LITERACY : International Scientific Journals of Social, Education, Humanities

E-ISSN: 2829-3649
P-ISSN: 2829-3908

Research Article

The Influence of a Digital-Based Curriculum on Learning Motivation (A Case Study of Driving Schools in the Papua Pegunungan Province)

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Abstract: The study was conducted in Papua Mountains Province, faces unique challenges in implementing a digital-based curriculum. Geographical factors and limited access to technological infrastructure are important aspects influencing the effectiveness of implementing a digital learning system. The research was a quantitative research, and the research design was a causal research design used to prove the relationship between cause and effect of several variables. Causal research usually uses the ex-post facto method, namely by controlling independent variables that will affect dependent variables in planned situations. The analysis tool used is SPSS 2025 with an ordinal measurement scale of 1-5. With a sample of 30. The results of the hypothesis test using the t-test, obtained a t-count value of 21.273 with a significance value of 0.000. So it can be concluded that the effect of implementing a digital-based curriculum has a positive and significant effect on learning motivation.

Keywords: Digital-Based Learning, Learning Motivation, Curriculum

1. Introduction

In the digital age, educational transformation has become a necessity to improve the quality of learning. Digital-based curricula have emerged as an innovative approach aimed at boosting students' learning motivation by providing more flexible access to learning materials and more engaging interactive methods (Herlina Rusdi, et al., 2025). Previous research indicates that the use of technology in education can enhance student engagement and the effectiveness of the learning process (Efvinggo Fasya Jaya, 2022). With a digital-based curriculum, students are expected to be more active in developing their understanding through various available digital resources (Breien, F. S., 2021).

Received: March 10, 2025
Revised: March 22, 2025
Accepted: April 20, 2025
Published: April 30, 2025

In the digital era, educational transformation has become a necessity to enhance the quality of learning. A digital-based curriculum has emerged as an innovative approach aimed at increasing students' learning motivation by providing more flexible access to learning materials and more engaging interactive methods (Herlina Rusdi, et al., 2025). Previous research has shown that the use of technology in education can improve student engagement and the effectiveness of the learning process (Efvinggo Fasya Jaya, 2022). Through a digital-

based curriculum, students are expected to be more active in developing their understanding by utilizing various available digital resources (Breien, F. S., 2021).

Education practitioners in the Papua Pegunungan Province face unique challenges in implementing a digital-based curriculum. Geographical factors and limited access to technological infrastructure are significant aspects that influence the effectiveness of implementing a digital learning system. Studies have shown that the use of digital learning media can enhance learning motivation by making the learning process more engaging, practical, and varied. Furthermore, the flexibility of digital learning enables students to study anytime and anywhere, thereby increasing their involvement in the academic process (Chen, S. W., 2019).

Considering these various factors, this study aims to analyze how a digital-based curriculum affects learning motivation. Through a case study approach, this research explores the effectiveness of technology integration in education and the challenges encountered during its implementation. The findings of this study are expected to provide insights for educational institutions in designing more effective digital learning strategies that are aligned with the needs of education practitioners in regions with limited access to technology.

2. Method

This research aims to explore and describe in depth how digital-based curricula influence learning motivation. The target group analyzed in this study is teacher leaders working in the Papua Pegunungan Province. Therefore, the researcher used a quantitative approach (Sugiono, 2017).

This study aims to explore and describe in depth how a digital-based curriculum influences learning motivation. The target group analyzed in this research consists of Guru Penggerak (education driving teachers) assigned in the Papua Pegunungan Province. Therefore, the approach used by the researcher is a quantitative approach (Sugiono, 2017).

This type of research falls under quantitative research, and the research design used is a causal research design, intended to demonstrate cause-and-effect relationships between several variables. Causal research typically employs the ex-post facto method, which involves controlling the independent variables that are expected to influence the dependent variables within a planned situation (D.R. Firdaus, 2023). The analytical tool used is SPSS 2025, with an ordinal measurement scale of 1 to 5. The sample size consists of 30 participants.

3. Results and Discussion

Result

The subjects of this study are teachers who are part of the Sekolah Penggerak (Driving School) program located in the Papua Pegunungan Province, with a focus on the influence

of a digital-based curriculum on learning motivation. This research explores how the integration of technology into the curriculum can enhance teacher engagement and motivation in the learning process (Damayanti, H., Rizky, N. N., & Sofiyah, 2024). These teachers, who work in areas with geographical challenges and limited access to technology, serve as an interesting case study for understanding the effectiveness of digitalization in the implementation of education. Below are the results of the descriptive statistical analysis using SPSS 2025.

Table 1. Results of Descriptive Statistical Test

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Digital-Based Curriculum	30	19	35	28,03	4,279
Learning Motivation	30	11	20	16,10	2,524
Valid N (listwise)	30				

Based on the results of the descriptive statistical analysis, it was found that the number of respondents (N) in this study was 30 individuals. The Digital-Based Curriculum variable has a minimum value of 11 and a maximum value of 35, with a mean score of 20.83 and a standard deviation of 4.279. Meanwhile, the Learning Motivation variable has a minimum value of 20 and a maximum value of 35, with a mean score of 28.03 and a standard deviation of 2.524.

These mean values indicate that, in general, the level of digital-based curriculum implementation falls into the moderate category, while the level of student learning motivation is considered high. The relatively small standard deviations in both variables indicate that the distribution of respondent data does not deviate much from the mean values, suggesting that the data is relatively homogeneous. The researcher then conducted a validity test as follows:

Table 2. Validity Test Results

No. Item	R_{value}	R_{table}	Remarks
Variable X (Digital-Based Curriculum)			
1	0, 861	0, 361	Valid
2	0, 831	0, 361	Valid
3	0, 819	0, 361	Valid
4	0, 908	0, 361	Valid
5	0, 864	0, 361	Valid
6	0, 820	0, 361	Valid
7	0, 835	0, 361	Valid
Variable Y (Learning Motivation)			
1	0, 872	0, 361	Valid

2	0, 850	0, 361	Valid
3	0, 877	0, 361	Valid
4	0, 926	0, 361	Valid

The results of the validity test analysis in Table 2 above, based on responses from 30 participants, show that all 11 items in the questionnaire are declared valid, as their r-count values exceed the r-table value of 0.361. This indicates that each question/statement in the questionnaire is consistent and accurate, making the instrument highly reliable and of excellent quality for collecting relevant data to support the research findings.

To ensure that the research instrument is consistent and reliable in measuring the studied variables, the researcher conducted a reliability test on both the independent and dependent variables, as shown in the table below:

Table 3. Reliability Test Results of the Digital-Based Curriculum (X)

Reliability Statistics

Cronbachs Alpha	N of Items
,934	7

Reliability Statistics

Cronbachs Alpha	N of Items
,899	4

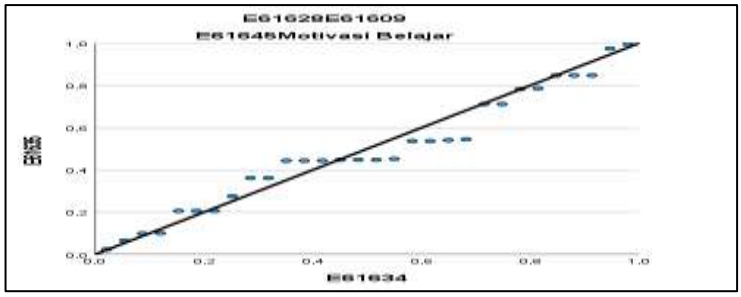

Figure 1. Normal P-P Plot Graph
Source: Researcher, SPSS 2025 Data Analysis

Based on the results of the Cronbach's Alpha values obtained for each variable, all values exceed 0.600. This indicates that the data distribution is reliable and can proceed to further testing. Furthermore, based on the results of the Kolmogorov-Smirnov normality test, the significance value was 0.067, which indicates that the distribution of the unstandardized residuals is normal, as the p-value is greater than 0.05. Therefore, the data is suitable for use in other classical assumption tests. To strengthen these results, an additional test was conducted using the normal P-P plot graph. The results of this test can be seen in the figure below.

Based on the graph above, it can be seen that the data points are distributed along the diagonal line representing a normal distribution. The pattern of points that closely follows the straight line indicates that the residuals are normally or approximately normally distributed. There are no noticeable deviations, such as sharp curves or large divergences from the line, which means there is no violation of the normality assumption. Finally, to answer the research questions that have been formulated, it is necessary to conduct a hypothesis test, which can be seen as follows:

Table 4. Hypothesis Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Significance
1	(Constant)	,055	,763		,072	,943
	Digital-Based Curriculum	,572	,027	,970	21,273	,000

a. Dependent Variable: Learning Motivation

Based on the results of the hypothesis test using the t-test, the calculated t value is 21.273 with a significance value of 0.000. The t-table value at a 5% significance level ($\alpha = 0.05$) with degrees of freedom (df = 30 - 2 = 28) is 2.048. Since the t-calculated value (21.273) is greater than the t-table value (2.048), and the significance value is less than 0.05, it can be concluded that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. Therefore, there is a positive and significant influence of the Digital-Based Curriculum on Learning Motivation. In other words, the higher the implementation of the digital-based curriculum, the higher the students' learning motivation.

Table 5. Coefficient of Determination Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,970[a]	,942	,940	,620

a. Predictors: (constant) Digital-Based Curriculum

b. Dependent Variable: Learning Motivation

Furthermore, based on the results of the coefficient of determination test as shown in the Model Summary table, the R Square value obtained is 0.942. This indicates that 94.2% of the variation in Learning Motivation can be explained by the Digital-Based Curriculum variable. The remaining 5.8% is explained by other factors outside the scope of this research model.

The Adjusted R Square value of 0.940 further supports this result, having been adjusted for the number of predictors and sample size, indicating that the regression model remains

strong and stable. Meanwhile, the R value of 0.970 signifies a very strong and positive relationship between the Digital-Based Curriculum and Learning Motivation. Thus, the better the implementation of the digital-based curriculum, the greater its impact on enhancing students' learning motivation.

Discussions

The Influence of a Digital-Based Curriculum on Learning Motivation

The results of the hypothesis test using the t-test revealed a t value of 21.273 with a significance value of 0.000. This indicates that the implementation of a digital-based curriculum has shown a positive impact on learning motivation. As education continues to evolve in the digital era, the integration of technology into the curriculum becomes essential to enhance student engagement and learning outcomes.

Studies have shown that digital learning environments increase motivation by offering more interactive and flexible learning experiences. The use of e-learning platforms, multimedia resources, and game-based learning tools creates a more engaging atmosphere, allowing students to explore concepts dynamically and personally. Research also reveals that students exposed to digital-based curricula exhibit higher levels of interest, participation, and academic achievement.

At Musamus University, the implementation of digital learning tools has helped overcome geographical challenges, allowing students to access educational materials online. Research findings show that students who utilize digital learning resources demonstrate higher enthusiasm and better self-directed learning behaviors, contributing to improved academic performance. However, successful implementation requires adequate infrastructure, digital literacy among lecturers, and institutional support to maximize its benefits.

Overall, this study confirms that a digital-based curriculum has a positive effect on learning motivation, making education more accessible, interactive, and effective. This transformation highlights the importance of adapting educational strategies to meet the demands of the digital era while ensuring inclusivity and quality in higher education.

4. Conclusions

Based on the research conducted and the results of the hypothesis testing using the t-test, a t-value of 21.273 was obtained with a significance value of 0.000. It can thus be concluded that the implementation of a digital-based curriculum has a positive and significant influence on learning motivation. The application of a digital-based curriculum has shown a positive impact on the motivation of Guru Penggerak (driving teachers) in Papua Pegunungan.

In line with developments in education in the digital era, the integration of technology into the curriculum is essential to increase student engagement and learning outcomes. Digital learning environments have been shown to enhance motivation by providing more interactive and flexible learning experiences. The use of e-learning platforms, multimedia resources, and game-based learning tools creates a more engaging atmosphere, enabling students to explore concepts in a dynamic and personalized manner. Research also reveals that learners exposed to a digital-based curriculum demonstrate higher levels of interest, participation, and academic achievement.

References

[1] Abna Hidayati, Andra Saputra, &Efendi, R. (2020). Development of E-Module Oriented Flipped Classroom Strategies in Computer Network Learning. Jurnal RESTI (Rekayasa Sistem Dan Teknologi Informasi), 4(3). https://doi.org/10.29207/resti.v4i3.1641.

[2] Artikel, I., Teknologi, P., & Pembelajaran, M. (2023). 194 /Program Studi Pendidikan Ekonomi STKIPBima. 6(2), 194 202.

[3] Azzahra, S., & Prasetyo, T. (2024). Penggunaan Pembelajaran Digital Media dalam Meningkatkan Motivasi Belajar Siswa berdasarkan Perspektif Guru. 1(2), 119–134.

[4] Brata, W. W. W., Wibowo, F. C., & Rahmadina, N. (2021). Implementation of discovery learning in a digital class and its effect on student learning outcomes and learning independence level. F1000Research, 10. https://doi.org/10.12688/f1000research.51763.1.

[5] Breien, F. S., & Wasson, B. (2021). Narrative categorization in digital game-based learning: Engagement, motivation & learning. British Journal of Educational Technology, 52(1). https://doi.org/10.1111/bjet.13004.

[6] Chen, S. W., Yang, C. H., Huang, K. S., & Fu, S. L. (2019). Digital games for learning energy conservation: A study of impacts on motivation, attention, and learning outcomes. Innovations in Education and Teaching International, 56(1). https://doi.org/10.1080/14703297.2017.1348960

[7] D.R. Firdaus (2023). Effect of Work Facilities, Interpersonal Communication and Work Discipline on Employee Performance at PT. Pandji Waringin Malimping Lebak-Banten. Formosa Journal of Sustainable Research (FJSR) Vol.2, No.3 : 517-530.

[8] Damayanti, H., Rizky, N. N., & Sofiyah, K. (2024). Pengaruh Apresiasi dan Motivasi dalam Meningkatkan Minat Belajar Siswa Madrasah Ibtidaiyah Kelas Rendah. LANCAH: Jurnal Inovasi

Dan Tren, 2(2b), 829 834.

[9] Efvinggo Fasya Jaya (2022). Pengaruh Pembelajaran Digital terhadap Motivasi Belajar dan Hasil Belajar Siswa di Era Pandemi Covid-19. Edunusa: Journal of Economics and Business Education Volume 2 Nomor 1.

[10] Fitri, A. N., & Hadi, M. S. (2024). Pemanfaatan Media Pembelajaran Digital Pada Pembelajaran IPS Di Sekolah Dasar. Jurnal Tarbiyah Dan Ilmu Keguruan Borneo, 5(2), 133 146. https://doi.org/10.21093/jtikborneo.v5i2.6995

[11] Fitri, S. D., Selfiyana, S., Rakhmatika, I., Afifah, N., Handiawan, M. D., Prayogi, A., Fitri, S. D., Selfiyana, S., & Rakhmatika, I. (2024). Penggunaan Media Pembelajaran Digital Dalam Meningkatkan Keterampilan Literasi Peserta Didik Di MA Pembangunan Jakarta. 2(6), 1931–1940.

[12] Hasna Nur Alifah, Umi Virgianti, Muhammad Imam Zamah Sarin, Dicky Amirul Hasan, Fina Fakhriyah, & Erik Aditia Ismaya. (2023). Systematic Literature Review: Pengaruh Pembelajaran Digital Media pada Pembelajaran Tematik Terhadap Hasil Belajar Siswa SD. Jurnal Ilmiah Dan Karya Mahasiswa, 1(3), 103–115. https://doi.org/10.54066/jikma.v1i3.463

[13] Huda, M. M., Tricahyo, V. A., Yusron, R. D. R., & Septarina, A. A. (2024). Analisis Tingkat Literasi Digital Siswa Berbasis Web Game Edukasi Sebagai Bagian Kesiapan Pembelajaran Digital. JSITIK: Jurnal Sistem Informasi Dan Teknologi Komputer, 2(2), Informasi 85–97.

[14] Rusdi, H., Ervianti, R., Adrias, A., Zulkarnaini, A.P. (2025). Pengaruh Media Pembelajaran Digital Terhadap Motivasi Belajar Siswa Sekolah Dasar. Pendas : Jurnal IlmiahPendidikan Dasar, Volume 10 Nomor 02.

[15] Sugiyono. (2014). Educational Research Methods Quantitative, Qualitative Approach and R&D. Alfabeta.

[16] Sugiyono. (2017). Metode penelitian dan pengembangan (S. Y. Suryandari (ed.)). Alfabeta.

[17] Yoo, S. J., Han, S.-H., & Huang, W. (2012). The roles of intrinsic motivators and extrinsic motivators in promoting e-learning in the workplace: A case from South Korea. Computers in Human Behavior, 28, 842–950.