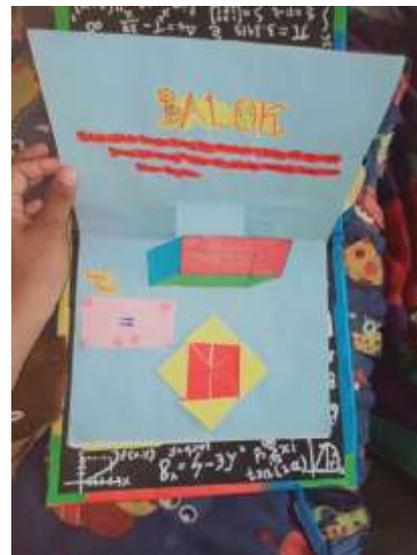
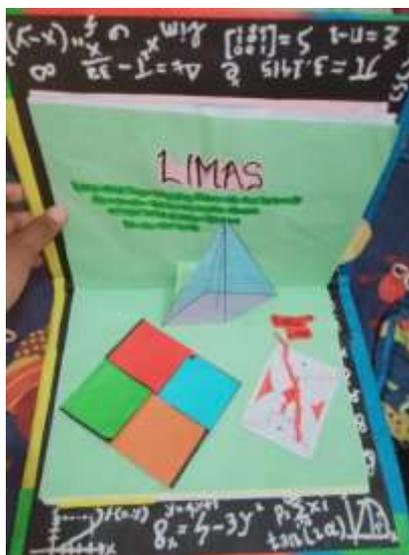
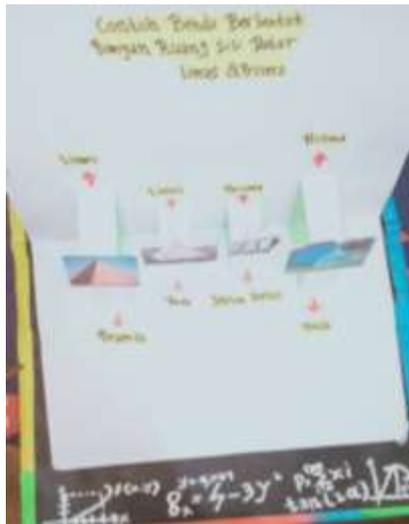


Figure 1. Pop Up Book View

The use of pop-up book learning media in mathematics subjects is very helpful for the discussion process between students and teachers, where students can write down answers or comment on the material taught at the same time or directly, and teachers can also comment on the results of writings or discussions that occur during the teaching and learning process. After completing the learning stages using pop up book media, to be able to see students' interest in learning

mathematics using pop up book media can be seen from taking a questionnaire to see student learning interests consisting of 10 aspects to be studied, from these results it can be seen changes in student learning interests taught using pop up book learning media can be seen in the following table:

Table 3. Tendency to Interest in Learning Mathematics Students Before and After Doing the Action

NO	Category	Before the Action Is Performed (%)	After the Action Is Performed (%)
1	High	0	87
2	Enough	20	13
3	Less	26	0
4	Low	54	0

From the results of the study, it shows that there is a change in students' interest in learning mathematics. This shows that students are very enthusiastic and passionate about learning mathematics with innovations in the use of learning media, especially using pop-up book learning media. It is proven that with a short time during the teaching and learning process, it becomes more interesting and students are able to use pop-up books as a more active and fun learning medium. So that students are more interested and excited in learning mathematics.

Then based on the questionnaire of interest in learning mathematics which was distributed to students based on indicators of interest in learning there was also an increase in students' mathematics learning. This can be seen from the following table:

Table 4. Description of Students' Mathematics Learning Interest Score

No	Indicators	Before the Action Is Performed (Average Score)	After the Action Is Performed (Average Score)
1	Feelings of pleasure in learning	2	4,7
2	Attention in learning	1,9	4,3
3	Participation in learning	1,7	4,2

Based on Table 4 above, it is clear that there is an increase in students' interest in learning mathematics after learning begins by using pop up book media. In the indicator of feeling happy in learning, originally the average score obtained by students was 2, but after going through the learning process using a pop up book, the average student score became 4.7, if presented, it increased by 54%. This clearly shows that when learning mathematics using a pop up book begins, students feel happy and happy. The displays and surprises given from the pop up book are very interesting and intriguing, so that students feel happy when the material is taught.

Furthermore, for the second indicator of students' interest in learning mathematics, namely attention in learning, there was also an increase of 58%. Originally, the average score of students' interest in learning was 1.9, but after learning using pop up book media, the average score of students became 4.3. This increase is shown by the attitude of students who are willing to listen and pay attention to the teacher's explanation. Enthusiastic in doing practice questions and asking questions about the material that students don't understand.

Then the third indicator of students' interest in learning mathematics is participation in learning. In this indicator, there is also an increase based on the average score of the student's learning interest questionnaire. At the time before learning using a pop up book, the average student score was 1.7 but after learning started using pop up book media, the student's score changed to 4.2. This is obviously increasing, if presented then the student's interest in learning mathematics for this third indicator increases by 50%. The students' participation in demonstrating to the front of the class, shows the participation of students during the mathematics learning process.

Of the three indicators, the indicator of feeling happy in learning is the one with the highest average score. These results show that students' feelings of excitement when learning mathematics will affect students' activities in learning. The results show that student activities are active by asking some questions related to material that students are not able to understand and understand, doing

the exercises given by the teacher and competing students to appear in the future in presenting their work.

Based on the results of observations and the results of the student mathematics interest questionnaire adjusted to the indicator of interest in learning mathematics above, the overall research results showed an increase in students' interest in learning mathematics in class VII MTsS Alwasliyah Bangun Purba. The results of this study are in line with several studies that look at students' interest in learning mathematics subjects. This is in accordance with the results of the study (Panjaitan, A.R., dkk, 2022) namely the increase in motivation and interest in learning students by using google jamboard as an interactive learning medium. This research both examines students' interest in learning mathematics, it's just that the difference in this study lies in the use of the media. With the help of the right media on the material when learning mathematics eating will be able to increase students' interest in learning. Interest as described earlier is one of the factors very capable of influencing learning outcomes and student achievement. Attention, learning, thinking and achievement of one's achievements are influenced by one's interests because interests contain elements of feelings so that a person tends to be active in a job, feels interested and happy in a certain field (Heriyati, 2017).

Student learning outcomes can be improved through increased student interest in learning. This means that the better the student's interest in learning will have an impact on student learning outcomes, the better (Nurhasanah & Sobandi, 2016). The greater the student's interest in learning mathematics, the more likely the student will be to have good learning outcomes and achievements.

Based on the results of the research and the results of previous research above, it can be concluded that students' interest in learning will increase when the use of the media used is appropriate for the material being taught. Furthermore, this interest in learning will greatly affect the students' learning achievements and achievements. Thus, in this study there was an increase in interest in learning mathematics for class VII MTsS alwasliyah Bangun Purba students after going

through the learning process using pop up book media with material to build a flat side room.

CONCLUSION

Learning using pop up book media can increase students' interest in learning mathematics. The learning process presented in the form of surprise books becomes more interesting. The teaching and learning process will certainly be more interesting and fun, especially when the subjects presented are like mathematics subjects that require more active explanations and discussions. This is because the appearance of the pop up book is full of surprises and colors that attract students.

REFERENCES

- Djamarah, Syaiful Bahri. 2002. Strategi Belajar Mengajar. Jakarta: Rineka Cipta.
- Heriyati. (2017). Pengaruh Minat Dan Motivasi Belajar Terhadap Prestasi Belajar Matematika. *Jurnal Formatif: Jurnal Ilmiah MIPA*, 7(1), 22–32. <https://doi.org/http://dx.doi.org/10.30998/formatif.v2i2.93>
- Hasni, A& Potvin, P. (2015). Student's interest in science and technology and its relationship with teaching methods, family context and self-efficacy. *International Journal of Environmental & Science Education*, 10(3).
- Ida Zusnani. Pendidikan Kepribadian Siswa SD-SMP. (Jakarta: Platinum, 2013).
- Katampunge, Meiske. Faktor yang Mempengaruhi Minat Belajar (Jakarta ,Rineka Cipta ,2013).
- Komariyah, Siti, dkk. (2018). Analisis Pemahaman Konsep dalam Memecahkan masalah Matematika Ditinjau dari Minat Belajar Siswa. *Sosiohumaniora*, 4(1).
- Nurhasanah, S., & Sobandi, A. (2016). Minat belajar sebagai determinan hasil belajar siswa. *Jurnal Pendidikan Manajemen Perkantoran*, 1(1), 128–135. <https://doi.org/https://doi.org/10.17509/jpm.v1i1.3264>
- Panjaitan, A.R., dkk (2022). Pembelajaran Interaktif Menggunakan Jamboard Dalam Meningkatkan Motivasi dan Minat Belajar Matematika. *JOURNAL MATHEMATICS EDUCATION SIGMA (JMES)*, 3 (1).
- Pramono, T. 2001. Kontribusi Kreativitas terhadap Minat Belajar Matematika Berprestasi Tinggi Siswa kelas 1 SMK YPPK 1 Sleman Yogyakarta.

Siska Candra N. “Pengembangan Instrumen Minat Belajar Matematika Siswa Smp,” FKIP Universitas PGRI yogyakarta (2015).

Syah Muhibbin, Psikologi Belajar (Jakarta: PT. Raja Grafindo Persada, 2005).