

## THE IMPACT OF GADGET USE ON STUDENTS' MOTIVATION AND ENGLISH LEARNING ACHIEVEMENT IN THE EFL CLASSROOM

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**Abstrak** - Penelitian ini bertujuan untuk menganalisis pengaruh penggunaan gadget terhadap motivasi belajar dan prestasi akademik siswa dalam pembelajaran Bahasa Inggris di kelas IV SD Negeri 99 Palembang. Sebanyak 38 siswa dilibatkan sebagai responden penelitian. Data dikumpulkan melalui angket dan dianalisis menggunakan uji normalitas, uji homogenitas, regresi linear sederhana, dan koefisien determinasi. Hasil uji menunjukkan bahwa data berdistribusi normal dan homogen, sehingga memenuhi syarat untuk dilakukan analisis regresi. Hasil analisis regresi memperlihatkan bahwa penggunaan gadget memiliki pengaruh positif dan signifikan terhadap motivasi belajar ( $B = 0,298$ ,  $t = 2,463$ ,  $Sig. = 0,018$ ) dan prestasi akademik ( $B = 0,198$ ,  $t = 2,563$ ,  $Sig. = 0,015$ ) siswa. Nilai koefisien determinasi menunjukkan bahwa gadget memberikan kontribusi sebesar 12,5% terhadap motivasi belajar dan 15,2% terhadap prestasi akademik, sementara sisanya dipengaruhi oleh faktor lain seperti strategi pembelajaran dan lingkungan belajar. Temuan ini menegaskan bahwa penggunaan gadget secara tepat dalam pembelajaran Bahasa Inggris dapat meningkatkan motivasi dan prestasi belajar siswa di sekolah dasar.

**Kata kunci:** Gadget, Motivasi Belajar, Prestasi Akademik, Pembelajaran Bahasa Inggris.

**Abstract** - This study aims to analyze the effect of gadget use on learning motivation and academic achievement in English language learning among fourth-grade students at SD Negeri 99 Palembang. A total of 38 students participated as respondents. Data were collected through questionnaires and analyzed using normality tests, homogeneity tests, simple linear regression, and the coefficient of determination. The results showed that the data were normally distributed and homogeneous, fulfilling the assumptions for regression analysis. Regression findings indicated that gadget use had a positive and significant effect on learning motivation ( $B = 0.298$ ,  $t = 2.463$ ,  $Sig. = 0.018$ ) and academic achievement ( $B = 0.198$ ,  $t = 2.563$ ,  $Sig. = 0.015$ ). The coefficient of determination revealed that gadgets contributed 12.5% to learning motivation and 15.2% to academic achievement, while the remaining variance was influenced by other factors such as learning strategies and classroom environment. These results suggest that appropriate use of gadgets in English language learning can enhance students' motivation and academic performance at the elementary level.

**Keywords:** Gadgets, Learning Motivation, Academic Achievement, English Language Learning..

### 1. INTRODUCTION

In the era of rapid globalization, technological advancements have profoundly transformed various aspects of human life, including education, economy, and socio-cultural interactions (Tran & Duong, 2020; Khalifa et al., 2023; Lemay et al., 2021; Fadilah et al., 2023). Technology, often defined as a set of tools or systems designed to simplify and enhance human activities (Nghie et al., 2019; Dash, 2022; Hadianti & Rohmah, 2021), has contributed to the widespread use of gadgets. Originally intended for communication, gadgets have evolved into multifunctional devices that support entertainment, information access, and interactive learning experiences (Yodi & Prasetyo, 2021; Yuaviki et al., 2020). Their

**History:**

Received : 25 Agustus 2024

Revised : 28 Agustus 2024

Accepted : 8 September 2024

Published : 10 September 2024

**Publisher:** Universitas PGRI Palembang

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accessibility and versatility have made gadgets particularly popular among children and young learners (Nurhati & Yanti, 2022; Seto et al., 2021; Syifa et al., 2019).

Recent data show a notable rise in gadget use among children from 38% in 2011 to 72% in 2013 (Hidayatuladkia et al., 2021; Nikmawati et al., 2021) demonstrating a growing dependence on digital technology. When appropriately utilized, gadgets can serve as powerful educational tools that promote creativity, problem-solving, collaboration, and independent learning (Purnomo et al., 2024; Cahyono & Mulyaningsih, 2022; Afni & Hartono, 2020). In English as a Foreign Language (EFL) contexts, they can facilitate vocabulary acquisition, pronunciation practice, and exposure to authentic language input. However, excessive or unregulated use often results in distractions, reduced attention span, lower motivation, and declining academic performance (Whitehead, 2019; MacFarlane et al., 2022; Buerkle et al., 2023).

Observations and interviews conducted with teachers and parents of fourth-grade students at SD Negeri 99 Palembang revealed that students frequently use gadgets for non-educational purposes such as online gaming, watching YouTube, or browsing social media platforms like TikTok. This behavior has led to a noticeable decrease in their motivation to learn English, limited concentration during classroom activities, and reduced academic achievement. Many parents also expressed concerns that children tend to prioritize digital entertainment over studying or engaging in meaningful communication. These patterns align with the concept of learning motivation, which refers to a student's internal drive to participate actively and persistently in learning activities (Seto et al., 2021; Hidayatuladkia et al., 2021), and directly influence learning achievement, encompassing students' cognitive, affective, and psychomotor outcomes (Loewen et al., 2019).

Empirical studies have also supported the link between gadget use and academic performance, indicating both positive and negative impacts on students' motivation and learning outcomes (Luthfiyyah et al., 2021; Dinata, 2017; Doz et al., 2024). Nonetheless, research that specifically explores how gadget use affects students' English learning motivation and achievement in the EFL classroom particularly among elementary learners remains limited. Therefore, this study aims to examine the influence of gadget use on students' motivation and English learning achievement in the EFL classroom, focusing on fourth-grade students at SD Negeri 99 Palembang. The study seeks to provide insights into how digital technology can be both a support and a challenge in developing effective and engaging English language learning at the elementary level.

## **2. METHOD**

### **2.1 Research Method**

This study applied a quantitative descriptive approach to examine the relationship between gadget use and students' motivation and achievement in English learning within the EFL classroom. The design was selected to identify patterns, describe existing conditions, and test hypotheses based on empirical data (Neuman, 2019; Sugiyono, 2021). Through this method, the research aimed to understand how varying levels of gadget use influence learners' motivation and performance in acquiring English as a foreign language.

### **2.2 Research Subjects**

The participants of this study were all fourth-grade students at SD Negeri 99 Palembang, totaling 38 students. Due to the relatively small population size, the study employed a

saturated sampling technique, meaning that every member of the population was included as a research sample. This approach ensured comprehensive representation of students' learning experiences related to gadget use and English learning achievement.

### 2.3 Data Collection

Data were collected through observations, interviews, and questionnaires. The research instruments included:

- 1) Gadget Use Questionnaire (X1): 25 statement items covering indicators such as ownership, health effects, utilization, time, and social aspects (Dornyei & Taguchi, 2019).
- 2) Learning Interest Questionnaire (Y1): 23 statement items assessing willingness, enjoyment, interest in learning, and rule compliance (Miall & Kuiken, 2019).

Meanwhile, learning outcomes (Y2) were measured using students' academic scores from the second semester of the fourth grade.

**Table 1.** Gadget Use Questionnaire Grid

Variable	Indicator	Statement Numbers	Total Items
Gadget Use (X)	Ownership	1, 2, 15	3
	Health Impact	12, 15, 21	3
	Utilization	4, 6, 7, 9, 10, 16, 18	7
	Time Management	3, 8, 13, 17, 19	5
	Social Interaction	5, 11, 20, 14	4

**Table 2.** English Learning Motivation Questionnaire Framework

Variable	Indicator	Statement Numbers	Total Items
Learning Interest (Y1)	Willingness to Learn	9, 12, 13, 17, 20	5
	Enjoyment in Learning	2, 6, 11, 15, 16	5
	Learning Engagement	1, 3, 8, 5, 18	5
	Rule Compliance	4, 7, 10, 14, 19	5

### 2.4 Data Analysis

The collected data were analyzed using simple linear regression analysis with SPSS Version 22 to determine the extent to which gadget use influences students' motivation and achievement in English learning. The regression analysis tested the statistical significance of the relationship between variables, providing empirical evidence of how digital device engagement affects learners' performance and interest in EFL contexts.

## 3. RESULT AND DISCUSSION

### 3.1 Result

#### 3.1.1 The Effect of Gadgets on Learning Interest

The analysis of the impact of gadget use on students' English learning motivation involved a series of statistical tests, including the normality test, homogeneity test, regression analysis, and coefficient of determination. First, a normality test was conducted to assess whether the residuals of the regression model followed a normal distribution. The Kolmogorov-Smirnov test, processed using SPSS version 21, was applied for this purpose. Ensuring normal data distribution is an essential prerequisite for conducting parametric statistical analyses. A model is considered valid when the residuals are normally distributed or approximately

normal, with a significance value (p-value) greater than 0.05. The hypotheses used in this analysis were:

H0: Gadget use influences students' motivation in learning English with a normal distribution.

H1: Gadget use influences students' motivation in learning English with an abnormal distribution.

The results of the Kolmogorov-Smirnov test for gadget use and students' learning interest are presented in Table 3.

**Table 3.** Results of Normality Test

Residual	Kolmogorov-Smirnov		Desc
	N	Sig.	
Gadgets & Learning Interest	35	0.215	H0 Accepted Data Normally Distributed

Based on the results of the Kolmogorov-Smirnov normality test, the residual data for the variables Gadgets and Learning Interest showed N = 35 with a significance value (Sig.) of 0.215. Since the significance value is greater than 0.05, H0 is accepted, indicating that the data are normally distributed. This finding confirms that the data meet one of the essential assumptions for parametric regression analysis, namely that residuals must follow a normal distribution. Consequently, further analyses such as homogeneity tests and regression analysis can be performed, as the normality assumption has been satisfied.

**Table 4.** Results of Homogeneity Test

Residual	Homogeneity of Variances		Desc
	T	Sig.	
Gadgets & Learning Interest	1.432	0.187	Homogeneity

The results of the homogeneity test, as shown in Table 4, indicate that the data for the variables Gadgets and Learning Interest meet the assumption of homogeneity of variances. The test produced a T-value of 1.432 with a significance level above 0.05, confirming that the data variance between groups is homogeneous. This means there are no significant differences in variance across the data groups, allowing further statistical analyses, such as regression tests, to be conducted under the assumption of equal variances.

**Table 5.** Simple Linear Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	13.875	1.210	-	11.469	0.002
X	0.298	0.121	0.354	2.463	0.018

The results of the simple linear regression analysis, as shown in Table 5, indicate that the constant (intercept) value is 13.875 with a significance level of 0.002, which is below the threshold of 0.05. This suggests that even without the influence of gadget use (X), students' learning interest would start at a baseline score of 13.875. Meanwhile, the regression coefficient for the independent variable Gadgets (X) is 0.298 with a significance value of 0.018 ( $< 0.05$ ). This indicates a significant positive relationship between gadget use and students' learning interest. The standardized beta coefficient of 0.354 indicates a moderate

contribution, meaning that as gadget use increases, students' motivation in learning English also tends to improve.

**Table 6.** Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.402	0.162	0.139	2.76489

Based on the table above, the correlation coefficient (R) is 0.402, indicating that the relationship between gadget use and students' learning interest is still relatively weak. The R Square value is 0.162, meaning that gadget use explains 16.2% of the variance in students' learning interest. Meanwhile, the remaining 83.8% is influenced by other factors not examined in this study.

### **3.1.2 The Effect of Gadget Use on Students' English Learning Achievement**

To determine the influence of gadget use on students' English learning achievement, several statistical procedures were conducted, including the normality test, homogeneity test, simple regression analysis, and coefficient of determination. The Kolmogorov-Smirnov test, processed using IBM SPSS 22, was employed to test data normality. Normally distributed data is a key assumption for valid regression analysis, with a significance level (p-value) greater than 0.05 indicating normal distribution. The hypotheses were as follows:

H0: The relationship between gadget use and English learning achievement follows a normal distribution.

H1: The relationship between gadget use and English learning achievement does not follow a normal distribution.

The results of the normality test for gadget use and students' learning outcomes are presented in Table 7.

**Table 7.** Results of Normality Test

Residual	Kolmogorov-Smirnov		Desc
	N	Sig.	
Learning Outcomes Gadgets	35	0.210	H0 Accepted Data Normally Distributed

The results in Table 7 indicate that the normality test for the effect of gadgets on learning outcomes produced a Kolmogorov-Smirnov significance value of 0.210, with N = 35. Since the significance value (Sig.) is greater than 0.05, the null hypothesis (H0) is accepted. This means that the residual data for gadget use and students' learning outcomes are normally distributed. A normal data distribution implies that the regression analysis assumption is satisfied, allowing further parametric tests such as regression and determination coefficient analysis to be conducted accurately and reliably..

**Table 8.** Results of Homogeneity Test

Residual	Homogeneity of Variances		Desc
	T	Sig.	
Learning Outcomes Gadgets	1.425	0.157	Homogeneity

The results in Table 8 show that the homogeneity test for the effect of gadget use on learning outcomes produced a T-value of 1.425 with a significance value (Sig.) of 0.157. Since the significance value is greater than 0.05, the data meet the assumption of homogeneity of variances. This result indicates that the variance across the groups being compared is statistically equal, meaning the data are suitable for further parametric analyses, such as regression analysis, because one of the main assumptions homogeneity of variance is satisfied..

**Table 9.** Simple Linear Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	12.845	1.120	-	11.369	0.003
X	0.198	0.181	0.254	2.563	0.015

The results of the simple linear regression analysis in Table 9 show that the constant (intercept) value is 12.845, indicating the predicted learning outcomes when gadget use is zero. The regression coefficient (B) for the independent variable (gadget use) is 0.198 with a t-value of 2.563 and a significance level (Sig.) of 0.015, which is below the threshold of 0.05. This finding means that gadget use has a positive and significant effect on student learning outcomes. The Beta value (0.254) indicates that while the effect is not very strong, gadget use contributes meaningfully to the improvement of English learning outcomes.

**Table 10.** Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.412	0.152	0.120	2.54780

he results indicate that the correlation coefficient ( $R = 0.412$ ) represents a moderate positive correlation between gadget use and English learning achievement. The  $R^2$  value of 0.152 shows that gadget use accounts for 15.2% of the variance in students' English achievement, while the remaining 84.8% is affected by other factors such as instructional strategies, teacher feedback, and students' intrinsic motivation. The standard error (2.54780) reflects the average deviation between predicted and observed values, indicating that the model explains the data with reasonable accuracy. These findings demonstrate that gadget use positively influences both English learning motivation and achievement, suggesting that when appropriately integrated, digital tools can enhance students' engagement and performance in EFL contexts.

### 3.2 Discussion

The results of this study reveal that the use of gadgets in English language learning has a positive and significant influence on students' motivation. Findings from the normality and homogeneity tests confirmed that the data satisfied the requirements for parametric analysis, with significance values greater than 0.05 (Table 3 and Table 4). The results of the simple linear regression analysis showed that gadget use had a positive effect on students' English learning motivation, indicated by a regression coefficient (B) of 0.298 and a significance value of 0.018 ( $< 0.05$ ). This suggests that higher levels of gadget use are associated with increased enthusiasm and engagement in learning English. The coefficient of determination ( $R^2 = 0.162$ ) shows that gadget use explained 16.2% of the variation in students' motivation, while the remaining 83.8% was influenced by other variables. These results are consistent with the findings of Dash (2022), who noted that the integration of digital tools into language learning environments can enhance learner motivation and participation.

Similarly, the analysis of gadget use on English learning achievement demonstrated a positive and significant correlation. The normality and homogeneity tests yielded significance values of 0.210 and 0.157, respectively, both exceeding 0.05, thereby confirming the data met the assumptions for regression analysis (Table 7 and Table 8). The regression results indicated that gadget use positively affected students' English achievement, with a regression coefficient (B) of 0.198 and a significance value of 0.015 ( $< 0.05$ ). Furthermore, the coefficient of determination ( $R^2 = 0.152$ ) revealed that gadget use contributed 15.2% to the variance in English achievement, suggesting that while gadgets play a role in improving performance, other factors such as instructional quality, teaching approaches, and learner strategies also significantly influence academic outcomes (Seto et al., 2021).

Overall, the findings underscore that gadgets can serve as effective learning media in the EFL classroom when used properly and purposefully. Their positive impact on both English learning motivation and achievement indicates that technology can effectively enhance engagement and support students' language development. Nonetheless, the relatively modest  $R^2$  values emphasize that gadgets should be complemented by pedagogically sound teaching practices to optimize learning outcomes. This aligns with the perspective of Nguyen and Habók (2022), who argue that while mobile and digital technologies can enrich English learning experiences, their success largely depends on thoughtful integration within a well-structured instructional design.

#### 4. CONCLUSION

This study concludes that the use of gadgets in English language learning has a positive and significant influence on students' motivation and achievement in the EFL classroom. Results from statistical analyses including normality, homogeneity, regression, and determination coefficient tests revealed that gadget use contributes meaningfully to improving students' engagement and performance in learning English. However, the relatively low  $R^2$  values suggest that although gadgets enhance English learning motivation and outcomes, other factors such as teaching strategies, classroom environment, and learners' self-regulation also play crucial roles in determining success. The findings indicate that when effectively and purposefully integrated, gadgets can serve as valuable tools to support English learning, stimulating interest, promoting interaction, and facilitating autonomous learning. Therefore, educators are encouraged to design technology-enhanced language activities that utilize digital platforms for interactive and communicative purposes, such as vocabulary practice, pronunciation improvement, or collaborative writing tasks. Additionally, schools and educational policymakers should establish clear guidelines for appropriate gadget use in EFL contexts to minimize distractions and foster focused, meaningful learning experiences.

Future research is suggested to examine the long-term effects of gadget use on students' English language proficiency, motivation, and critical thinking skills. Further studies may also analyze the effectiveness of various types of gadgets, mobile applications, and online platforms in enhancing specific English skills such as speaking, listening, reading, and writing. Moreover, expanding research across different educational levels and diverse learning environments will provide a more comprehensive understanding of how digital technologies influence EFL learning outcomes and help shape effective pedagogical practices in the digital era.

## 5. REFERENCES

- Afni, N., & Hartono. (2020). Contextual teaching and learning (CTL) as a strategy to improve students mathematical literacy. *Journal of Physics: Conference Series*, 1581(1). <https://doi.org/10.1088/1742-6596/1581/1/012043>
- Buerkle, A., O'Dell, A., Matharu, H., Buerkle, L., & Ferreira, P. (2023). Recommendations to align higher education teaching with the UN sustainability goals – A scoping survey. *International Journal of Educational Research Open*, 5, 100280. <https://doi.org/10.1016/j.ijedro.2023.100280>
- Cahyono, B. E. H., & Mulyaningsih, I. (2022). Learning model based on creativity development in improving literature appreciation ability (model pembelajaran berbasis pengembangan kreativitas dalam meningkatkan kemampuan apresiasi sastra) Learning model based on creativity development in improving li. *Jurnal Gramatika : Jurnal Penelitian Pendidikan Bahasa Dan Sastra Indonesia*, 8(1). <https://doi.org/10.22202/jg.2022.v8i1.5652>
- Dash, B. B. (2022). Digital tools for teaching and learning English language in 21st Century. *International Journal of English and Studies*, 4(2), 8–13. <https://doi.org/10.47311/IJOES.2022.4202>
- Dinata, H. (2017). The use of gallery walk too enhance the speaking achievement of the ninth grade students of smp PGRI 1 Palembang. *Global Expert: Jurnal Bahasa Dan Sastra*, 6(1), 50–56. <https://doi.org/10.36982/jge.v6i1.265>
- Dornyei, Z., & Taguchi, T. (2019). *Questionnaires in second language research: Construction, administration, and processing* (2nd ed.). Routledge. <https://doi.org/10.4324/9780203864739>
- Doz, E., Cuder, A., Pellizzoni, S., Granello, F., & Passolunghi, M. C. (2024). The interplay between ego-resiliency, math anxiety and working memory in math achievement. *Psychological Research*, 2401–2415. <https://doi.org/10.1007/s00426-024-01995-0>
- Fadilah, I. A., Jaya, A., & Uzer, Y. (2023). Visual representation and comprehension: the exploration of multimodal text to energize reading of the tenth grade students' at state vocational high school 5 of Palembang. *Esteem Journal of English Education Study Programme*, 6(1), 125–130. <https://doi.org/10.31851/esteem.v6i1.10226>
- Hadianti, S., & Rohmah, D. W. M. (2021). English teachers' perception on using digital tools in the classroom. *Exposure : Jurnal Pendidikan Bahasa Inggris*, 10(2), 234–241. <https://doi.org/10.26618/exposure.v10i2.5769>
- Hidayatuladkia, S. T., Kanzunudin, M., & Ardianti, S. D. (2021). Peran orang tua dalam mengontrol penggunaan gadget pada anak usia 11 tahun. *Urnal Penelitian Dan Pengembangan Pendidikan*, 5(3), 363–372. <https://doi.org/10.23887/jppp.v5i3.38996>
- Khalifa, M., Alrasheed, R., & Aldada, A. M. (2023). Education in light of the sustainable development goals in the kingdom of bahrain “an analytical study.” *Journal of Statistics Applications and Probability*, 12, 1419–1423. <https://doi.org/10.18576/jsap/12S103>

- Lemay, D. J., Bazelais, P., & Doleck, T. (2021). Transition to online learning during the COVID-19 pandemic. *Computers in Human Behavior Reports*, 4, 100130. <https://doi.org/10.1016/j.chbr.2021.100130>
- Loewen, S., Crowther, D., Isbell, D. R., Kim, K. M., Maloney, J., Miller, Z. F., & Rawal, H. (2019). Mobile-assisted language learning: A Duolingo case study. *ReCALL*, 31(3), 293–311. <https://doi.org/10.1017/S0958344019000065>
- Luthfiyyah, R., Hafifah, G. N., Ivone, F. M., & Tresnadewi, S. (2021). Technology use in secondary level of English language teaching: A Literature Review. *JEES (Journal of English Educators Society)*, 6(1), 79–89. <https://doi.org/10.21070/jees.v6i1.1020>
- MacFarlane, A., Russell-Rose, T., & Shokraneh, F. (2022). Search strategy formulation for systematic reviews: Issues, challenges and opportunities. *Intelligent Systems with Applications*, 15, 200091. <https://doi.org/10.1016/j.iswa.2022.200091>
- Miall, D. S., & Kuiken, D. (2019). Aspects of literary response: A new questionnaire. *Research Teaching in English*, 29(1), 37–58. <https://doi.org/https://doi.org/10.58680/rte199515356>
- Neuman, W. L. (2019). Social research methods: Qualitative and quantitative approaches. In *Pearson* (Seventh Ed). Pearson New International Edition. [https://www.amazon.co.uk/Social-Research-Methods-Quantitative/dp/0205786839/ref=sr\\_1\\_5?s=books&ie=UTF8&qid=1461496914&sr=1-5&keywords=social+research+methods+qualitative+and+quantitative+approaches](https://www.amazon.co.uk/Social-Research-Methods-Quantitative/dp/0205786839/ref=sr_1_5?s=books&ie=UTF8&qid=1461496914&sr=1-5&keywords=social+research+methods+qualitative+and+quantitative+approaches)
- Nghi, T. T., Phuc, T. H., & Thang, N. T. (2019). Applying ai chatbot for teaching a foreign language: An empirical research. *International Journal of Scientific and Technology Research*, 8(12), 897–902.
- Nguyen, L. A. T., & Habók, A. (2022). Digital literacy of EFL students: An empirical study in Vietnamese Universities. *Libri*, 72(1), 53–66. <https://doi.org/10.1515/libri-2020-0165>
- Nikmawati, N., Bintoro, H. S., & Santoso, S. (2021). Dampak Penggunaan Gadget terhadap Hasil Belajar dan Minat Belajar Siswa Sekolah Dasar. *Jurnal Edutech Undiksha*, 9(2), 254–259. <https://doi.org/10.23887/jeu.v9i2.38975>
- Nurhati, N., & Yanti, P. G. (2022). Pengaruh penggunaan gawai terhadap prestasi belajar siswa sekolah dasar. *Jurnal Basicedu*, 6(4), 7586–7592. <https://doi.org/10.31004/basicedu.v6i4.3607>
- Purnomo, E., Jermaina, N., Marheni, E., Gumilar, A., Widarsa, A. H., Elpatsa, A., & Abidin, N. E. Z. (2024). Enhancing problem-solving skills through physical education learning: A comprehensive analysis. *Retos: Nuevas Tendencias En Educación Física, Deporte y Recreación*, 58, 435–444. <https://doi.org/10.47197/retos.v58.106838>
- Seto, S. B., Wondo, M. T. S., & Mei, M. F. (2021). Pengaruh penggunaan gadget dan peran orang tua terhadap hasil belajar mahasiswa di masa covid-19. *Jurnal Cendikia*, 5(2), 2104–2114. <https://doi.org/10.31004/cendekia.v5i2.742>

- Sugiyono. (2021). *Metode penelitian pendidikan (kuantitatif, kualitatif, kombinasi, r&d dan penelitian pendidikan)* (A. Nuryanto (ed.); Kedua). ALFABETA, CV.
- Syifa, L., Setianingsih, E. S., & Sulianto, J. (2019). Dampak penggunaan gadget terhadap perkembangan psikologi pada anak sekolah dasar. *Jurnal Ilmiah Sekolah Dasar*, 3(4), 527–533. <https://doi.org/10.23887/jisd.v3i4.22310>
- Tran, T. Q., & Duong, T. M. (2020). EFL learners' perceptions of factors influencing learner autonomy development. *Kasetsart Journal of Social Sciences*, 41(1), 194–199. <https://doi.org/10.1016/j.kjss.2018.02.009>
- Whitehead, M. (2019). Physical literacy across the world. In *Physical Literacy across the World*. Taylor & Francis. <https://doi.org/10.4324/9780203702697>
- Yodi, S., & Prasetyo, D. (2021). Perancangan serial animasi sebagai upaya pelestarian lagu daerah untuk anak sekolah dasar. *Jurnal Sains Dan Seni ITS*, 10(1), 70–76. <https://doi.org/10.12962/j23373520.v10i1.59963>
- Yuaviki, R., Burstiando, R., & Mashuri, H. (2020). *Hubungan penggunaan gadget terhadap kebugaran jasmani pada siswa kelas iv, v dan vi sdn 2 kedoyo kecamatan sendang kabupaten tulungagung* [Universitas Nusantara PGRI Kediri]. <https://repository.unpkediri.ac.id/1739/>