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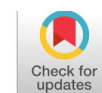
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Effectiveness of Website-Based Mathematics Learning Media with the Concept of Edutainment on Student Learning Motivation

Nasaruddin¹ , Ahmad Dhany Syaputra^{1*}, Rosdiana¹ , Irma T¹ , Dwi Risky Arifanti¹

¹Mathematics Education Study Program, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Palopo

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ABSTRACT

Learning motivation is one of the important factors that affect student involvement in mathematics learning. Abstract mathematical characteristics and less varied learning can cause students to be less interested and passive during the learning process. This study aims to analyze the effectiveness of website-based mathematics learning media with the concept of edutainment on increasing student learning motivation. The research uses a quantitative approach with a pre-test quasi experiment design and a post-test control group design. The research subjects consisted of 62 students in grade VIII, namely 32 students in grade VIII A as the experimental class and 30 students in class VIII B as the control class. Data were collected through a learning motivation questionnaire and observation sheets of student and teacher activities. The validity of the instrument based on Aiken's V was 0.86 for motivation questionnaire, 0.84 for teacher activity observation, and 0.82 for student activity observation, while the reliability was 0.76, 0.73, and 0.73, respectively. Data were analyzed descriptively and inferentially through normality, homogeneity, and independent sample t-test tests with the help of statistical software. The average motivation of the experimental class increased from 53.09% to 81.66%, while the control class increased from 56.60% to 67.07%. The activities of students and teachers during learning were in the very good category. The independent sample t-test showed $t = -12.161$, $df = 60$, and $\text{Sig. (2-tailed)} = 0.000 < 0.05$, so there was a significant difference in learning motivation between the two groups. These findings show that the integration of elements of education, entertainment, interactivity, quizzes, and games in websites can be an alternative to mathematics learning media to create a more engaging learning experience and support increased student motivation.



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Corresponding Author:

Nasaruddin,
Mathematics Education Study Program,
Faculty of Tarbiyah and Teacher Training,
Universitas Islam Negeri Palopo
Latammacelling Street, Amassangan Urban Village, Palopo City, South Sulawesi Province, 91921, Indonesia
✉ nasarudin.ih1@gmail.com

Introduction

Learning motivation is one of the important aspects of mathematics learning because it is related to students' willingness to participate in activities, try to complete assignments, and maintain involvement during the learning process (Munthe & Pasaribu, 2023). However, mathematics is still often seen as difficult by students, so some students show interest, perseverance, and participation that is not optimal. This is supported by Wahyudi et al., (2022) who found that the learning motivation of junior high school students in mathematics learning is still in the sufficient category. (Niswah & Malasari, 2023) also explained that low motivation to learn mathematics can be one of the causes of laziness in learning mathematics. In addition, Tambunan (2020) shows that mathematics teachers still face challenges in building students' interest and motivation to learn. This condition shows that increasing motivation needs to be a concern in the design of mathematics learning.

This problem was also seen in the researcher's initial observation during the Teaching Assistance activity in grade VIII of SMP Negeri 2 Palopo. Some students are still passive, have difficulty understanding basic concepts, and show limited interest when learning takes place conventionally. In statistics materials, students still have difficulties in reading, processing, and interpreting data, including in determining statistical diagrams. This condition shows that a more varied and interactive presentation of material is needed to help maintain attention, increase participation, and provide opportunities for students to be actively involved in learning. This finding is in line with Tambunan (2020) who shows that mathematics teachers face challenges in building students' interest and motivation to learn.

The use of technology-based learning media can be an alternative to overcome these problems. Websites allow materials to be presented flexibly through text, images, animations, videos, and interactive activities. The results of the meta-analysis of Samo et al. (2023) show that the use of web-based mathematics learning media has a positive influence on the learning process. Digital media can also increase interaction and provide opportunities for students to learn through various forms of representation (Donna et al., 2021; Wulandari et al., 2023). Therefore, the use of websites needs to be designed not just as a place to display materials, but as a learning environment that encourages students to interact with materials and activities.

Website-Based Learning Media

Web-based media in this study was designed using Genially and used as a forum for presenting statistical materials (See Figure 1). The media combines learning materials with videos, animations, quizzes, educational games, exercises, and evaluations so that students can move from presenting concepts to activities and feedback in a single learning environment. These characteristics are in line with the study of technology in mathematics education which emphasizes that the use of technology will be more meaningful when it supports active engagement, interaction, and feedback, rather than just replacing the presentation of printed materials (Clark et al., 2020). Studies on secondary school students also show that digital applications can support mathematics learning when combined with learning strategies that have clear pedagogical goals (Larico et al., 2026).

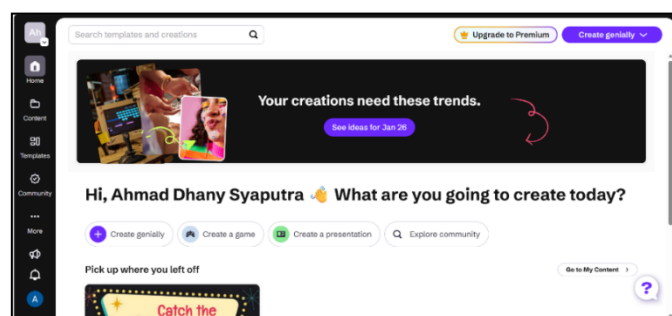


Figure 1. Display of the Main Menu of the Genially Website

In addition to technology, learning needs to pay attention to the elements of fun and engagement. The concept of edutainment combines elements of education and entertainment to create a more enjoyable learning atmosphere and encourage student participation (Hasan, 2021; Nurdin, 2021). In this study, these elements were realized through quizzes, educational games, videos, animations, exercises, and feedback. Meta-analysis showed that gamification and game-based learning can have a positive influence on motivation, although the type and design of game elements influence the outcome (Sailer & Homner, 2020; Zhang & Yu, 2022).

Previous research has shown the benefits of websites, digital technology, and edutainment, but there is still room to test the integration of the three more specifically in junior high school mathematics learning. Karyati (2023) found that learning websites can increase students' motivation to learn, while Sriyanto et al. (2022) show that the edutainment method can improve motivation and mathematics learning outcomes. Budiman et al. (2021) show the benefits of web-based mathematics media and educational games, while research by Ihza (2023) shows that digital games can increase mathematics motivation compared to conventional learning (Fadda et al., 2021). The study of technology in secondary school mathematics education also shows that the effectiveness of technology is influenced by context, intervention design, and evaluation methods (Darmanova & Abylkassymova, 2025).

Based on this description, the research gap is not only in the use of websites or games separately, but in the empirical testing of website media that deliberately integrates statistical materials, edutainment elements, interactive activities, and feedback to increase the learning motivation of junior high school students. This gap is important because the empirical evidence that directly compares motivational changes between classes that use website-edutainment media and classes without such media in statistical materials is still limited. Previous research has shown that the use of websites and educational games can support learning motivation, but their application is still widely studied separately. Research that integrates statistical materials, videos, animations, quizzes, games, exercises, and evaluations in one website media and tests their influence on the motivation to learn mathematics of junior high school students is still limited. Therefore, this study offers novelty through the integration of the edutainment-based Genially website that provides interactive learning experiences, feedback, and active involvement of students, in line with the view of constructivism (Masgumelar, 2021). Based on these gaps, this study is directed to answer three questions: (1) how changes in student learning motivation in experimental classes and control classes before and after learning; (2) how the activities of students and teachers are carried out during learning using media; and (3) whether there is a difference in learning motivation between the experimental class and the control class after the treatment.

Method

Settings

This study uses a quantitative approach with a quasi experiment method. The design used is a pre-test and post-test control group design because the study involves two groups that were given measurements before and after learning, namely the experimental class that obtained learning using a website-based mathematics learning media with the concept of edutainment and a control class that obtained learning without the media. This design was used to compare changes in learning motivation and find out the difference in results between the two groups after treatment. Measurements were carried out through a questionnaire on mathematics learning motivation before and after learning (Table 1).

Table 1. Research Design

Groups	Pretest	Treatment	Posttest
Experiment	O1	X1	O2
Control	O3	X2	O4

Description:

O1 : Pre-test on the Experiment class

O2 : Post-test on the Experiment class

O3 : Pre-test on Control class

O4 : Post-test on Control class

X1 : Treatment in the form of the use of mathematics learning media with the concept of wesbite-based edutainment

X2 : Classes that don't get treatment

Participants

The research population was all students in grade VIII of SMP Negeri 2 Palopo which amounted to 244 students in eight classes in Table 2. The sample was determined using cluster random sampling. Class VIII A consisting of 32 students was designated as an experimental class, while class VIII B consisting of 30 students was designated as a control class. The research was carried out in the even semester of the 2025/2026 school year at SMP Negeri 2 Palopo, Palopo City, South Sulawesi.

Table 2. Number of Grade VIII Students of SMPN 2 Palopo

No	Classes	Quantity
1	VIII A	32
2	VIII B	30
3	VIII C	31
4	VIII D	28
5	VIII E	31
6	VIII F	31
7	VIII G	31
8	VIII H	30
Quantity		244

Instruments

The research instrument consisted of a learning motivation questionnaire and an observation sheet of student and teacher activities. The questionnaire was used to measure learning motivation before and after learning. Motivation indicators refer to Uno (2008),

namely desire and desire to succeed, motivation and need for learning, future expectations and goals, appreciation in learning, interesting activities in learning, and a conducive learning environment (Table 3).

Table 3. Measured Learning Motivation Indicators

Indicator	Measurement Focus	Example of Instrument Statement
Desire and desire to succeed	The desire of students to achieve success in mathematics learning.	I try to get good math learning results.
Motivation and need for learning	Internal encouragement of students to participate in and complete learning activities.	I studied mathematics because I felt the need to understand the material.
Future hopes and aspirations	The belief that learning mathematics supports future goals.	I studied math to support future goals.
Rewards in learning	Students' responses to appreciation or reinforcement in learning.	I feel motivated when I receive an award or reinforcement.
Interesting learning activities	Students' interest in activities, quizzes, games, and material presentation.	Materials, quizzes, or games make me interested in learning.
Conducive learning environment	Comfort and environmental support during the learning process.	I feel comfortable and can learn well during the lessons.

The observation sheet was used to assess the implementation of the five phases of learning, including the delivery of student goals and preparation, demonstration of knowledge and skills, training guidance, checking understanding and giving feedback, as well as follow-up training and implementation. The aspects observed in students included attention, participation, involvement in the use of media, work on exercises, response to feedback, and involvement in follow-up activities; while for teachers it included goal delivery, demonstration, guidance, understanding checking, feedback, and directing follow-up activities (Table 4).

Table 4. Observed Aspects of Student and Teacher Activities

Phase	Observed Activities in Students	Activities Observed in Teachers
Convey goals and prepare students	Pay attention to goals, readiness to follow learning, and follow initial directions.	Convey goals, prepare students, and direct learning readiness.
Demonstrate knowledge and skills	Pay attention to demonstrations and follow the use of media.	Explain the material and demonstrate the use of media.
Guiding training	Work on exercises and participate in media activities.	Guiding exercises and assisting students during activities.
Check understanding and give feedback	Answer questions/quizzes, check understanding, and respond to feedback.	Check understanding and provide feedback.
Advanced training and implementation	Take follow-up exercises and apply the material learned.	Provide follow-up training opportunities and direct implementation.

The validity of the instrument is tested using Aiken's V, while the reliability is calculated to ensure the consistency of the instrument in Table 5.

Table 5. Instrument Validity and Reliability Test Results

Instruments	Aiken's V	Category: Validitas	Reliability	Remarks
Learning motivation questionnaire	0,86	Very valid	0,76	Reliabel

Instruments	Aiken's V	Category: Validitas	Reliability	Remarks
Observation of teacher activities	0,84	Very valid	0,73	Reliabel
Observation of student activities	0,82	Very valid	0,73	Reliabel

All Aiken's V values are in the very valid category and the reliability value indicates the instrument can be used in data collection.

Website-Based Learning

Learning in the experimental class was carried out for three meetings using the Genially website as the main medium for presenting statistical materials in Table 6. Media was used to integrate the presentation of materials, videos, animations, quizzes, educational games, exercises, and evaluations. Statistical materials were presented interactively with video and animation support to help with concept understanding, while quizzes, educational games, and exercises were used to involve students in learning activities. Furthermore, evaluation was used to measure students' understanding after participating in learning. The learning flow follows five phases that are also the basis for observation, namely the delivery of student goals and preparation; demonstration of knowledge and skills; training guidance; comprehension checking and giving feedback; and follow-up and application training. Overall, the website functions as part of the classroom learning activities, while the teacher continues to direct, guide, check understanding, and provide feedback.

Table 6. Implementation of Learning Using the Website

Components	Implementation in Learning
Duration	Three meetings.
Material	Statistics.
Media	Genially website with materials, videos, animations, quizzes, educational games, exercises, and evaluations.
Plot	Objectives and preparation → demonstrations → guided training → checking understanding and feedback → further training and implementation.
The role of teachers	Directs media usage, guides activities, checks understanding, and provides feedback.
Role of students	Access materials, participate in interactive activities, work on exercises, respond to feedback, and take evaluations.

Data Collection

Data collection was carried out through three main stages. The first stage was the provision of pre-tests in the form of learning motivation questionnaires to the experimental class and the control class to find out the initial conditions. The second stage was the implementation of learning during three meetings. In the experimental class, statistical material was presented through the Genially website which contained materials, videos, animations, quizzes, educational games, exercises, and evaluations. In the control class, learning was carried out without using website-based edutainment media. During the learning of the experimental class, the observer filled out an observation sheet of student and teacher activities. The third stage was the administration of post-tests with the same motivational instrument to determine changes in learning motivation after learning. The flow is presented in Figure 2.

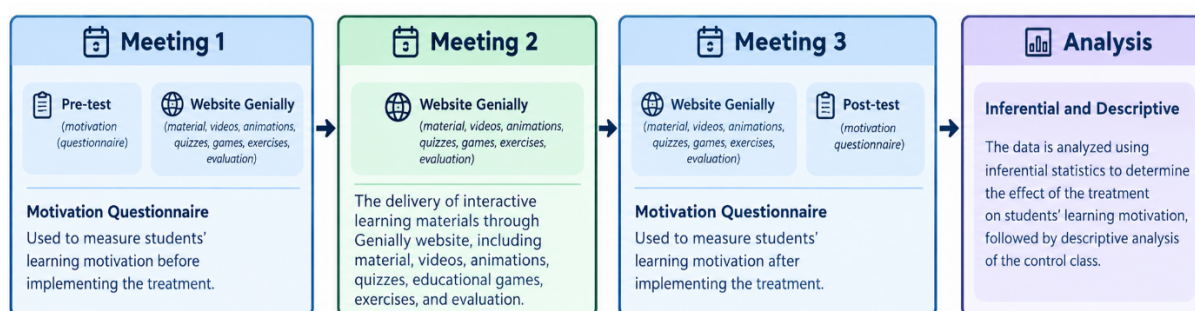


Figure 2. Research and data collection flow

Analysis

Data were analyzed using descriptive and inferential statistics. Descriptive statistics were used to determine the average, standard deviation, minimum score, maximum score, percentage, and category of learning motivation as well as the percentage of student and teacher activity. The data from the observation of teacher student activities was analyzed using the following data percentage formula (Retnawati, 2026):

$$\text{Student and Teacher Activities} = \frac{\text{the score obtained}}{\text{maximum score}} \times 100\%$$

The assessment criteria for student and teacher activities can be seen in the following Table 7

Table 7. Interpretation of Teacher Activities

Percentage of Teacher Activity	Category
0% ≤ Student and Teacher Activity 35% ≤	Very Less
35% ≤ Student and Teacher Activities 55% ≤	Not Good
55% ≤ Student and Teacher Activity 65% ≤	Enough
65% ≤ Student and Teacher Activity 85% ≤	Good
85% ≤ Student and Teacher Activity 100% ≤	Excellent

The data of the student mathematics learning motivation questionnaire was carried out using a scoring form to determine the scoring of all items with the weight of the answer score as follows (Sugiyono, 2014) in Table 8

Table 8. Guidelines for Item Scoring on the Student Learning Motivation Questionnaire

Criteria	Shoes	
	Positive Statement	Negative Statements
Strongly agree	5	1
Setuju	4	2
Disagree	3	3
Disagree	2	4
Strongly Disagree	1	5

The management of data obtained through Microsoft excel uses the following formula (Raupu, 2023):

$$p = \frac{f}{N} \times 100\%$$

Description:

Q : The number of presenters

f : Observation score obtained

N : Ideal score

The criteria for assessing student and teacher activities can be seen in the following [Table 9](#) (Lusiati, 2025):

Table 9. Interpretation of Student Learning Motivation Questionnaire

Presentase	Category
81% – 100%	Very High
61% – 80%	Height
41% – 60%	Medium
21% – 40%	Low
0% – 20%	Very Low

Inferential statistical analysis is used to test the research hypothesis using a t-test on the same data. However, before that, a normality test is carried out first. The normality test is a basic test conducted initially for hypothesis testing purposes. In this study, statistical testing is assisted by statistical software. The homogeneity test is carried out to determine whether the data studied have homogeneous variance or not; if the two classes have the same variance, the group is said to be homogeneous. After testing the normality and homogeneity of the variances, the t-test statistics were then calculated. In this study, hypothesis testing was carried out using an independent sample t-test assisted by statistical software.

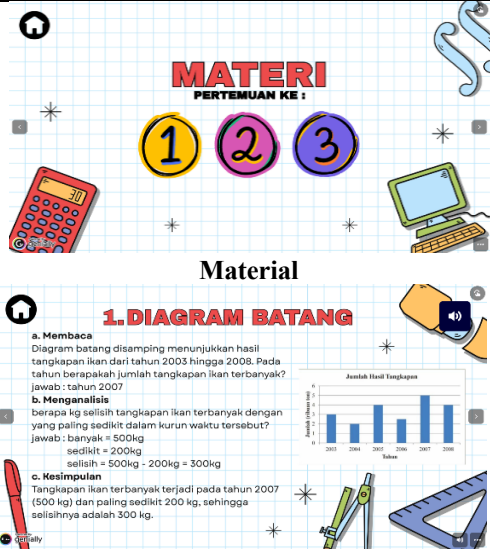
Results

Implementation of Website-Based Learning

Learning in the experimental class was carried out for three meetings using mathematics learning media with the concept of website-based edutainment through Genially. At the beginning of the lesson, the teacher conveyed the learning objectives and directed the students to access the website that had been prepared. Furthermore, students learned statistical material presented through text, videos, animations, and interactive displays. After learning the material, students worked on quizzes, educational games, and practice questions available on the website. The teacher guided the students during the activity, provided explanations of the material that was not understood, and provided feedback on the students' answers. At the end of the lesson, students do evaluations and follow-up exercises to find out their understanding of the material that has been learned. Overall, the website is used directly in the learning process as a medium for delivering material as well as a means of student activities and exercises (See [Table 10](#)).

Table 10. Display of Learning Process and Learning Media of Mathematics Genially

Cover	Menu View
	
Material and Game Display	Learning Objectives



Material



Learning Videos



Meeting 1



Learning Process



Game

Meeting 2



Learning Process



Game

Meeting 3



Learning Process



Game

Implementation of Student Activities

The results of the observation of student activities showed that the application of web-based edutainment media could be carried out very well. Observations were carried out over three meetings and included five learning phases. The percentage of student activity in each

phase was above 95%, indicating that students generally followed the learning stages, participated in the use of media, participated in exercises, and responded to the feedback given.

Table 11. Results of Student Activity Observation Sheet

No	Student Activities	Meetings			Average	Average Percentage	Note
		1	2	3			
1	Phase 1: Convey goals and prepare students	35	34	35	35	99,05%	SB
2	Phase 2: Demonstrate knowledge and skills	22	24	23	23	95,8%	SB
3	Phase 3 : Guiding the training	34	34	34	34	100%	SB
4	Phase 4: Check understanding and give feedback	22	23	23	23	98,5%	SB
5	Phase 5: Provide opportunities for further training and implementation	22	23	23	23	98,5%	SB

The third phase obtained the highest percentage, which was 100%, which indicates that the training guidance activities can be fully followed by students. The second phase obtained a percentage of 95.8% and became the phase with the lowest percentage, but it was still included in the very good category. The high involvement in all phases shows that media can be used as part of the learning flow, not just as a complement to the delivery of material.

Implementation of Teacher Activities

Teachers' activities were also in the very good category in all phases. The highest percentage was found in the fifth phase at 95.8%, while the lowest percentage was found in the fourth phase at 87.5%. Table 12 show that teachers are able to carry out the learning stages, direct students in the use of media, provide guidance, and provide feedback on the activities carried out by students.

Table 12. Results of Teacher Activity Observation Sheet

No	Student Activities	Meetings			Average	Average Percentage	Note
		1	2	3			
1	Phase 1: Convey goals and prepare students	12	11	10	11	91,7%	SB
2	Phase 2: Demonstrate knowledge and skills	7	8	7	7	91,7%	SB
3	Phase 3 : Guiding the training	10	11	12	11	91,7%	SB
4	Phase 4: Check understanding and give feedback	6	7	8	7	87,5%	SB
5	Phase 5: Provide opportunities for further training and implementation	7	8	8	8	95,8%	SB

Motivation to Study Experimental Classes

In the experimental class, the average learning motivation before treatment was in the medium category, which was 53.09%. After learning using website-based edutainment media, the average increased to 81.66% and was in the very high category. Based on the category distribution, the initial condition was dominated by the medium category, while the final condition was dominated by the high and very high categories in Table 13.

Table 13. Descriptive Statistics of Experimental Class Learning Motivation

Statistics	Pre-test	Post-test
Number of samples	32	32
Minimum score	42	69
Maximum value	64	90
Average	53,09	81,66
Standard deviation	6,397	4,190
Varians	40,926	24,104

The change in distribution (Table 14) showed a substantive shift in motivation. Before the treatment, 27 students were in the medium category and 5 students were in the high category. After the use of media, there were no students in the medium or lower category; 15 students were in the high category and 17 students were in the very high category. Thus, the increase was not only seen in the average score, but also in the shift in the category of most students.

Table 14. Distribution of Experimental Class Motivation Categories

Interval	Category	Pre-test f	Pre-test %	Post-test f	Post-test %
0–20	Very Low	0	0%	0	0%
21–40	Low	0	0%	0	0%
41–60	Medium	27	84%	0	0%
61–80	Height	5	16%	15	47%
81–100	Very High	0	0%	17	53%
Quantity	—	32	100%	32	100%

Control Class Learning Motivation

The control class also experienced an increase in motivation, but the increase was lower than that of the experimental class (Table 15). The average pre-test of 56.60% was in the medium category, then increased to 67.07% in the post-test with the high category.

Table 15. Descriptive Statistics of Learning Motivation in Control Classes

Statistics	Pre-test	Post-test
Number of samples	30	30
Minimum score	47	55
Maximum value	63	75
Average	56,60	67,07
Standard deviation	4,628	4,510
Varians	21,421	20,340

In the control class, the number of students in the medium category decreased from 22 students to 1 student, while the high category increased from 8 students to 29 students (Table 16). Although learning without edutainment media also increased motivation, no students reached the very high category. This is one of the important differences compared to the experimental class.

Table 16. Distribution of Control Class Motivation Categories

Shoes	Category	Pre-test f	Pre-test %	Post-test f	Post-test %
0–20	Very Low	0	0%	0	0%
21–40	Low	0	0%	0	0%
41–60	Medium	22	73%	1	3%
61–80	Height	8	27%	29	97%
81–100	Very High	0	0%	0	0%
Quantity	—	30	100%	30	100%

Comparison of Motivation Enhancement

Descriptively, the experimental class increased by 28.57 points, while the control class increased by 10.47 points (See Table 17). The difference in the increase showed that the use of web-based edutainment media provided a greater change in motivation than learning without the media. Interestingly, the initial condition of the control class was slightly higher than that of the experimental class, but after treatment the experimental class showed a much higher average post-test.

Table 17. Comparison of Average Learning Motivation

Groups	Pre-test (%)	Post-test (%)	Upgrades (points)	Category Post-test
Eksperimen	53,09	81,66	28,57	Very High
Control	56,60	67,07	10,47	Height

Prerequisite Test and Hypothesis Test

The overall significance value in the normality test was greater than 0.05. Thus, the research data met the normality assumption and could be continued on parametric testing (See Table 18).

Table 18. Normality Test Results

Data	Statistic	df	Say.	Verdict
Pre-test experiment	0,931	30	0,052	Normal
Post-test experiment	0,974	30	0,656	Normal
Pre-test control	0,949	32	0,134	Normal
Post-test control	0,966	32	0,399	Normal

The significance value of the Based on Mean of $0.427 > 0.05$ indicates that the variance of the data of the two groups is homogeneous (Table 19). Therefore, the homogeneity requirement is met.

Table 19. Homogeneity Test Results

Testing	Levene Statistic	df1	df2	Say.	Verdict
Based on Mean	0,640	1	60	0,427	Homogeneous
Based on Median	0,647	1	60	0,424	Homogeneous
Based on Median and adjusted df	0,647	1	59,920	0,424	Homogeneous
Based on trimmed mean	0,623	1	60	0,433	Homogeneous

The results of the independent sample t-test on the equal variances assumed line showed a value of $t = -12.161$ with $df = 60$ and $\text{Sig. (2-tailed)} = 0.000$ (Table 20). The significance value was less than 0.05 so that H_0 was rejected and H_1 was accepted. Thus, there was a significant difference in learning motivation between students who studied using web-based edutainment media and students who studied without such media. Because the average post-test of the experimental class was higher than that of the control class, the difference showed that the web-based edutainment media was effective in increasing students' motivation to learn mathematics.

Table 20. Independent Sample T-Test Results

Model	F	Sig. Levene	t	df	Sig. (2-tailed)
Equal variances assumed	0,640	0,427	-12,161	60	0,000

Model	F	Sig. Levene	t	df	Sig. (2-tailed)
Equal variances not assumed	—	—	-12,196	59,978	0,000

Discussion

The increase in motivation in the control class showed that conventional learning can still provide a stimulus to student motivation. Teacher explanations, exercises, questions, guidance, and feedback can help students maintain engagement in learning. These findings are in accordance with [Uno \(2008\)](#) motivational indicators, especially motivation and needs in learning as well as a conducive learning environment. However, the increase in smaller control classes shows that the available learning stimuli do not provide an interactive experience as much as that obtained by the experimental class.

Motivation to learn in experimental classes increased higher after the use of website-based media with the concept of edutainment. The media not only presents material, but also provides videos, animations, quizzes, games, exercises, and feedback. These characteristics are related to indicators of interesting activities in learning because students gain a more varied learning experience. These results support [Karyati \(2023\)](#) who found that learning websites can increase student learning motivation and [Ihza \(2023\)](#) who showed an increase in motivation through a web-based learning management system platform.

The effectiveness of media can also be understood through the concept of edutainment. The combination of educational and entertainment elements makes learning not only oriented to the delivery of material, but also to creating a fun learning atmosphere. This is in line with [Salsabila et al. \(2025\)](#) who show that the application of edutainment is related to student learning motivation. [Sriyanto et al. \(2022\)](#) also found that the edutainment method can increase motivation and mathematics learning outcomes. Thus, the findings of this study strengthen the results of previous research by showing the application of edutainment in the form of interactive website media in junior high school students and statistical materials.

From the perspective of constructivism, media provides opportunities for students to build understanding through hands-on activities, try out answers, receive feedback, and improve their understanding. Students not only receive information from teachers, but interact with available digital materials and activities. This is in line with [Masgumelar \(2021\)](#) who emphasizes that constructivistic learning provides space for students to build knowledge through active experiences and engagement. Game and quiz features also provide a success experience that can strengthen students' interest in continuing learning activities.

The significant difference in motivation between the two groups, indicated by a significance value of 0.000, reinforces that the integration of websites and edutainment has contributed to increasing learning motivation. These findings are in line with the research of [Budiman et al. \(2021\)](#) regarding the use of web-based mathematics media and educational games, as well as the research of [Lailiyah and Wadud \(2024\)](#) which shows that Genially-based media can support student involvement in mathematics learning. The novelty of this research lies in the combination of statistical material, Genially media, and edutainment elements in one learning experience specifically aimed at increasing the motivation to learn mathematics of grade VIII students.

However, the effectiveness of media needs to be understood in the context of conducting research. The use of websites requires adequate devices and internet connections, while research is conducted in a relatively limited time so the long-term impact cannot be known. Subsequent research can test media on the number of schools, longer duration of treatment, and other variables such as learning outcomes, critical thinking skills, or mathematical literacy.

Implications of the Findings

The use of mathematics learning media with the concept of website-based edutainment can provide several benefits in the learning process. This media can increase students' learning motivation through the combination of materials with elements of games, quizzes, videos, and animations that create a more interesting learning atmosphere. In addition, the presentation of material visually and interactively can help students understand mathematical concepts more easily and provide a more concrete learning experience. Interactive features on the website also encourage students to learn independently and actively through activities to access materials, do exercises, try quizzes, and get feedback. Therefore, website-based media can be an alternative, interesting, interactive, and fun learning media for teachers and students and support more varied learning and not only centered on teacher explanations.

Conclusion

Website-based mathematics learning media with the concept of edutainment has been proven to be effective in increasing the learning motivation of grade VIII students of SMP Negeri 2 Palopo. The increase in motivation in the experimental class was greater than in the control class, with an average change from 53.09% to 81.66%, while the control class increased from 56.60% to 67.07%. All stages of learning using media were also carried out in the very good category, both based on student activities and teacher activities. The results of the independent sample t-test showed a significant difference in learning motivation between the two groups with a significance value of $0.000 < 0.05$. These findings show that the integration of materials, visuals, videos, quizzes, games, exercises, and feedback in the website can be an alternative to create more interesting mathematics learning and support student motivation. The limitations of this study include limited implementation time, dependence on devices and internet connections, as well as the scope of research that only involves grade VIII students in statistical materials and learning motivation variables. Further research is suggested to apply media for a longer period of time, involving more diverse subjects and materials, and test its influence on other variables such as learning outcomes, critical thinking skills, and learning independence. The development of features that can support the use of media in less stable internet connection conditions is also recommended.

Conflict of Interest

The author states that there is no conflict of interest related to the implementation of research and writing this article.

Auhor Contributions

N. conceptualized the research ideas presented and collected data. The other four authors (A.D.S., R., I.T., and D.R.A.) actively contributed to the development of theory, methodology, organization and analysis of data, discussion of results, and approval of the final version of the work. All authors stated that they had read and approved the final version of this manuscript. The percentage of contributions in the conceptualization, drafting, and revision of this article is as follows: N.: 50%, . A.D.S.: 20%, R.: 10%, I.T.: 10%, and D.R.A.: 10%..

Data Availability Statement

Data supporting the results of this study are available from the corresponding authors upon reasonable request.

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Authors Biography



Nasaruddin, M.Si. is a lecturer and researcher at the Mathematics Education Study Program, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Palopo, South Sulawesi, Indonesia.
✉ nasarudin.ih1@gmail.com

	Ahmad Dhany Syaputra is a student and researcher at the Mathematics Education Study Program, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Palopo, South Sulawesi, Indonesia. ✉ 2202040020@uinpalopo.ac.id
	Rosdiana, is a lecturer and researcher at the Mathematics Education Study Program, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Palopo, South Sulawesi, Indonesia. ✉ rosdiana@uinpalopo.ac.id
	Irma T is a lecturer and researcher at the Mathematics Education Study Program, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Palopo, South Sulawesi, Indonesia. ✉ Irma@uinpalopo.ac.id
	Dwi Risky Arifanti is a lecturer and researcher at the Mathematics Education Study Program, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Palopo, South Sulawesi, Indonesia. ✉ dwi_risky_arifanti@uinpalopo.ac.id