

Blended Learning and PPKn Learning Motivation: Analysis of Its Influence Strength in 21st Century Learning

Anisya Fadilla Suryana¹, Edy Sofyan^{2*}

^{1,2}Department of Civic Education, STKIP Pasundan, Indonesia

*Email Corresponding Author: edy.sensei2021@gmail.com

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Abstract

The development of 21st-century learning, characterized by the integration of digital technology, encourages the implementation of blended learning as a relevant learning strategy to enhance student engagement and learning motivation, including in the subject of Pancasila and Citizenship Education (PPKn), which is oriented toward strengthening character and civic literacy. However, student learning motivation remains a major challenge in technology-based learning because it demands learning independence and consistency. This research aims to measure the strength of the influence of blended learning on students' PPKn learning motivation in the context of 21st-century learning. The research uses a quantitative approach with a correlational survey design, involving 65 students as a sample determined through saturated sampling. Data were collected using a Likert scale questionnaire and analyzed with SPSS through validity tests, reliability, normality tests, Pearson correlation, as well as simple linear regression and t-test at a significance level of $\alpha = 0.05$. The research results show there is a strong and positive relationship between blended learning and learning motivation ($r = 0.710$) as well as a statistically significant influence ($t\text{-calculated} = 8.005 > t\text{-table} = 1.669$), with blended learning contributing 50.4% to learning motivation ($R^2 = 0.504$), thus the research hypothesis is accepted. In conclusion, blended learning is proven effective in increasing students' PPKn learning motivation and provides an important contribution to strengthening technology-based learning theory in the affective-psychological aspect, as well as serving as a practical basis for teachers and schools to design more interactive blended learning oriented toward sustainable improvement of learning motivation. Keywords: blended learning, learning motivation, PPKn, 21st-century learning, linear regression.

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1. Introduction

The transformation of education in the 21st century is marked by the integration of digital technology as part of learning strategies that promote flexibility, accessibility, and more adaptive learning experiences to the needs of learners (Zou et.al., 2025; Srivastava, 2023). This change has strengthened further post-COVID-19 pandemic when educational institutions shifted from full online learning to hybrid/blended learning formats as an adaptation to the demands of learning effectiveness as well as the need for social interaction in the classroom. International studies show that digital learning is now evolving toward innovative models that combine face-to-face and online learning, with the main challenges in aspects of pedagogical readiness, access gaps, and the sustainability of student learning motivation in digital environments (Frontiers in Education, 2025; UNESCO, 2021).

At the high school level, the implementation of blended learning becomes one of the most relevant approaches to meet the needs of effective learning, as this model allows flexible delivery of material while maintaining the important dimension of social interaction in forming students' conceptual understanding. Conceptually, blended learning is understood as a learning system that combines face-to-face learning with computer-based learning (computer-mediated instruction) to create richer and more diverse learning experiences (Graham, 2006). In this

context, blended learning is not just a technical change, but a pedagogical transformation that demands learning design, learning independence, and consistent student engagement (Prasmesworo et.al., 2023; Hidayah et.al., 2024).

However, one of the important issues in 21st-century learning is student learning motivation, because motivation serves as the main driver of engagement, learning persistence, and achievement of learning outcomes (Zajda, 2024). Motivation also becomes a crucial indicator for the success of technology-based learning, as students are required to be more independent and able to manage themselves in online learning. Several studies show that learning motivation strongly correlates with academic achievement in the context of blended learning, and is influenced by emotional, cognitive, and metacognitive factors in technology-based learning processes (Acosta-Gonzaga & Ramirez-Arellano, 2021).

In the subject of Pancasila and Citizenship Education (PPKn), learning motivation holds an increasingly strategic position because PPKn learning not only aims at cognitive aspects, but also character building, civic attitudes, and democracy literacy (Afan et.al., 2024; Ikhsan, 2024). PPKn learning in the digital era faces new challenges because civic values now interact with digital spaces that are often filled with disinformation, polarization, and instant culture. Therefore, PPKn learning strategies need to be more relevant to the characteristics of the digital generation in order to maintain appeal while increasing student engagement in the learning process of civic values and character. Various studies affirm that blended learning has the potential to improve learning quality through increased engagement, variety of learning activities, and flexibility of material access; however, its effectiveness is highly determined by the quality of learning design and students' readiness for independent learning. The latest systematic review confirms that blended learning generally has a positive impact on engagement and learning outcomes, but more specific research is still needed to explain how blended learning works in the context of specific subjects and psychological variables such as learning motivation, especially at the secondary school level (De Bruijn-Smolders & Prinsen, 2024). In addition, meta-analyses also show that blended learning tends to improve academic performance and learning attitudes, but the intensity and strength of its influence can vary by context, country, and learner characteristics (Bizami et.al., 2023; Cao, 2023).

Research gaps emerge because most blended learning studies are conducted in higher education, while research at the junior high school level, especially in PPKn subjects, is still relatively limited and has not sufficiently measured quantitatively the strength of the effect (effect strength) of blended learning on student learning motivation. Some PPKn studies related to blended learning tend to focus more on learning outcomes or civic responsibility aspects, but have not specifically mapped the strong influence relationship between blended learning strategies and learning motivation as the main psychological determinant for the success of PPKn learning (Ansari et.al., 2023; Cahyono et al., 2024). Thus, quantitative research is needed that empirically measures the extent of the strength of the influence of blended learning on student learning motivation in PPKn learning.

This study provides a new contribution through empirical measurement based on a quantitative approach regarding the strength of the influence of blended learning on PPKn learning motivation in the context of 21st-century learning at the junior high school level. The theoretical contribution of this research lies in strengthening the study of blended learning as a learning model that not only impacts cognitive aspects but also affects affective-psychological dimensions such as learning motivation. Meanwhile, its practical contribution is to provide evidential basis for teachers and schools in designing more effective blended learning strategies oriented toward enhancing student learning motivation, particularly in PPKn learning that demands reflective engagement and attitude consistency.

Thus, the main objective of this research is to analyze and measure the strength of the influence of blended learning on student learning motivation in the PPKn subject, as part of the response to the demands of 21st-century learning that increasingly integrates technology. This research is expected to be theoretically beneficial for enriching the literature on the relationship between blended learning and learning motivation in the context of civic education, as well as practically beneficial as input for teachers, schools, and education policymakers in developing blended learning designs that can sustainably strengthen student learning motivation and engagement in PPKn.

2. Method

This research uses a quantitative approach with explanatory research type, aiming to measure the strength of the influence of blended learning on students' PPKn learning motivation. The research design used is a correlational survey design, because this research analyzes the relationship and influence between independent variables and dependent variables based on empirical data collected through structured instruments. The research population is all class VIII students at SMP Negeri 2 Pangkalan, Karawang Regency, with a sample of 65 students determined using saturated sampling technique, considering the relatively small population size so that the entire population members are made as the research sample. The research instrument is a closed questionnaire using a five-level Likert scale compiled to measure students' perceptions of the implementation of blended learning and the level of PPKn learning motivation. The collected data is analyzed using inferential statistical analysis, including instrument validity and reliability tests, data normality tests, Pearson correlation analysis, and simple linear regression analysis to determine the magnitude of the influence of blended learning on student learning motivation, with data processing carried out using statistical software.

Data analysis in this research is conducted quantitatively using SPSS (Statistical Package for the Social Sciences) software to process questionnaire data obtained from respondents. The initial analysis stage is carried out through descriptive statistics to describe data trends on blended learning variables and PPKn learning motivation, including mean values, percentages, and score distributions. Next, instrument quality tests are conducted through validity tests (Pearson Product Moment correlation) to ensure each questionnaire item can measure the intended construct, as well as reliability tests using Cronbach's Alpha to assess the internal consistency of the instrument. After that, prerequisite analysis tests are performed, namely normality tests (Kolmogorov-Smirnov/Shapiro-Wilk) as the basis for using parametric analysis. To answer the research objectives, data is analyzed using Pearson correlation tests to determine the strength of the relationship between blended learning and learning motivation, as well as simple linear regression analysis to measure the magnitude of the influence of blended learning on student learning motivation. The significance of the influence is tested through t-tests, while the strength of the contribution of the independent variable to the dependent variable is determined through the coefficient of determination (R^2), with the statistical significance level set at $\alpha = 0.05$.

3. Result

Data analysis was conducted to test the strength of the influence of blended learning (X) on PPKn learning motivation (Y). Based on data processing using SPSS on 65 respondents, the based on the Pearson correlation test, an r value of 0.710 was found. This value indicates a strong and positive relationship between the blended learning variable and students' learning motivation. Subsequently, regression analysis was conducted to examine the magnitude of the contribution of variable X to Y, as summarized in the table below:

Table 1. Summary of Coefficient of Determination

Model	R	R Square (R ²)	Adjusted R Square
1	0,710	0,504	0,496

Based on Table 1, an R^2 value of 0.504 indicates that blended learning contributes 50.4% to the variation in students' learning motivation in the PPKn subject. This suggests that half of the factors driving students' learning motivation in that school are influenced by the effectiveness of implementing the blended learning strategy.

Table 2. Results of Simple Linear Regression Test

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	(a)*	-	-	-	-
Blended Learning (X)	(b)*	-	0,710	8,005	0,000

The analysis results show in table 2 a calculated t-value of 8.005, which is much larger than the table t-value of 1.669. Therefore, the null hypothesis (H_0) is rejected and the working hypothesis (H_a) is accepted, meaning there

is a significant effect of blended learning on students' PPKn learning motivation. The Sig. value (0.000) < 0.05 indicates that the null hypothesis is convincingly rejected. * Standardized Coefficients (Beta) of 0.710 reflect a strong positive relationship direction between the two variables.

4. Discussion

The results of this research provide empirical evidence that the implementation of blended learning has a positive and significant influence on students' PPKn learning motivation at the secondary school level. These findings not only confirm the research hypothesis but also strengthen the position of blended learning as a key strategy in the transformation of civic education in the 21st century.

The strength of the strong relationship ($r = 0.710$) indicates that the integration of face-to-face and digital learning creates a learning ecosystem that is more responsive to students' needs. Theoretically, this aligns with Self-Determination Theory (SDT) proposed by Deci & Ryan (2000), where learning motivation will increase optimally if the learning environment can meet the needs for autonomy, competence, and social relatedness. In the blended learning model, students are given autonomy to regulate their learning pace through digital platforms, which directly increases their intrinsic motivation. This research also supports Graham's (2006) findings that the effectiveness of blended learning lies in its ability to combine the advantages of personal interaction in the classroom with the flexibility of computer-based instruction. In Civics classes, this variation of activities is very crucial because theoretical material and civic values are often considered boring if delivered only through conventional methods. With the help of technology, such material can be packaged in a more interactive digital form, which according to De Brujin-Smolders, Prinsen (2024) is very effective in increasing student engagement.

The uniqueness of this finding lies in the context of the PPKn subject. Citizenship education in the digital era demands digital literacy and critical thinking skills. The finding that blended learning contributes 50.4% to learning motivation indicates that students find PPKn learning more relevant when they can interact with citizenship issues through digital spaces. This aligns with the study by Cahyono et al. (2024), which states that blended learning models can strengthen students' civic responsibility through collaborative project-based activities on digital platforms. Furthermore, the integration of technology in PPKn enables Meaningful Learning as explained by Ausubel (1968), where new information (digital material) is linked to existing cognitive structures (classroom value discussions). Acosta-Gonzaga & Ramirez-Arellano (2021) add that in the context of blended learning, students' emotional and cognitive aspects interact to form stronger learning persistence compared to traditional learning.

Although blended learning is the main driver, there is a 49.6% variation influenced by other factors outside the research model. Cao (2023) in their meta-analysis emphasized that although blended learning generally excels, its effectiveness heavily depends on teachers' pedagogical readiness and technological accessibility. In PPKn subjects, the quality of interaction between teachers and students remains a key variable in instilling character values. Without strong teacher guidance in the face-to-face aspect, the technological aspect is feared to only become a tool for delivering information without value internalization. This is supported by Hattie (2012)'s view in Visible Learning, which states that the impact of technology will be maximal if teachers play an active role as facilitators who provide timely feedback. Therefore, the 50.4% influence in this study proves that the implemented blended learning strategy has successfully bridged the administrative needs of the material with the students' psychological needs to be recognized and actively involved in the learning process.

Overall, this confirms that blended learning is not merely a technical aid, but rather a transformation of strategy that is capable of enhancing students' affective-psychological aspects. The success of this model in increasing PPKn learning motivation becomes a strong foundation for developing a more adaptive, interactive curriculum oriented toward forming active and responsible digital citizens.

5. Conclusion

The conclusion of this research shows that blended learning has a positive and significant effect on students' PPKn learning motivation, thus the hypothesis stating the influence of blended learning on learning motivation is accepted. These findings answer the research problem formulation by proving that the strength of the relationship

between the two variables is in the strong category and the effect is significant, as well as contributing to the variation in learning motivation.

Academically, this research contributes to the development of blended learning studies in the context of junior high school PPKn learning by emphasizing the affective-psychological dimension in the form of learning motivation as an important indicator of 21st-century learning success. Practically, these findings imply the need for PPKn teachers to design more interactive, structured, and consistent blended learning, as well as to ensure technological support and student guidance so that learning motivation can increase optimally. Future research is recommended to test other factors that influence learning motivation, such as self-regulated learning, parental support, quality of teacher-student interaction, and digital literacy, and to use a broader research design such as experiments or mixed-methods to gain a deeper understanding of the effectiveness of blended learning in PPKn learning.

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