EMTEKA: Jurnal Pendidikan Matematika
Volume 6, No. 1, 2025. 166-178
DOI: https://doi.org/10.24127/emteka.v6i1.7875

e-ISSN 2746-5594
p-ISSN 2746-5608

THE EFFECT OF LEARNING MEDIA IN THE FORM OF SNAKES AND LADDERS ON STUDENTS' INTEREST IN LEARNING MATHEMATICS

Premiyanto Perangin-angin[1], Glory Indah Situmorang[2], Kristina Seriati Samosir[3], Luis Vigo Oktavianus Pranata Tarigan[4], Melky Djetro Sinaga[5], Budi Halomoan Siregar[6*]

[1,2,3,4,5,6*] Medan State University, Deli Serdang, Indonesia
*Corresponding author. Jl. William Iskandar Ps. V, 20221, Deli Serdang, Indonesia.

E-mail: ppremiyanto@gmail.com [1]
gloryindahsitumorang@gmail.com2
kristinasamosir01@gmail.com[3]
luistarigan123@gmail.com4
melkydjetro19@gmail.com5
budihalomoan@unimed.ac.id[6*]

Received 23 December 2025; Received in revised form 06 March 2025; Accepted 08 March 2025

ABSTRACT
This study aims to determine the effect of using Snakes and Ladders learning media on the interest in learning mathematics among eighth-grade students at UPT SMP Negeri 24 Medan. The population in this study consisted of all eighth-grade students at UPT SMP Negeri 24 Medan, while the research sample consisted of two classes selected using purposive sampling. Class VIII A was designated as the experimental class, which received learning using the Snakes and Ladders media, and Class VIII D served as the control class, which received learning without the use of media. Each class consisted of 30 students. This study applied a quasi-experimental method with a non-equivalent control group design. The instrument used was a learning interest questionnaire with a Likert scale, which was administered before and after the treatment. Data were analyzed using descriptive statistics and an independent sample t-test. The results showed that the average post-test score of students' learning interest in the experimental class was 34.03, which was higher than the control class, which had an average score of 30.1. Based on the independent sample t-test, a significance value of 0,002 < 0,05 was obtained, with t_{count} (3,319) > (2,051),t_{tabel} indicating a significant difference between the experimental and control classes. Therefore, it can be concluded that the use of Snakes and Ladders learning media has a significant effect on students' interest in learning mathematics in eighth grade at UPT SMP Negeri 24 Medan.
Keywords: mathematics, learning media, learning interest, quasi-experiment, and snakes and ladders

ABSTRAK
Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media pembelajaran ular tangga terhadap minat belajar matematika peserta didik kelas VIII di UPT SMP Negeri 24 Medan. Populasi dalam penelitian ini adalah seluruh peserta didik kelas VIII UPT SMP Negeri 24 Medan, sedangkan sampel penelitian terdiri dari dua kelas yang dipilih menggunakan teknik purposive sampling. Kelas VIII A ditetapkan sebagai kelas eksperimen yang mendapatkan pembelajaran menggunakan media ular tangga, dan kelas VIII D sebagai kelas kontrol yang mengikuti pembelajaran tanpa menggunakan media tersebut. Masing-masing kelas berjumlah 30 peserta didik. Penelitian ini menggunakan metode kuasi-eksperimen dengan desain non-equivalent control group design. Instrumen yang digunakan berupa angket minat belajar menggunakan skala Likert, yang diberikan sebelum dan sesudah perlakuan. Data dianalisis menggunakan statistik deskriptif dan uji independent sample t-test. Hasil penelitian menunjukkan bahwa rata-rata skor post-test minat belajar peserta didik di kelas eksperimen sebesar 34,03, lebih tinggi dibandingkan kelas kontrol yang memperoleh rata-rata skor 30,1. Berdasarkan hasil uji independent sample t-test, diperoleh nilai signifikansi sebesar 0,002 < 0,05 dengan t_{hitung} (3,319) > t_{tabel} (2,051), sehingga menunjukkan adanya perbedaan yang signifikan

EMTEKA: Jurnal Pendidikan Matematika
Volume 6, No. 1, 2025. 166-178
DOI: https://doi.org/10.24127/emteka.v6i1.7875

e-ISSN 2746-5594
p-ISSN 2746-5608

antara kelas eksperimen dan kelas kontrol. Dengan demikian, dapat disimpulkan bahwa penggunaan media pembelajaran ular tangga berpengaruh secara signifikan terhadap minat belajar matematika peserta didik kelas VIII di UPT SMP Negeri 24 Medan.
Kata Kunci: Matematika, media pembelajaran, minat belajar, quasi-experiment, dan ular tangga.

Introduction

Education is a learning process aimed at developing students' knowledge, skills, and character. According to the *Kamus Besar Bahasa Indonesia* (KBBI), education is a process of changing the attitudes and behavior of individuals or groups in an effort to mature individuals through teaching and training (Putri et al., 2023). Education is also understood as a conscious and planned effort designed to create an enjoyable learning environment that allows students to optimally develop their potential, including spiritual strength, self-control, intelligence, and skills that benefit both themselves and society (Pristiwanti et al., 2022). Furthermore, Azzahra and Irawan (2023) emphasize that education does not only focus on the transfer of knowledge, but also aims to create a conducive and enjoyable learning environment to foster students' learning interest in a meaningful way.

One of the subjects that has an important role in the world of education is mathematics. Mathematics is a science that requires students to think logically, systematically, and analytically (Maryam et al., 2022 in Kairuddin et al., 2024). Mathematics is not only taught as a mere science, but also a basis for developing problem-solving skills in daily life. Mathematics is a universal science that plays an important role in the development of science and technology. In the national education curriculum, mathematics is one of the compulsory subjects at all levels of education because it serves as the foundation for mastery of other sciences (Liberna, 2015 in Ningrum et al., 2023).

Fauzan and Anshari (2024) revealed that mathematics education aims to develop logical, rational, critical, creative, systematic, and practical thinking skills. In addition, mathematics plays an important role as a scientific thinking tool that contributes to the advancement of both natural sciences and social sciences. This is in line with Khotna et al. (2025), who stated that mathematics education plays a crucial role in preparing the younger generation to face global challenges in the digital era and knowledge-based economy. Mathematics also serves as a fundamental basis for developing critical and analytical thinking skills that are highly needed in the workforce, especially in technology and data-driven sectors.

Although mathematics has an important role, the reality is that many students are not interested in learning mathematics. Hamidah and Suryadi (2021) found that most students consider mathematics to be difficult, boring, and irrelevant to daily life. Rusmala et al. (2023) found that learning interest is a key factor determining students' academic success, especially in subjects that require understanding abstract concepts such as mathematics. This is consistent with the findings of Sanjaya et al. (2023), which showed that students with high learning interest tend to be more active in classroom discussions, have better memory retention, and are able to complete academic assignments more effectively. This

e-ISSN 2746-5594
p-ISSN 2746-5608

low interest in learning has an impact on low motivation and mathematics learning outcomes. Students' interest in mathematics is often a significant challenge, because these negative perceptions make students reluctant to be actively involved in the learning process. According to Lestari and Mokhammad (2017), indicators of students' interest in learning include attention, curiosity, active participation, and feelings of pleasure during learning. The same thing was conveyed by Darmadi (2017) who identified three indicators of learning interest, namely: (1) concentration of emotions, thoughts, and attention on learning driven by interest, (2) pleasure obtained from learning experiences, and (3) desire and tendency to be actively involved in learning and achieve optimal learning outcomes.

To overcome these problems, innovation is needed in the use of learning media that is able to attract attention and increase student participation. Interactive and fun learning media is expected to be able to create an interesting learning atmosphere and increase students' interest in learning.

Fazia and Darmawan (2024) revealed that learning media has a significant contribution to increasing students' learning interest. Yonanda et al. (2025) demonstrated that the implementation of game-based learning media in mathematics lessons successfully increased students' learning motivation significantly. Rahmawati (2025) emphasized that the use of interactive learning media can enhance students' engagement and interest in the mathematics learning process. One of the learning media that can be used is educational game media, such as snakes and ladders.

Pramesti (2023) found that the use of Snakes and Ladders game media can enhance student activeness and make the learning process more engaging, enjoyable, and less monotonous. This finding is consistent with the study by Hussaidah et al. (2024), who stated that the Snakes and Ladders game can create a more dynamic learning environment and help students understand the material in a more engaging way compared to conventional teaching methods. Furthermore, Ardi and Desstya (2025) found that the use of Snakes and Ladders media in learning not only increases students' learning interest but also trains their critical thinking skills through solving various challenges presented within the game.

One of the factors that causes low interest in learning mathematics is the use of monotonous and less varied learning methods. Astuti (2019) explained that lecture-dominated learning makes students easily bored and not interested in participating in lessons. Early observations also show that when math learning takes place, many learners tend to talk to their peers or be distracted by other things that are more interesting. However, this observation data does not fully support the comprehensive analysis of learning interest categories.

Several previous studies have examined the use of learning media in increasing interest in learning mathematics. A study conducted by Astuti (2019) shows that the use of game-based learning media can increase student involvement in understanding mathematical concepts. Meanwhile, Lestari and Mokhammad (2017) found that educational games such as snakes and ladders can create a more interactive and fun learning environment, thereby increasing student participation.

However, this study has novelties compared to previous studies. If previous research only highlighted the use of snake and ladder media as an aid in mathematics learning, this study emphasizes more on how much the influence of the

e-ISSN 2746-5594
p-ISSN 2746-5608

use of snake and ladder media on the increase in learning interest of grade VIII students of SMP Negeri 24 Medan, with a quasi-experimental approach involving experimental classes and control classes. In addition, this study also uses a questionnaire instrument with the Likert scale to measure changes in students' learning interests in a more structured and quantitative manner.

Based on this background, this study aims to identify the influence of the use of snake and ladder learning media on the interest in learning mathematics of grade VIII students at UPT SMP Negeri 24 Medan.

Research Methods

Quantitative research is the type of research used in this study. As explained by Arikunto (2010), quantitative research focuses on objectivity by utilizing data in the form of numbers that are statistically analyzed to describe or determine the relationship between the variables involved.

In the quasi-experimental research methodology used, two categories of variables are used: dependent variables and independent variables. X represents the dependent variable and Y represents the independent variable. In connection with this experiment, the snake and ladder game media functions as a dependent variable, while learning interest plays a role as an independent variable. The experimental paradigm applied is a simple paradigm are presented in Figure 1.

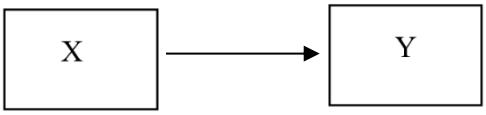

Figure 1. Simple Paradigm

Information:
X : snakes and ladders as a medium
Y : Students' interest in learning mathematics
→ : The Influence of Snake and Ladder as a Media(X) on Students' Interest in learn mathematics (Y)

Based on Figure 1, for this quasi-experimental research, in this quasi-experimental research, a *non-equivalent control group design was used*. This design involves a control class, but it is not fully capable of controlling all the external variables that have the potential to affect the outcome of the experiment. In this study, the experimental class received treatment in the form of learning using snake and ladder media, while the control class followed learning without using the media. This design was chosen to determine the influence of the use of snake and ladder media on the interest in learning mathematics of grade VIII students at UPT SMP Negeri 24 Medan. In detail, the research design is presented in Table 1.

Table 1. Research Design

Class	Pre-nontest	Treatment	Post-nontest
Experiment	O_1	X	O_2
Control	O_1		O_2

(Source : Sugiyono, 2015)

e-ISSN 2746-5594
p-ISSN 2746-5608

Information:

O_1 : Pre-Nontest made of questionnaires for experimental and control classes
Before being given treatment

O_2 : post-nontest made from questionnaires for experimental classes and Control after treatment

X : treatment in experimental classrooms with assisted learning
The media is in the form of a snake and ladder.

This experiment was carried out in the odd semester of the 2024/2025 academic year at SMP Negeri 24 Medan. The population includes students from grades VIII A to VIII K, with about 30 students per class. Class VIII A serves as an experimental class and Class VIII D serves as a control class. *Purposive sampling*, or sampling based on consideration, is the sampling method used. Recommendations from experienced people, namely teachers, help in the selection of *purposive samples*.

In this experiment, the questionnaire used to measure students' interest in learning consisted of ten statements. Each statement measures students' attitudes, opinions, and perceptions using the Likert scale. The instrument is arranged based on a grid that refers to the indicators of learning interest according to Darmadi (2017), namely: (1) the concentration of emotions, thoughts, and attention on learning driven by interest, (2) the sense of pleasure obtained through learning experiences, and (3) the desire and tendency to be actively involved in learning and achieve optimal learning outcomes. This questionnaire aims to measure the level of students' interest in learning before and after the implementation of learning using snake and ladder media, so that the influence of the use of the media on students' learning interests can be known, are presented in Table 2.

Table 2. Likert Scale Category Scale

Category	**Score Weight**	
	Positive Statement	**Negative Statements**
Strongly Agree	5	1
Agree	4	2
Nervous	3	3
Disagree	2	4
Strongly disagree	1	5

Table 2 shows the Likert scale categories used in this study to measure students' interest in learning based on the weight of scores from positive and negative statements. This table is used to measure the level of students' interest in learning mathematics. The score given to each statement in the questionnaire follows the Likert scale, where positive statements score higher if students agree or strongly agree, reflecting a higher level of interest. Negative statements score higher if the learner strongly disagrees or disagrees, reflecting a lower level of interest.

This quantitative research analyzes data with statistical analysis. These two categories of analysis are descriptive and inferential. Here's the explanation.

e-ISSN 2746-5594
p-ISSN 2746-5608

1) Descriptive Analysis

Displaying students' interest scores to learn mathematics in control and experimental classes is the goal of descriptive statistical analysis. In this study, the Likert scale was used to analyze the questionnaire. In addition, descriptive analysis activities aim to describe the results of the questionnaire before the implementation of learning using snake and ladder media and students' interest in learning mathematics and afterwards. Using Microsoft Excel 2019, descriptive statistics present data in the form of mean, highest score, lowest score, and standard deviation.

For grouping data into score limit categories, the standard deviation value must be looked for after the value has been calculated. According to Arikunto (2012) there are 3 categories of categorization steps as follows:

a. Groups with high interest in learning
   Calculated using the formula : $(X \geq (Mi + 1\ SDi))$
b. Groups with moderate learning interests
   Calculated using the formula : $(M - 1\ SDi) \leq X < (Mi + SDi)$
c. Groups with low interest in learning
   Calculated using the formula : $(X < Mi - 1\ SDi)$

Information:

X	= respondents to be categorized
Ideal Mean (Mi)	= 1/2(highest score + lowest score)
Ideal Deviation Standard (SDi)	= 1/6(highest score-lowest score)

2) Inferential Analysis

a) Data Assumption Test

Inferential statistical analysis, or hypothesis testing, can be used to determine the effect of providing learning treatment using media in the form of snakes and ladders on students' interest in learning mathematics. Since the results can be generalized to the population, this analysis is used to test the sample data. Before carrying out the hypothesis test, the data assumption test is carried out first. Homogeneity and normality tests are used in this assumption test.

b) Hypothesis Test

A hypothesis test was carried out to find out whether the provision of treatment in the form of snake and ladder media had an impact on students' interest in learning mathematics. The data of the learning interest questionnaire of the experimental group and the control group were used as the basis for conducting hypothesis tests. The test was carried out with the help of IBM SPSS 26 software with independent sample *t-test analysis*. The conditions used in the hypothesis test are as follows: if the $t_{count} > t_{table}$, the hypothesis H_a accepted, but H_a rejected if the $t_{count} < t_{table}$ where the significant rate is 5%.

The following are the hypotheses in the study:

H_0 : the provision of learning treatment using media in the form of snakes and ladders does not have an impact on students' interest in learning mathematics in grade VIII at UPT SMP Negeri 24 Medan.

e-ISSN 2746-5594
p-ISSN 2746-5608

H_a : the provision of learning treatment using media in the form of snakes and ladders has an impact on students' interest in learning mathematics in grade VIII at UPT SMP Negeri 24 Medan.

Results and Discussion

Research Results

1) Descriptive Analysis

Descriptive analysis was carried out to describe the initial and final data of students' learning interests in the control group and experiment. Initial data was obtained through pre-nontest before being given treatment to determine the level of students' basic learning interest. This data is the basis for comparison to measure the influence of snake and ladder learning media in increasing students' interest in learning.

After the treatment was given, a post-nontest was carried out to measure changes in the level of students' interest in learning. The results of this descriptive analysis provide an overview of the influence of learning media applied in the experimental class compared to without using media in the control class.

a. *Initial data on students' learning interests in the experimental and control groups*

Before the treatment was carried out, a pre-nontest was carried out in the experimental and control classes to obtain data on students' initial learning interests. The descriptive results of the pre-nontest of the two classes are summarized in the following Table 3.

Table 3. Pre-Nontest Results of Students in Control and Experiment Classes

Descriptive Statistics	Statistical Value	
	Control Classes	Experimental Classes
Lots of samples	30	30
Lowest score	23	23
Highest score	38	37
Average	30	29.8
Standard Deviation	4.79	4.47

Based on table 3, the results of the pre-nontest were to determine the equality of students' learning interests before being treated in the experimental class and the control class. This table shows that both the control and experimental classes had equivalence in the students' initial learning interest before the treatment was given. Both classes have the same sample size, which is 30 students. The lowest score in both classes was 23, while the highest score was slightly different, with the control class reaching 38 and the experimental class 37. The average score of the control class was 30, slightly higher than the experimental class which had an average of 29.8. However, this difference is so small that it suggests that the level of early learning interest in both classes is almost equal. In addition, the distribution of the data was also relatively balanced with a standard deviation of 4.79 for the control class and 4.47 for the experimental class, which indicates that the variation in scores in both classes is quite consistent. It can be concluded that

e-ISSN 2746-5594
p-ISSN 2746-5608

before the treatment was given, both groups had comparable initial conditions in terms of interest in learning mathematics.

b. The final data on students' learning interests after treatment were given to the experimental and control groups.

The post-non-test in the experimental class was given with the aim of describing the level of students' final learning interest after the application of snakes and ladders as a teaching medium. Furthermore, the post-nontest results from both the control class and the experiment are presented in the following Table 4.

Table 4. Post-Nontest Results of Students in Control and Experiment Classes

Descriptive Statistics	**Statistical Value**	
	Control Classes	**Experimental Classes**
Lots of samples	30	30
Lowest score	22	26
Highest score	36	44
Average	30.1	34.03
Standard Deviation	3.64	5.37

Based on table 4, the results of the post-nontest show significant changes in the experimental class. The lowest score in the experimental class increased to 26, higher than the control class which had the lowest score of 22. The highest score in the experimental class also experienced a significant increase to 44, while the highest score in the control class only reached 36. The average score of the control class increased slightly to 30.1, while the average score of the experimental class rose more sharply to 34.03. This shows that the use of snake and ladder learning media has a positive impact on students' interest in learning.

In terms of data variation, the standard deviation in the control class dropped to 3.64, indicating a more even distribution of scores, while the experimental class had a standard deviation of 5.37, indicating a mixed increase in scores among students. The results obtained indicate that the use of snake and ladder learning media has an effect in increasing students' interest in learning compared to without using media.

2) Inferential Analysis

Before carrying out the hypothesis test, a normality test was carried out for the first step. The goal is to see if the data follows a normal distribution. The normality test uses the Shapiro-Wilk method with the help of IBM SPSS 26 software. The results are shown in Table 5.

Table 1. Normality Test

Test of Normality			
Class	Statistics	Df	Sig.
Control Classes	0.2	30	0.617

e-ISSN 2746-5594
p-ISSN 2746-5608

Learning Interest	Experimental Classes	0.14	30	0.087

Referring to Table 5, it shows that the significance value (Sig.) of the control class is 0.617 which is greater than 0.05, and the significance value (Sig.) of the experimental class is greater than 0.05. This shows variance in the normally distributed experimental and control groups.

Next is a homogeneity test that is carried out to find out whether the control and experimental classes come from populations that have the same variance. It will be displayed in the Table 6.

Table 6. Homogeneity Test Results

Test of Homogeneity of Variances					
	Category	Levene Statistic	df1	DF2	Sig.
Value	Based on Mean	0.196	1	58	0.659

Based on Table 6, it is known that the Sig. value is 0.659 > 0.05, so it can be interpreted that the variance of the data between the control and experimental classes is homogeneous or the same. Because the data is normally distributed and homogeneous, an independent sample t-test is then carried out.

Table 7. Independent Sample T-Test Results

Independent Sample T-Test						
		Levene's Test F	**Levene's Test Sig.**	**t**	**Df**	**Sig. (2-tailed)**
Learning Interest	Equal variances assumed	5.459	0.023	-3.319	58	0.002
Learning Interest	Equal variances not assumed			-3.319	51.009	0.002

Based on Table 7, the significance value (Sig.) between the control class and the experiment was 0.002 < 0.05 which showed a significant difference between the two groups. In addition, in Table 7, it can be seen that the value of t_{count} (3,319) > t_{tabel} (2,051), so H_a accepted. Therefore, it was concluded that learning using media in the form of snakes and ladders had an effect on students' interest in learning mathematics in grade VIII at UPT SMP Negeri 24 Medan.

Discussion

The results of the study showed that the use of snake and ladder learning media had a significant effect on the increase in interest in learning mathematics of grade VIII students of SMP Negeri 24 Medan. Post-nontest data showed that the average score of the experimental class (34.03) was higher compared to the control class (30.1). The results of the independent sample t-test also showed a significance value of 0.002 < 0.05, which means that there was a significant difference between the control class and the experiment. Thus, it can be concluded that game-based learning media such as snakes and ladders are able to increase student motivation and involvement in mathematics learning.

e-ISSN 2746-5594
p-ISSN 2746-5608

Some of the factors that cause an increase in interest in learning in the experimental class include the interactive and fun aspects possessed by the snake and ladder media. This game provides a more interesting learning experience than the lecture method, so that students are more involved in learning. In addition, the game encourages students to be more active as they have to interact with their classmates in solving math questions. The use of this media also reduces student boredom because learning methods become more varied. Another factor that plays a role is visual and kinesthetic support that helps students with different learning styles in understanding the material.

This study has several advantages, including the use of quasi-experimental methods that can measure the impact of treatment more accurately. In addition, the use of questionnaire instruments with the Likert scale allows quantitative measurement of students' learning interests. In terms of application, this study provides an alternative innovative learning method for teachers to increase students' interest in learning. However, this study also has limitations, such as the research sample is only limited to one school, so the results cannot be generalized widely. External factors such as family environment and peer influence were also not taken into account in this study, even though they could also affect students' interest in learning. In addition, the limited research time makes this study not able to see the long-term impact of the use of snake and ladder learning media.

The results of this study are in line with several previous studies that discussed the effectiveness of game media in increasing students' interest in learning. Astuti (2019) found that snake and ladder games increase students' involvement in understanding mathematical concepts. Lestari and Mokhammad (2017) stated that the use of educational games in learning increases students' active participation. Hakim (2021) also mentioned that the snake and ladder game media can increase the learning motivation of junior high school students. However, this study has a difference with the research conducted by Purwanti (2021), which found that not all students respond positively to the use of game media in learning, especially for students who prefer conventional learning methods.

In terms of implications, this study makes a theoretical contribution by supporting the theory that game-based learning can increase students' motivation and interest in learning in subjects that are considered difficult such as mathematics. These findings also provide empirical evidence that snake and ladder media can be used as an interactive learning tool in the classroom. Practically, teachers can use game-based learning media such as snakes and ladders to increase students' interest in learning. Schools can consider the use of innovative media in the learning process to reduce student burnout. In addition, this research can be the basis for the development of other game-based learning media.

In this study, the categorization of learning interest (high, medium, low) was used to group students based on the results of the questionnaire measured before and after the treatment was given. Based on the results of the analysis, after the use of snake and ladder media, as many as 45% of students were included in the high category, compared to 30% before the treatment. As many as 40% of students were in the medium category, while 15% of students were still in the low category, down from 30% before the treatment. The increase in the percentage of students in the category of high learning interest can be explained by the theory of Lestari and

e-ISSN 2746-5594
p-ISSN 2746-5608

Mokhammad (2017), which states that learning interest is influenced by students' active participation, emotional involvement, and intrinsic motivation that can be strengthened through interesting learning methods. Thus, this study confirms that the use of game-based learning media such as snakes and ladders has a positive impact on students' learning interest and can be one of the effective alternative methods in teaching mathematics.

Conclusion and Suggestion

Based on the results of the research that has been conducted, it can be concluded that the use of snake and ladder learning media has a significant effect on the interest in learning mathematics of grade VIII students at UPT SMP Negeri 24 Medan. Students who participated in learning using snake and ladder media showed higher interest in learning than students who participated in learning without using the media. These findings show that game-based learning media can be an effective alternative to increase interest in learning mathematics, especially at the junior high school (SMP) level.

Based on the results of this study, it is recommended that mathematics teachers at the junior high school (SMP) level take advantage of innovative learning media, especially educational game media such as snakes and ladders, to increase students' interest in learning. The use of interactive and fun learning media can create a more conducive learning atmosphere and encourage active participation of students in the learning process. Further research is expected to develop a variety of game-based learning media that is adapted to the characteristics of other mathematical materials, both in abstract concepts and materials that require concrete visualization. In addition, further research can also expand the scope of population and samples, as well as examine the influence of similar learning media at different levels of education, so that the findings of this research can be used as a more comprehensive reference for the development of mathematics learning strategies at various levels of education.

Reference

Afifah, Nur & Sri Hartati. (2019). Pengaruh Media Permainan Ular Tangga Terhadap Motivasi Belajar Pembelajaran Matematika Kelas II SD Kemala Bhayangkari 1 Surabaya. *MUST* : *Jurnal Pendidikan Matematika, Sains dan Teknologi*. 4(2), 209-216. https://doi.org/10.30651/must.v4i2.3035

Ardi, SDK, & Desstya, A. (2025). Media pembelajaran ular tangga untuk meningkatkan motivasi belajar berhitung siswa di sekolah dasar. *Buletin Pengembangan Bahan Pembelajaran*, 5(1), 1-9. https://doi.org/10.23917/bppp.v5i1.22934

Arikunto, S. (2010). *Prosedur Penelitian: Pendekatan Praktis*. Jakarta: Rineka Cipta.

Azzahra, L., & Irawan, D. (2023). Pentingnya mengenalkan Al-Qur'an sejak dini melalui pendidikan agama Islam. *Pengertian: Jurnal Pendidikan Indonesia (PJPI)*, 1(1), 13-20. https://ejournal.lapad.id/index.php/pjpi

Darmadi. (2017). *Pengembangan Model dan Metode Pembelajaran dalam Dinamika Pembelajaran Siswa*. Yogyakarta: Deepublish.

Fauzan, H., & Anshari, K. (2024). Tinjauan pustaka: Peran pembelajaran matematika dalam membentuk karakter siswa. *JURRIPEN: Jurnal Penelitian di Bidang*

Pendidikan, 3(1), 163-175. https://doi.org/10.55606/jurripen.v3i1.2802

Fazia, P., & Darmawan, D. (2024). Pengaruh media instruksional terhadap minat belajar siswa di tingkat sekolah dasar. *Jurnal Pendidikan Dasar Islam (ISLAMENTARY)*, 3(1), 45-58. https://ejournal.alkhairat.ac.id/index.php/ISLAMENTARY/article/view/384

Hakim, A. (2021). Efektivitas Media Permainan Ular Tangga terhadap Motivasi Belajar Siswa SMP. *Jurnal Pendidikan Matematika*, 13(1), 45-52. https://doi.org/010.0000/xxxxxx-xxx-0000-0

Hamidah, N., & Suryadi, H. (2021). Analisis faktor-faktor penyebab rendahnya minat belajar matematika pada siswa SMP. *Jurnal Pendidikan Matematika Indonesia*, 2(1), 45-53. https://doi.org/10.31949/educatio.v5i2.14

Hussaidah, M., Ain, S. Q., & Yolanda, F. (2024). Pengembangan media ular tangga pada materi perkalian dan pembagian untuk siswa kelas IV SDN 182 Pekanbaru. *Didaktik: Jurnal Ilmiah PGSD FKIP Universitas Mandiri*, 10(2), 216-224. https://doi.org/10.36989/didaktik.v10i2.4038

Kairuddin;, Siregar, BH, Lobak, L., Manullang, J., Sibarani, K., & Dhuha, N. (2024). Analisis Penggunaan Media Pembelajaran dalam Materi Sistem Persamaan Linier Dua Variabel di SMA Negeri 1. *Jurnal Ilmu Narasi*, 05(4). https://ijurnal.com/1/index.php/jipn

Khotna, S., Nasution, NE, Amelia, A., & Hutagalung, LA (2025). Pengaruh kesadaran siswa akan pentingnya matematika dalam berkarir di era digital dan ekonomi berbasis pengetahuan. *Aliansi: Jurnal Hukum, Pendidikan, dan Sosial Humaniora*, 2(1), 111-118. https://doi.org/10.62383/aliansi.v2i1.673

Lestari, Karunia Eka and Mokhammad Ridwan Yudhanegara. (2017). *Research on Mathematics Education.* Bandung: Refika Aditama.

Ningrum, SS, Siregar, BH, & Panjaitan, M. (2023). Pengembangan LKPD Digital Interaktif dengan Pendekatan Matematika Realistis (PMR) untuk Meningkatkan Keterampilan Pemecahan Masalah pada Materi Aritmatika Sosial Kelas VII. Jurnal Cendekiawan: *Jurnal Pendidikan Matematika*, 7(1), 766–783. https://doi.org/10.31004/cendekia.v7i1.1838

Purwanti, L. (2021). Analisis faktor-faktor yang mempengaruhi rendahnya minat belajar matematika siswa SMP. *Jurnal Inovasi Pendidikan*, 18(2), 134-140. https://doi.org/10.58192/insdun.v2i1.484

Pramesti, AR (2023). Analisis media permainan ular tangga untuk meningkatkan keaktifan siswa. *La-Tahzan: Jurnal Pendidikan Islam*, 15(1), 61-76. https://doi.org/10.62490/latahzan.v15i1.381

Pristiwanti, D., Badariah, B., Hidayat, S., & Dewi, R. S. (2022). Definition of education. *Jurnal Pendidikan dan Konseling*, 4(6), 7911-7915. https://journal.universitaspahlawan.ac.id/index.php/jpdk

Putri, Jesika Pratiwi, dkk. (2023). Pengaruh penggunaan media ular tangga terhadap minat belajar siswa SD. *Jurnal Pendidikan*. 3(6), 1-10. http://eprints.unm.ac.id/id/eprint/34981

Rahmawati, AF (2024). Strategi untuk meningkatkan motivasi belajar siswa dalam bidang matematika melalui penggunaan media pembelajaran interaktif. *Prosiding Seminar Nasional Pendidikan Matematika dan Sains*, 4(1), 88-102. https://prosiding.ikippgribojonegoro.ac.id/index.php/FPMIPA/article/view/2601

e-ISSN 2746-5594
p-ISSN 2746-5608

Rahmawati, D., & Yulianti, S. (2020). Penggunaan media game dalam meningkatkan motivasi dan hasil belajar matematika. *Jurnal Teknologi Pendidikan*, 15(3), 178-185. https://journal.ummat.ac.id/index.php/semnaslppm/index

Sanjaya, H., Misdalina, & Suryani, I. (2023). Analisis faktor-faktor penyebab rendahnya motivasi belajar siswa pada mata pelajaran IPS siswa kelas IV SD Negeri 1 Sunggutan. *Jurnal Pendidikan*, 5(3), 7674-7682. https://doi.org/10.31004/joe.v5i3

Siringoringo, R., Asbari, M., & Margaretta, C. (2023). Strategi pembelajaran yang berbeda: Mempercepat pengembangan potensi mahasiswa. *Jurnal Sistem dan Manajemen Informasi*, 2(5), 13-16. https://doi.org/10.4444/jisma.v2i5

Sugiyono. (2015). *Metode Penelitian (Pendekatan Kuantitatif, Kualitatif dan R&D).* Kota Bandung. ALFABETA.

Sulistyorini, Y., & Sumajaya, A. S. (2024). Pengembangan media pembelajaran permainan ular tangga dalam pembelajaran literasi dan numerasi. *Jurnal Sains Ilmiah Horizon*, 3(1), 29–36. https://doi.org/10.28989/cakrawala.v1i2.2200

Yonanda, R., Putra, DA, & Sari, M. (2025). Media instruksional berbasis game dalam pelajaran matematika untuk meningkatkan motivasi belajar siswa. *Jurnal Pendidikan Matematika dan Sains*, 7(1), 112-125. https://doi.org/10.30596/jmes.v6i1.20794