



Jurnal Ilmiah Pendidikan Citra Bakti

p-ISSN 2355-5106 || e-ISSN 2620-6641

<https://jurnal.citrabakti.ac.id/index.php/jil>



EFFECTIVENESS OF THE TEAM GAMES TOURNAMENT LEARNING MODEL ASSISTED BY QUIZWHIZZER ON LEARNING OUTCOMES AND JOYFUL LEARNING OF PANCASILA EDUCATION STUDENTS OF ELEMENTARY SCHOOL

Sintiya Pujiana^{1*)}, Kurotul Aeni²⁾

Elementary School Teacher Education, Semarang State University

*Corresponding author email: sintiya1612@students.unnes.ac.id

Article History

Received:
March 11, 2026

Accepted:
2 May 2026

Published:
May 19, 2026

Abstract

This study aims to analyze the differences in joyful learning and students' learning outcomes between those taught using the Teams Games Tournament (TGT) model integrated with Quizwhizzer and those taught using conventional methods, as well as to examine the effectiveness of the model on joyful learning and learning outcomes in Pancasila Education. This study employed a quasi-experimental design with a nonequivalent control group design involving 37 fifth-grade students at SDN Wonosari 03, Semarang City, divided into an experimental class and a control class. Data were collected through interviews, a joyful learning questionnaire, and a learning outcomes test. The questionnaire consisted of 20 valid and reliable Likert-scale items (Cronbach's Alpha = 0.731), while the test consisted of 20 valid and reliable multiple-choice items (Cronbach's Alpha = 0.770). The results revealed a significant difference in joyful learning between the experimental and control classes based on the independent samples t-test (Sig. (2-tailed) = 0.000 < 0.05). The N-Gain score for joyful learning in the experimental class was 0.71 (high category), compared to 0.19 (low category) in the control class. For learning outcomes, the experimental class obtained an N-Gain of 0.58 (moderate category), while the control class obtained 0.29 (low category). These findings indicate that improvements in both joyful learning and learning outcomes were higher in the experimental class than in the control class. It can be concluded that the TGT model integrated with Quizwhizzer has a positive effect on improving students' joyful learning and learning outcomes compared to conventional instruction.

Keywords: Joyful Learning, Pancasila Education, Quizwhizzer, Team Games Tournament

Abstrak. Penelitian ini bertujuan untuk menganalisis perbedaan *joyful learning* dan hasil belajar murid yang menggunakan model *Team Games Tournament* (TGT) berbantuan Quizwhizzer dengan model konvensional, serta mengkaji keefektifan model tersebut terhadap *joyful learning* dan hasil belajar Pendidikan Pancasila. Penelitian ini menggunakan desain kuasi-eksperimen tipe *nonequivalent control group design* dengan subjek 37 murid kelas V SDN Wonosari 03 Kota Semarang yang terdiri atas kelas eksperimen dan kelas kontrol. Data dikumpulkan melalui wawancara, angket joyful learning, dan tes hasil belajar. Angket joyful learning terdiri atas 20 pernyataan skala Likert 1–4 yang valid dan reliabel (*Cronbach's Alpha* = 0,731). Tes hasil belajar terdiri atas 20 soal pilihan ganda yang valid dan reliabel (*Cronbach's Alpha* = 0,770). Hasil penelitian menunjukkan bahwa terdapat perbedaan signifikan *joyful learning* antara kelas eksperimen dan kelas kontrol berdasarkan uji t dengan nilai Sig. (2-tailed) $0,000 < 0,05$, nilai N-Gain *joyful learning* pada kelas eksperimen sebesar 0,71 (kategori tinggi), sedangkan kelas kontrol sebesar 0,19 (kategori rendah). Pada hasil belajar, kelas eksperimen memperoleh N-Gain sebesar 0,58 (kategori sedang), sedangkan kelas kontrol sebesar 0,29 (kategori rendah). Hasil ini menunjukkan bahwa peningkatan *joyful learning* dan hasil belajar lebih tinggi pada kelas eksperimen dibandingkan kelas kontrol. Disimpulkan bahwa model TGT berbantuan Quizwhizzer memberikan dampak positif dengan peningkatan *joyful learning* dan hasil belajar murid dibandingkan pembelajaran konvensional.

Kata-Kata Kunci: Pembelajaran Menyenangkan, Pendidikan Pancasila, Quizwhizzer, *Team Games Tournament*

Background

Education aims to develop students' potential so that they become individuals who are faithful, devout, of noble character, knowledgeable, creative, independent, and responsible, in accordance with Law Number 20 of 2003 concerning the National Education System. The implementation of this objective is realized through the subject of Pancasila Education, which plays a strategic role in shaping character and instilling national values such as tolerance, mutual cooperation, and unity. Learning in Pancasila Education needs to be designed in a meaningful and contextual way, involving active learning experiences so that values are not only understood cognitively but also internalized in daily life. The learning process plays an important role as the main means of developing students' knowledge, attitudes, and skills. The quality of learning is not only determined by the delivery of material, but also by the extent to which learning is able to create meaningful learning experiences and actively engage students (Salsabilla et al., 2025). Therefore, learning activities need to be designed to be interactive, enjoyable, and capable of encouraging active participation from students.

However, in practice, the teaching of Pancasila Education in elementary schools has not yet been aligned with the objectives of Pancasila Education. Based on interviews with a fifth-grade teacher at Wonosari 03 Public Elementary School in Semarang, instruction is still dominated by teacher-centered, one-way lecturing, resulting in students who tend to be passive, less focused, and hesitant to express their opinions. Preliminary data indicate that 46.51% of students exhibit low participation, and 37.21% have not met the Minimum Learning Mastery Criteria. This situation suggests that the learning process has not fully fostered joyful

learning, leading to suboptimal learning outcomes. Therefore, an innovative learning model is needed to support more enjoyable, meaningful, and in-depth learning.

One learning model considered appropriate to address these issues is the Teams Games Tournament (TGT) model. The TGT learning model combines elements of cooperation and games that encourage students to actively discuss, collaborate, and participate in academic competition. National research shows that the implementation of the TGT model is able to improve students' activeness and learning outcomes through group interaction and structured game activities (Rochmiyati et al., 2024). This is in line with the theory of game-based cooperative learning, which states that the combination of cooperation and competition can increase students' engagement and academic achievement (Qiao et al., 2024).

The implementation of the TGT model in Pancasila Education requires appropriate learning media to enhance its effectiveness. In this study, the TGT model is combined with Quizwhizzer as a digital game-based learning medium that allows students to learn through interactive quizzes in a competitive and collaborative way. The use of game-based digital media has been proven to increase students' motivation, attention, and participation in learning (Nadeem et al., 2023). The utilization of digital media in learning has also been shown to strengthen students' engagement and improve concept understanding through interactive learning experiences (Kurniawan et al., 2025).

Several studies have shown that the implementation of the TGT model supported by digital games can create an enjoyable learning environment while also improving students' learning outcomes. Research by Sari et al. (2024) indicates that a game-based TGT model is able to significantly enhance students' learning mastery. Meanwhile, Elisa et al. (2025) found that Team Games Tournament assisted by digital media can simultaneously improve motivation, engagement, and learning outcomes.

However, studies integrating the TGT model with digital learning media in the context of Pancasila Education at the elementary school level—particularly those examining both joyful learning and learning outcomes—are still limited. Most previous research tends to focus only on improving learning outcomes or engagement separately, without examining the relationship between the two within a single analytical framework. In fact, recent studies suggest that emotional engagement in learning plays an important role in improving students' learning outcomes (Xu et al., 2023). Therefore, this study examines the effectiveness of the TGT model assisted by Quizwhizzer and analyzes simultaneously joyful learning and students' learning outcomes in fifth-grade Pancasila Education.

Based on the above description, this study aims to comprehensively analyze the effectiveness of implementing the Team Games Tournament model assisted by Quizwhizzer in Pancasila Education learning. Specifically, this study aims to: (1) analyze the differences in

joyful learning between students who learn using the TGT model assisted by Quizwhizzer and those who learn using conventional models; (2) analyze the differences in learning outcomes between the two groups; (3) examine the effectiveness of the TGT model assisted by Quizwhizzer on students' joyful learning; and (4) examine the effectiveness of the model on students' learning outcomes.

Method

This research adopts a quantitative approach using a quasi-experimental design, specifically a nonequivalent control group structure that involves two groups, an experimental group and a control group. Sugiyono explained that the experimental research method is a quantitative method carried out through experiments to determine the impact of predictor variables on outcome variables within controlled settings (Sugiyono, 2022). The experimental group was instructed using the Team Games Tournament (TGT) method supported by Quizwhizzer, whereas the control group received instruction through a conventional teaching approach. This design was selected because it enabled the researchers to compare joyful learning and learning outcomes between the experimental and control groups, which were chosen based on their similar characteristics.

The research subjects were all fifth-grade students at SDN Wonosari 03 in Semarang City, Central Java, during the 2025/2026 school year. The research subjects were all fifth-grade students at SDN Wonosari 03 in Semarang City, Central Java, during the 2025/2026 school year. The total number of research subjects was 37 students, consisting of 18 students in fifth-grade Class A (the experimental class) and 19 students in fifth-grade Class B (the control class). This study employed a total sampling technique, which is a sampling method in which all members of the population are used as research samples. Total sampling is applied when the population size is relatively small, allowing all subjects to be examined comprehensively (Ihsan et al., 2024). The study consisted of two sessions conducted in both the experimental and control classes, with each session lasting 70 minutes. The instructional procedures applied in both groups were identical, including a pretest, learning activities, and a posttest.

The research instruments consisted of test and non-test instruments. Measurement of student learning outcomes in the cognitive domain was conducted using a test instrument in the form of multiple-choice questions administered as a pretest and posttest. Non-test data collection was conducted using interviews and documentation to help gain an initial understanding of classroom learning conditions. The questionnaire on joyful learning contained 20 statements designed using a Likert scale ranging from 1 to 4. Validity testing confirmed that all statements are valid, and the Cronbach's Alpha reliability coefficient was 0.731, indicating

a high level of reliability. The instrument grid used to measure joyful learning is presented in Table 1.

Table 1. Joyful Learning Questionnaire Instrument Grid

Indicator	Question Number
Attention and focus on learning	1, 2, 3, 4, 5
Enthusiasm and motivation for learning	6, 7, 8, 9, 10
Willingness to try	11, 12, 13, 14, 15
Courage to ask questions and express opinions	16, 17, 18, 19, 20

Source: (Rahmatiani 2025)

The learning outcomes assessment instrument initially comprised 50 multiple-choice items, which were subjected to validity testing. The results of the validity analysis showed that 26 items met the validity criteria, and 20 of these were selected for use in this study. Furthermore, the reliability test produced a Cronbach's Alpha coefficient of 0.770, indicating a high level of reliability. The complete list of items included in the learning outcomes assessment instrument is presented in Table 2.

Table 2. Grid of Learning Outcomes Questionnaire Instrument

Learning Outcomes	Learning Objectives	Cognitive Aspects	Question Number
presents the results of an assessment of attitudes toward respecting, preserving, and sustaining cultural diversity	Explaining regional cultures in Indonesia	C2	1, 2, 3, 10, 11
	Analyzing regional cultures in Indonesia	C4	4, 12, 13, 14, 15, 16, 17
	Summarizing regional cultures in Indonesia	C5	5, 6, 7, 8, 9
	Classifying regional cultures in Indonesia	C6	18, 19, 20

Source: Bloom, in Silaben et al (2021)

Quantitative data were processed using SPSS version 26, which included: (1) the Shapiro-Wilk test for normality; (2) a homogeneity test; (3) independent samples t-tests to examine differences in mean scores between groups; and (4) the N-Gain analysis to measure improvements in joyful learning and students' learning outcomes.

Result and Discussion

Result

Joyful Learning can be assessed through a questionnaire given to students prior to and following the intervention, namely a pretest and a posttest.

Table 3. Results of Descriptive Statistical Analysis

Class		Minimum	Maximum	Mean	Std. Deviation
Control	Pretest	40	56	46.74	4.677
	Posttest	46	64	53.42	4.562
Experiment	Pretest	30	68	48.44	10.048
	Posttest	64	79	71.83	4.162

Table 3 indicates that the mean joyful learning score in the control group score from 46.74 to 53.42, reflecting a modest improvement, whereas the experimental group's score increased from 48.44 to 71.83. Descriptively, the enhancement in joyful learning in the experimental class was higher than that of the control class, as presented in Table 4.

Table 4. Results of the Joyful Learning Questionnaire by Indicator

Indicator	Control		Experiment	
	Pretest	Posttest	Pretest	Posttest
Attention and focus on learning	58%	67%	57%	82%
Enthusiasm and motivation for learning	60%	67%	60%	84%
Willingness to try	56%	69%	56%	86%
Courage to ask questions and express opinions	58%	62%	55%	86%

Based on table 4, all indicators of joyful learning in both the experimental and control classes increased from the pretest to the posttest. In the experimental class, the indicators of attention and focus on learning increased from 57% to 82%, enthusiasm and motivation for learning rose from 60% to 84%, the willingness to try new things increased from 56% to 86%, and courage to ask questions and express opinions from 55% to 86%. The next step is the normality test as part of the prerequisite analysis. Table 5 summarizes the results of the normality test.

Table 5. Normality Test for Joyful Learning

Class		Shapiro-Wilk		
		Statistic	Df	Sig.
Control	Pretest	0.927	19	0.154
	Posttest	0.969	19	0.766
Experiment	Pretest	0.974	18	0.863
	Posttest	0.955	18	0.509

Based on Table 5, the Shapiro–Wilk test was used as a method for testing normality; it is particularly effective for small samples, specifically those with fewer than 50 data points (Sugiyono, 2023). The results of the analysis show that the significance level is greater than 0.5, indicating that the data are normally distribute (Machali, 2021).

Once the data was confirmed to follow a normal distribution, a homogeneity test was carried out. The results are shown in Table 6.

Table 6. Homogeneity Test for Joyful Learning

		Levene Statistic	df1	df2	Sig.
Value	Based on Mean	0.067	1	35	0.797
	Based on Median	0.052	1	35	0.820
	Based on Median and with adjusted df	0.052	1	33.908	0.620
	Based on trimmed mean	0.061	1	35	0.806

Table 6 presents the results of the homogeneity test using Levene's test, with a significance level (Sig.) > 0.05 for both the pretest and posttest, indicating that the variances of the two groups are homogeneous (Widodo, et al., 2023).

After the prerequisite tests were met, an independent samples t-test was conducted to determine the significance of the difference in joyful learning between the two classes. The data are presented in Table 7

Table 7. Independent-Samples t-Test: Joyful Learning

	T	Df	Sig. (2-tailed)	Mean Difference
Joyful Learning	-12.803	35	0.000	-18.412

Based on Table 7, the results of the independent t-test show a Sig. (2-tailed) value of $0.000 < 0.05$, which means that H_0 is rejected and H_1 is accepted, indicating a significant difference in learning interest between the experimental and control classes (Fitri, et al., 2023).

After the t-test was conducted, an N-Gain test was carried out to assess students' improvement in joyful learning. The results of the N-Gain analysis are presented in Table 8.

Table 8. N-Gain Test Joyful Learning

Class	Minimum	Maximum	Mean N-Gain
Control	46.73	53.42	0.19
Experiment	48.44	71.83	0.71

According to Table 8, the control group scored only 0.19 (low category), while the experimental group achieved an average N-Gain for joyful learning of 0.71 (high category), based on the criteria established by Hake (1998, as cited in Agustianti et al., 2022). These results indicate that the increase in joyful learning was higher in the experimental class than in the control class.

To assess student learning outcomes, tests were administered before and after the program, specifically through a pretest and a posttest. A complete summary of the assessment results is presented in Table 9.

Table 9. Descriptive Analysis of Student Learning Outcomes

Class		Minimum	Maximum	Mean	Std. Deviation
Control	Pretest	35	80	59.47	13.426
	Posttest	50	95	73.42	10.145
Experiment	Pretest	35	85	60.56	14.439
	Posttest	70	95	83.61	6.372

Based on Table 9, the average learning outcome score in the control class increased from 59.47 to 73.42, while the experimental class improved from 60.56 to 83.61. Descriptively, the increase in learning outcomes in the experimental class was greater than in the control class. The next step is to conduct a normality test as a preliminary requirement to ensure that the data are normally distributed. A summary of the results of the normality test is presented in Table 10.

Table 10. Normality Test of Learning Outcomes

Class		Shapiro-Wilk		
		Statistic	Df	Sig.
Control	Pre-test	0.954	19	0.456
	Post-test	0.956	19	0.488
Experiment	Pre-test	0.917	18	0.114
	Post-test	0.946	18	0.363

Based on Table 10, the findings indicate that all groups and variables (pretest and posttest) have Sig. value > 0.05 , suggesting that the data are normally distributed. After confirming the normality of the data, a homogeneity test was then conducted, and the results are presented in table 11.

Table 11. Homogeneity Test of Learning Outcomes

		Levene Statistic	df1	df2	Sig.
Value	Based on Mean	2.198	1	35	0.147
	Based on Median	1.900	1	35	0.177
	Based on Median and with adjusted df	1.900	1	29.567	0.178
	Based on trimmed mean	2.195	1	35	0.147

Table 11 presents the results of the homogeneity test using Levene's test, with significance values (Sig.) > 0.05 for both the pretest and posttest, indicating that the variances of the two groups are homogeneous.

When the prerequisite assumptions were met, an independent samples t-test was then conducted to determine the significance of differences in learning outcomes between the two classes. The data are presented in Table 12.

Table 12. Independent-Samples t-Test Learning Outcomes

	t	Df	Sig. (2-tailed)	Mean Difference
Learning Outcomes	-3.635	35	0.001	-10.190

Based on Table 12, the results of the independent samples t-test indicate that the Sig. (2-tailed) value of 0.001 is less than 0.05; therefore, H_0 is rejected and H_1 is accepted. This shows that there is a significant difference in learning outcomes between the experimental class using the Team Games Tournament model assisted by QuizWhizzer and the control class using the conventional model.

An N-Gain test was then conducted to determine the improvement in students' learning outcomes. The data are presented in Table 13.

Table 13. N-Gain Test Learning Outcomes

Class	Minimum	Maximum	Mean N-Gain
Control	59.47	73.42	0.29
Experiment	60.55	83.61	0.58

Based on Table 13, the control class achieved an average N-Gain score of 0.29, which falls into the low category, while the experimental class reached 0.58, categorized as

moderate. These results indicate that there was a greater improvement in learning outcomes in the experimental class compared to the control class.

Discussion

Based on the results of the joyful learning questionnaire data analysis, it was found that the average joyful learning score of students in the experimental class, which implemented the Teams Games Tournament model assisted by Quizwhizzer, was higher than that of the control class that used conventional learning methods. The statistical test results indicated that this difference was significant, meaning that there was a difference in the level of joyful learning between the two classes.

These findings indicate that the use of the Teams Games Tournament model assisted by Quizwhizzer results in higher joyful learning compared to conventional learning. In addition, the results of the joyful learning questionnaire show that students in the experimental class had higher levels of engagement, enthusiasm, and enjoyment compared to those in the control class. This suggests that the improvement in joyful learning is not only reflected in the difference in scores but is also supported by students' responses to the learning process.

Game based and cooperative learning, such as the Teams Games Tournament model, enables students to actively engage through discussions, competitions, and interactive activities. The integration of digital media such as Quizwhizzer also has the potential to enhance emotional engagement and create a more enjoyable learning experience. The Teams Games Tournament model is capable of increasing students' emotional engagement, enjoyment, and activeness in the learning process (Ngoc, 2025). In conclusion, there is a difference in joyful learning between the experimental and control classes, with the experimental class demonstrating a higher level of joyful learning.

The results of the study indicate that the posttest scores of students in the experimental class were higher than those in the control class. In addition, the improvement in learning outcomes calculated using the N-Gain shows that the experimental class falls into the moderate category, while the control class is in the low category. These results indicate that there is a difference in learning outcomes between the two groups.

These findings indicate that the use of the Teams Games Tournament model assisted by Quizwhizzer is associated with higher learning outcomes compared to conventional instruction. On the other hand, the results of the joyful learning questionnaire show that students in the experimental class demonstrated higher levels of engagement, enthusiasm, and enjoyment during the learning process. This suggests that more interactive and enjoyable learning also plays a role in supporting the improvement of learning outcomes.

Game-based and collaborative learning can enhance student engagement and support concept understanding through interaction and active learning experiences. Previous research findings also indicate that game-based learning can improve students' motivation, participation, and academic achievement (Nik et al., 2025).

The data from this study indicate differences in learning outcomes and levels of joyful learning. However, this relationship cannot be directly interpreted as a cause-and-effect relationship, but rather as an association. Therefore, it can be concluded that there is a difference in learning outcomes between the experimental and control classes, with the experimental class achieving higher results, which is also supported by a higher level of joyful learning during the learning process.

The effectiveness of the Teams Games Tournament model assisted by Quizwhizzer in improving joyful learning can be seen from the results of the questionnaire analysis, which show that the joyful learning scores in the experimental class are higher than those in the control class, and the difference is statistically significant. These findings indicate that the implemented learning model contributes to the improvement of students' joyful learning.

In terms of attention and focus, students in the experimental class were able to maintain concentration throughout the learning process. Structured game activities and competition encouraged students to continuously pay attention to the material. This helped reduce boredom and maintain learning focus, in line with findings that interactive media can support students' attention (Cutting et al., 2024).

In terms of enthusiasm and motivation for learning, students demonstrated higher levels of enthusiasm in participating in the learning process. The game elements in the Teams Games Tournament model create an engaging and challenging learning environment, thereby enhancing learning motivation. This is supported by research indicating that game-based learning can improve students' motivation and engagement (Nadeem et al., 2023).

Furthermore, in terms of *willingness to try*, the use of Quizwhizzer provides students with opportunities to actively attempt answering questions without feeling pressured. This condition encourages students' confidence to participate in the learning process, in line with findings that active engagement can enhance students' self-confidence (Marwah et al., 2025).

In terms of *courage to ask questions and express opinions*, the Teams Games Tournament model provides opportunities for students to discuss and interact within groups. This makes students more confident in expressing ideas and asking questions, in accordance with research showing that cooperative learning can improve students' interaction and communication (Ahmad et al., 2024).

Overall, the improvement across the four indicators of joyful learning indicates that the Teams Games Tournament model assisted by Quizwhizzer contributes to creating a more enjoyable and interactive learning environment.

The results of the study indicate that the posttest scores of students in the experimental class were higher than those in the control class. In addition, the N-Gain calculation shows that the improvement in learning outcomes in the experimental class falls into the moderate category, while the control class is in the low category. This difference indicates that the implementation of the Teams Games Tournament model assisted by Quizwhizzer is associated with better learning outcomes compared to conventional instruction.

In terms of learning outcome indicators, the improvement can be seen in students' ability to explain, analyze, summarize, and classify regional cultures in Indonesia. In the explaining indicator, students were able to restate concepts more effectively through discussions and games. In the analyzing indicator, students demonstrated the ability to compare and understand relationships among cultures. In the summarizing indicator, students were able to organize information more systematically, while in the classifying indicator, students were able to categorize regional cultures based on specific characteristics. Research shows that the Teams Games Tournament contributes to improvements in students' motivation, engagement, and learning outcomes (Camacho et al., 2023). Furthermore, active learning has also been proven to support the development of higher-order thinking skills such as analysis and classification (Byusa et al., 2022).

Therefore, it can be concluded that the Teams Games Tournament model assisted by Quizwhizzer results in higher learning outcomes compared to conventional instruction, thereby providing optimal improvement in students' learning outcomes.

Conclusion

Based on the research results, there is a difference in joyful learning between the experimental class and the control class, as indicated by the t-test with a Sig. (2-tailed) value of $0.000 < 0.05$. In the sample studied, the experimental class obtained an N-Gain score for joyful learning of 0.71 (high category), while the control class scored 0.19 (low category). In terms of learning outcomes, there is also a difference between the experimental and control classes, as indicated by the t-test with a Sig. (2-tailed) value of $0.001 < 0.05$. The experimental class showed a higher improvement compared to the control class, with an N-Gain score of 0.58 (moderate category), while the control class scored 0.29 (low category). This pattern indicates that the improvement in the experimental class tends to be greater and more optimal than in the control class. the Team Games Tournament (TGT) model assisted by Quizwhizzer in this study has a positive impact on improving students' joyful learning and learning outcomes

compared to conventional learning. However, these findings should be interpreted cautiously by considering the limitations of the research design and sample scope; therefore, generalizing the results requires further studies with a broader scope.

References

- Agustianti, R., Nussifera, L., Wahyudi, Angelianawati, L., Meliana, I., Sidik, E. A. N., Nurlaila, Q., Simarmata, N., Himawan, I. S., Pawan, E., & Ikhrum, F. (2022). *Metode penelitian kuantitatif & kualitatif*. Tohar Media.
- Ahmad Alwi, Athifa Radella tabina, & Nurul Azmi Aziz. (2024). Cooperative learning: improving students' understanding, social skills, and motivation. *Socio-Political Communication and Policy Review*, 1(1), 1–5
- Camacho-Sánchez, R., Rillo-Albert, A., & Lavega-Burgués, P. (2022). Gamified Digital Game-Based Learning as a Pedagogical Strategy: Student Academic Performance and Motivation. *Applied Sciences*, 12(21), 11214
- Cutting, J., & Deterding, S. (2024). The task-attention theory of game learning: a theory and research agenda. *Human–Computer Interaction*, 39(5–6), 257–287.
- Eci, H., Rochmiyati, S. ., & Dewana, E. N. . (2024). Penerapan Model Kooperatif Learning Tipe TGT Untuk Meningkatkan Hasil Belajar Kelas IIB Pada Pendidikan Pancasila . *Prosiding Seminar Nasional Pendidikan Profesi Guru*, 3(1), 1021–1028.
- Fitri, A., Rahim, R., Nurhayati, Aziz, Pagiling, S. L., Natsir, I., Munfarikhatin, A., Simanjuntak, D. N., Huatgaol, K., & Anugrah, N. E. (2023). *Dasar-dasar Statistika untuk Penelitian*. Yayasan Kita Menulis.
- Kurniawan, I. & Zabeta, M. (2025). Analisis Penggunaan Media Pembelajaran Digital Pada Siswa Kelas V Di Sekolah Dasar. *Research and Development Journal of Education*, 11(1), 258-267.
- Machali, I. (2021). *Metode Penelitian Kuantitatif (Panduan Praktis Merencanakan, Melaksanakan, dan Analisis dalam Penelitian Kuantitatif)*. Fakultas Ilmu Tarbiyah dan Keguruan UIN Sunan Kalijaga Yogyakarta.
- Marwah, S., & Jasiah, J. (2025). Pengembangan Media Pembelajaran Berbasis Quizwhizzer untuk Meningkatkan Pemahaman Siswa dalam Materi Beriman Kepada Allah SWT kelas VII . *Jurnal Pendidikan Tambusai*, 9(3), 33330–33336.
- Meisanti, E. (2025). Implementasi Model Team Games Tournament (Tgt) Berbasis Media Digital Untuk Meningkatkan Motivasi Belajar Siswa Sdn Simomulyo Iv Surabaya. *Proceeding Umsurabaya*
- Nadeem, M., Oroszlanyova, M., & Farag, W. (2023). *Effect of digital game-based learning on student engagement and motivation*. *Computers*, 12(9), 177.
- Nik Suriati Nik Hassan, Hamnah Che Hamzah, Nor Zuriati Amani Ab Rani (2025). A Conceptual Review of Gamification and Game-Based Learning: Enhancing Student Motivation and Engagement in Online Learning. , 9(25),
- Ngoc Tuong Nguyen, T., & Thi Kim Oanh, D. (2025). Cooperative learning and its influences on student engagement. *Cogent Education*, 12(1).
- Qiao, S., Yeung, S. S., Shen, X. A., Leung, K. L., Ng, T. K., & Chu, S. K. W. (2024). How competitive, cooperative, and collaborative gamification impacts student learning and engagement. *Language Learning & Technology*, 28(1), 1–19
- Rahmatiani, R., et al. (2025). *Pembelajaran mindful, meaningful, & joyful*. Penerbit Litnus.

- Salsabilla, A., Cahya, I. N., Latipah, T., & Farhurohman, O. (2025). Meningkatkan Kualitas Pembelajaran di Sekolah Dasar melalui Metode Aktif dan Inovatif. *ARZUSIN*, 5(4), 1603-1618.
- Silaban, R. A., Nurchintyawati, I., Effendi, E., Madjid, M., Hidayah, N., Ningsih, R. W., & Akbar, J. S. (2025). *Taksonomi Pendidikan*. Deli Serdang: Mifandi Mandiri Digital.
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta
- Sugiyono. (2023). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Widodo, S., Ladyani, F., Lestari, S. M. P., Wijayanti, D. R., Devrianya, A., Hidayat, A., & Widya, N. (2023). *Buku Ajar Metode Penelitian*. CV. Science Techno Direct.
- Xu, X., Shi, Z., Bos, N. A., & Wu, H. (2023). Student engagement and learning outcomes: an empirical study applying a four-dimensional framework. *Medical Education Online*, 28(1).