

The Role of Gamified Learning Media in Enhancing Students' Motivation at State Madrasah Tsanawiyah

Dwi Novita*

Universitas Islam Sumatera Utara

Email: novitadwi19@gmail.com

Abstract

This study aims to examine the effect of using gamification-based learning media on student learning motivation at Madrasah Tsanawiyah Negeri 3 Simalungun. This research uses a quantitative approach. The sample amounted to 35 students who were purposively selected. Data were collected through a Likert scale questionnaire that had been tested with the help of SPSS, including validity, reliability, normality, homogeneity, T-test, F-test, and the coefficient of determination. The results showed that the use of gamification media has a significant influence on student learning motivation, with a coefficient of determination (R^2) of 0.522. This means that 52.2% of learning motivation variables can be explained by the use of gamification media. This finding confirms that gamification is an effective learning strategy in increasing student engagement and motivation.

Keywords: *Learning Media; Gamification; Learning Motivation*

Abstrak: Penelitian ini bertujuan untuk mengkaji pengaruh penggunaan media pembelajaran berbasis gamifikasi terhadap motivasi belajar siswa di Madrasah Tsanawiyah Negeri 3 Simalungun. Penelitian ini menggunakan pendekatan kuantitatif. Sampel berjumlah 35 siswa yang dipilih secara purposive. Data dikumpulkan melalui kuesioner skala Likert yang telah diuji dengan bantuan SPSS, meliputi uji validitas, reliabilitas, normalitas, homogenitas, uji-T, uji-F, dan koefisien determinasi. Hasil penelitian menunjukkan bahwa penggunaan media gamifikasi memiliki pengaruh yang signifikan terhadap motivasi belajar siswa, dengan nilai koefisien determinasi (R^2) sebesar 0,522. Ini berarti 52,2% variabel motivasi belajar dapat dijelaskan oleh penggunaan media gamifikasi. Temuan ini menegaskan bahwa gamifikasi merupakan strategi pembelajaran yang efektif dalam meningkatkan keterlibatan dan motivasi belajar siswa.

Kata Kunci: *Media Pembelajaran; Gamifikasi; Motivasi Belajar*

Introduction

Education in the 21st century demands adaptive, innovative learning that can adapt to the characteristics of the digital generation. In this context, student learning motivation is one of the factors that determine the success of the educational process (Hidayah et al., 2025). Motivation not only plays a role in increasing students' interest in the subject matter, but also encourages their active involvement in the learning process. Therefore, learning approaches that are interesting, fun, and in line with the world of today's students are needed to support the achievement of optimal learning objectives (Lutfi et al., 2023).

One of the rapidly growing approaches in the world of education is the use of gamification-based learning media (Lutfi et al., 2023). Gamification is the application of game elements in non-game contexts such as education, with the aim of increasing user participation, focus, and motivation. Elements such as points, levels, badges, leaderboards, and challenges are used to create a more interactive and competitive learning experience. This concept has been proven in various studies to increase students' enthusiasm and learning discipline, especially at the primary and secondary education levels (Satria & Herumurti, 2021).

In the Madrasah Tsanawiyah environment, the application of gamification learning media is a strategic opportunity to strengthen students' interest and motivation to learn subjects, both general and religious. Madrasah students, who often face the burden of dual curriculum (general and early), need a learning approach that is able to combine educational values and fun learning experiences. The use of gamification in learning is not only pedagogically relevant, but also in accordance with the characteristics of students who are already very familiar with technology and digital devices.

A number of previous studies have shown that gamification has a positive impact on students' motivation to learn. Huang and Hew (2023) through their meta-analysis concluded that gamification elements such as points, challenges, and leaderboards can increase intrinsic motivation, especially in short-term learning. A systematic study by Zhang (2022) also underscores the importance of gamification design that aligns with pedagogical goals to generate significant impact. Meanwhile, research by Almeida et al. (2023) highlights that without proper planning, gamification can actually cause the opposite effect, such as demotivation or cognitive fatigue. In Indonesia, contextual research related to the implementation of gamification in madrasahs is still limited, so a more specific study is needed to understand the effectiveness of gamification media on student learning motivation in the Madrasah Tsanawiyah environment.

This study aims to analyze the role of gamified learning media on student learning motivation in Madrasah Tsanawiyah. The focus of this study is not only on the use of the media itself, but also on its impact on the dimensions of learning motivation, both intrinsic and extrinsic. With this approach, it is hoped that research can make a practical contribution to

the development of innovative learning strategies in madrasas and become the basis for making educational policies that are more responsive to the needs of students in the digital era.

Method

This study is a quantitative research with a correlational descriptive approach that aims to determine the influence of gamification-based learning media on student learning motivation at Madrasah Tsanawiyah Negeri 3 Simalungun. The sample in this study amounted to 35 students who were selected purposively, taking into account their experience in participating in learning using gamification media. Data collection was carried out through the distribution of closed questionnaires compiled based on learning motivation indicators, using a 5-point Likert scale. The instruments used are first tested for validity and reliability to meet scientific measurement standards.

The test results are carried out by presenting a validity test, a reliability test. Furthermore, the data were analyzed through the normality test and the variance homogeneity test. To test the influence of gamification media on students' learning motivation, a simple linear regression analysis was performed. The results of the t-test showed that gamification media had a significant effect on learning motivation. The F-test also produces a significance value of 0.000 which means the regression model is overall significant. Meanwhile, the value of the determination coefficient (R^2) indicates that the variation in students' learning motivation can be explained by the use of gamified learning media, while the rest is influenced by other variables outside the model. These findings reinforce that gamification plays an important role in positively shaping students' motivation to learn.

Results and Discussion

This test is carried out to test the validity of each statement item in measuring its variables. The validity test in this study was carried out by correlating the score of each item statement addressed to the respondents with the total score for all items. The correlation technique used to test the validity of the statement items in this study is the Pearson Product Moment correlation. If the value of the correlation coefficient of the item under test is greater than r-table 0.334. Therefore, it can be concluded that the statement item is a valid construct. The results of the questionnaire validity test for the variables studied are presented in the following table:

Table 1. Variable Validity Test Results (X)

Variable X	<i>rhitung</i>	<i>rTabel</i> 5% (35)	Sig	Information
X1	0,631	0,334	0,001	Valid
X2	0,388	0,334	0,021	Valid
X3	0,522	0,334	0,001	Valid
X4	0,483	0,334	0,003	Valid

X5	0,597	0,334	0,001	Valid
X6	0,640	0,334	0,001	Valid
X7	0,536	0,334	0,001	Valid
X8	0,648	0,334	0,001	Valid
X9	0,556	0,334	0,001	Valid
X10	0,561	0,334	0,001	Valid

Source: Processing Results with SPSS version.23

Table 2. Validity Test Results Variable (Y)

Variable Y	<i>r</i> hitung	<i>r</i> Tabel 5% (35)	Sig	Information
Y1	0,608	0,334	0,001	Valid
Y2	0,545	0,334	0,001	Valid
Y3	0,564	0,334	0,001	Valid
Y4	0,542	0,334	0,001	Valid
Y5	0,589	0,334	0,001	Valid
Y6	0,606	0,334	0,001	Valid
Y7	0,521	0,334	0,001	Valid
Y8	0,516	0,334	0,002	Valid
Y9	0,605	0,334	0,001	Valid
Y10	0,509	0,334	0,002	Valid

Source: Processing Results with SPSS version.23

From the results of the validity test in the two tables above, it can be seen that all statement items have a validity coefficient greater than r-table 0.334. So that these items are suitable for use as a measuring tool in research.

Instrument Reliability Test

Table 3. Variable Reality Test Results (X)

Reliability Statistics	
Cronbach's Alpha	N of Items
.749	10

Based on the results of the variable (X) realism test in table 24 above, a considerable Cronbach's Alpha value was obtained, namely 0.749 which is in the high reality category (located in the range of 0.70 – 0.90). Therefore, it can be interpreted that the concept of measuring self-efficacy variables used in this study is reliable.

Table 4. Variable Reality Test Results (Y)

Reliability Statistics	
Cronbach's Alpha	N of Items
.753	10

Based on the results of the variable (X) realism test in table 24 above, a considerable Cronbach's Alpha value was obtained, namely 0.753

which is in the high reality category (located in the range of 0.70 – 0.90). Therefore, it can be interpreted that the concept of measuring self-efficacy variables used in this study is reliable.

Table 5. Results of the Feasibility Test of Research Variables (X) and (Y)

Variable	Reliability Coefficient	r-table	Information
X	0,749	0,600	Reliabel
Y	0,753	0,600	Reliabel

Source : Processing Results with SPSS version.23

The reliability value of the statement items on the questionnaire of each variable being studied is greater than 0.60 This result shows that the statement items on the questionnaire are reliable to measure the variables.

Normality Test

Table 6. Normality Test Results
One-Sample Kolmogorov-Smirnov Test

N		30
Normal Parameters ^a ,b	Mean	.0000000
	Hours of deviation	1.90368408
Most Extreme Differences	Absolute	.136
	Positive	.081
	Negative	-.136
Test Statistic		.136
Asymp. Sig. (2-taild) ^c		.164

Based on the results of the normality test, it is known that the significance value is $0.164 > 0.05$, so it can be concluded that the residual value is normally distributed .

Linearity Test

Table 7. Linearity Test Results
ANOVA Table

Sum of Squares				Df	Mean Square	F	Sig.
Var	Between	(Combined)	32.617	9	3.624	.959	.500
Y	Groups	Linearity	3.070	1	3.070	.813	.378
Var		Deviation	29.546	8	3.693	.978	.481
X		from Linearity					
	Within Groups		75.550	20	3.778		
	Total		108.167	29			

Based on the results of the linearity test, it is known that the value of Sig. Deviation From Linearity > Alpha ($0.481 > 0.05$). Then it can be concluded that Variable X and variable Y are linear.

Homogeneity Test

Table 8. Homogeneity Test Results
Tests of Homogeneity of Variances

Tests of Homogeneity of Variances					
Levene Statistic			df1	df2	Sig.
Motivation	Based on Mean	2.368	6	20	.068
	Based on Median	1.072	6	20	.412
	Based on Median and with adjusted df	1.072	6	6.934	.458
	Based on trimmed mean	2.059	6	20	.105

Based on the test above, it shows that the test has significance ($0.105 > 0.05$). So it can be said that the variants of two or more population groups of this study data are the same (homogeneous)

T-test

Table 9. T Test Results
Coefficients^a

Unstandardized Coefficients			Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	56.914	3.038		18.733	<.001
X1	-.373	.067	-.723	-5.531	<.001

a. Dependent Variable: VAR and

Based on the SPSS output above, it is known that the t-calculation value of variable X is -5.531. Because the t-value is calculated $-5.531 \leq$ the t-table is 2.0484. so that H_0 was rejected, meaning that there was no influence on the use of gamification learning media

F-Test.

Table 10. F-Test Results
ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	56.473	1	56.473	30.589	.000b
	Residual	51.693	28	1.846		
	Total	108.167	29			

- 1. Dependent Variable: VAR and
- 2. Predictors: (Constant), X1

Based on the SPSS output above, it is known that the F-calculation value is 30.589. Because the F-value is calculated at $30.589 \leq F\text{-table}$ is 4.18. Therefore, as the basis for decision-making in the F-test, it can be concluded that H_0 is accepted or in other words, variable X simultaneously affects variable Y.

Coefficient Determination Test

Table 11. Coefficient Determination Test
Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.723a	.522	.505		1.359

a. Predictors: (Constant), X1

Based on the SPSS output table "Model Summary" above, it is known that the value of the determination coefficient of R square is 0.522. The value of R square 0.522 comes from the squaring of the value of the correlation coefficient or "R", which is $0.723 \times 0.723 = 0.522$. The magnitude of the determination coefficient (R square) is 0.522 or equal to 52.2%. This number means that variable X simultaneously (together) affects variable (Y) by 52.2%. While the rest ($100\% - 52.2\% = 47.8\%$) were influenced by other variables outside of this regression equation or variables that were not studied.

The results of the above analysis explain that there is a contribution to the use of gamification learning media in increasing the motivation to learn noble morals by 0.522 or equivalent to 52.2% which shows moderate results. Therefore, the results show that there is a significant correlation coefficient between the use of learning media and increasing learning motivation.

Discussions

Based on the results of the tests that have been carried out, it can be seen that the use of gamification-based learning media has a significant influence on increasing students' motivation to learn, especially in the aspect of noble morals. The determination coefficient value of 52.2% indicates that more than half of the variation in learning motivation can be explained by the use of gamification media. This indicates that interactive, competitive, and fun learning strategies can stimulate students' interest and involvement in a deeper way in the learning process.

These findings are in line with research (Zhang & Yu, 2022) that states that gamification has a positive impact on students' intrinsic motivation, especially when elements such as points, challenges, and rewards are appropriately integrated into learning activities. Another study by (Li et al., 2024) also supports these results by emphasizing that the use of gamification in the context of learning encourages students to be more

focused and enthusiastic in completing academic tasks. In addition, in the local context, a study by (lim Nurhasanah et al., 2025) shows that madrasah students tend to respond positively to the gamification approach, as it brings them closer to technology while fostering a competitive spirit of learning.

Thus, it can be affirmed that gamification is not only relevant in the context of general learning, but also effectively applied in religious-based educational institutions such as madrasahs. The implication of this result is the importance of teacher training in designing and implementing gamification-based learning media that is in accordance with the characteristics of madrasah students. Technology support, school policies, and strengthening digital pedagogy are important factors so that this innovation can be sustainable and have a maximum impact on the formation of students' motivation and character.

Conclusions

Based on the results of data analysis, a determination coefficient value (R^2) of 0.522 was obtained which showed that the use of gamified learning media contributed 52.2% to the increase of students' learning motivation, especially in the aspect of noble morals. This value is derived from the square of the value of the correlation coefficient ($R = 0.723$), which indicates the existence of a positive and strong relationship between the independent variable and the bound variable. Thus, it can be concluded that gamification media plays a significant role in shaping students' learning motivation while the remaining 47.8% is influenced by other factors outside of this study.

The implications of these findings show that the integration of gamification media in the learning process is not only able to increase student involvement, but also contributes to character formation, especially noble morals. Therefore, teachers and madrasah managers need to consider the systematic and integrated use of gamification media in the curriculum, as an innovative strategy to encourage motivation and a more effective and enjoyable learning quality.

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