



Journal of Education, Teaching, and Learning is licensed under  
A [Creative Commons Attribution-Non Commercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

# The Influence of Cooperative Learning Models of Teams, Games Tournaments and Conventional Types and Learning Motivation on Student Learning Outcomes

Norma Asdika <sup>1)</sup>✉, Arsil Arsil <sup>2)</sup>, Kamal Firdaus <sup>3)</sup>, Muhamad Sazeli Rifki <sup>4)</sup>

✉<sup>1)</sup> *Department of Sports Education, Universitas Negeri Padang, Padang, Indonesia*  
E-mail: [normaasdika@gmail.com](mailto:normaasdika@gmail.com)

<sup>2)</sup> *Department of Sports Education, Universitas Negeri Padang, Padang, Indonesia*  
E-mail: [arsil@fik.unp.ac.id](mailto:arsil@fik.unp.ac.id)

<sup>3)</sup> *Department of Sports Education, Universitas Negeri Padang, Padang, Indonesia*  
E-mail: [Dr.kamalfirdaus.mkes.aifo@gmail.com](mailto:Dr.kamalfirdaus.mkes.aifo@gmail.com)

<sup>4)</sup> *Department of Sports Science, Universitas Negeri Padang, Padang, Indonesia*  
E-mail: [mrs\\_rifki@fik.unp.ac.id](mailto:mrs_rifki@fik.unp.ac.id)

✉ Correspondence Author

**Keywords:** Teams Games Tournament Method; Conventional Method; Learning Motivation; Learning Outcomes

© **Copyright:** 2025. Authors retain copyright and grant the JETL (Journal of Education, Teaching and Learning) right of first publication with the work simultaneously licensed under a [Creative Commons Attribution License](https://creativecommons.org/licenses/by-nc/4.0/)

## Abstract

The problem addressed in this study is the low volleyball learning outcomes of eighth-grade students at SMP Negeri 26 Padang. This research aims to examine the effects of the Teams Games Tournament (TGT) and conventional teaching methods, as well as learning motivation, on students' volleyball learning outcomes. The study employed a 2x2 factorial quasi-experimental design with purposive sampling, resulting in a total of 48 student participants. Instruments used include a questionnaire to measure learning motivation and a volleyball skills test to assess learning outcomes. Data were analyzed using ANOVA. The results showed: (1) the TGT method produced better volleyball learning outcomes than the conventional method, (2) there is an interaction effect between teaching methods and learning motivation on student outcomes, (3) highly motivated students achieved better results with TGT than with the conventional method, and (4) students with low motivation performed better with the conventional method than with TGT.

**How to cite:** Asdika, N., Arsil, A., Firdaus, K., & Rifki, M. (2025). The Influence of Cooperative Learning Models of Teams, Games Tournaments and Conventional Types and Learning Motivation on Student Learning Outcomes. *JETL (Journal of Education, Teaching and Learning)*, 10(1). doi:<http://dx.doi.org/10.26737/jetl.v10i1.6964>

## INTRODUCTION

Learning outcomes in physical education, particularly in volleyball, remain a challenge in many schools, including SMP Negeri 26 Padang. Despite the inclusion of sports in the curriculum, many students show low achievement levels, which may stem from ineffective teaching methods and varying levels of student motivation (Piliana et al., 2020; Wardana et al., 2020). Traditional,

teacher-centered approaches often fail to engage students actively, resulting in passive learning experiences and suboptimal understanding of skills and concepts (Novitasari et al., 2019; Sonjaya, 2014).

To address this issue, educators are exploring more interactive and student-centered teaching methods. One such approach is the Teams Games Tournament (TGT), a cooperative learning model developed by Slavin. TGT emphasizes teamwork, competition, and active participation, providing students with an enjoyable and engaging environment that enhances both academic and social development (Arifin et al., 2024; Ridwan et al., 2020). Unlike conventional methods, TGT fosters collaboration and student accountability, which are crucial in improving performance in practical subjects like volleyball.

Another critical factor influencing learning outcomes is student motivation (Colledani et al., 2025; Sharma et al., 2025). Motivation drives students to participate actively in the learning process, persist through challenges, and strive for improvement. Previous studies have indicated that motivated students tend to perform better academically and exhibit higher levels of engagement. However, the effectiveness of teaching methods may vary depending on the level of student motivation, suggesting the need to analyze how motivation interacts with instructional strategies (Lin & Muenks, 2025; Shi, 2025; Tu et al., 2025).

This study aims to investigate the effects of the TGT and conventional teaching methods, alongside student motivation, on volleyball learning outcomes. By employing a 2x2 factorial design with quasi-experimental methods, this research examines whether the interaction between teaching method and motivation level significantly impacts student achievement. The study uses purposive sampling, involving 48 eighth-grade students at SMP Negeri 26 Padang.

The findings of this research are expected to contribute to the development of more effective instructional strategies in physical education. By understanding the impact of teaching methods and motivation, educators can better tailor their approaches to maximize student engagement and achievement (DiCesare et al., 2025; Peng et al., 2025; Sverdlik et al., 2025). Ultimately, this study seeks to offer practical insights for teachers and policymakers aiming to enhance learning outcomes in sports education.

## **METHODS**

This study employed a quasi-experimental research design using a 2x2 factorial approach to examine the effects of the Teams Games Tournament (TGT) and conventional teaching methods, as well as students' learning motivation, on volleyball learning outcomes. The research was conducted at SMP Negeri 26 Padang, involving eighth-grade students as participants. A purposive sampling technique was used to select a sample of 48 students, ensuring that the selected participants represented the criteria required for the study. Students were divided into four groups based on the combination of teaching method (TGT or conventional) and level of motivation (high or low), which was measured using a validated motivation questionnaire.

The instruments used in this research included a learning motivation questionnaire and a volleyball skills test. The motivation questionnaire was used to categorize students into high and low motivation groups, while the volleyball test measured students' cognitive and psychomotor achievement in the sport. Data were analyzed using analysis of variance (ANOVA) to determine the main effects of teaching methods and motivation, as well as their interaction on learning outcomes.

The use of ANOVA allowed for an accurate comparison of group means and the identification of statistically significant differences.

## RESULT AND DISCUSSION

The results of this study are presented to illustrate the influence of teaching methods and learning motivation on the volleyball learning outcomes of eighth-grade students at SMP Negeri 26 Padang.

Table 1. Recapitulation of Normality Test Results of Research Data

Sample Group	Number of Samples	Lcount	Ltable	Conclusion
Group A1	24	0,1297857	0,1766	Usual
Group A2	24	0,121642	0,1766	Usual
Group B1	24	0,1068809	0,1766	Usual
Group B2	24	0,1374556	0,1766	Usual
Group A1B1	12	0,1483866	0,242	Usual
Group A2B1	12	0,1415835	0,242	Usual
Group A1B2	12	0,1687775	0,242	Usual
Group A2B2	12	0,1192356	0,242	Usual

Furthermore, to find out whether the data tested is homogeneous or not, a homogeneity test is carried out. The test criterion is that  $H_0$  is accepted if the  $F_{cal}$  value obtained is smaller than  $F_{table}$ . A summary of the homogeneity test results can be seen in table 2. next. The description of the homogeneity test of this research data is presented as follows.

Table 2. Results of the Research Data Homogeneity Test

Variable	Fcount	Ftable $\alpha = 0,05$	Kesimpulan
Group A1 – A2	1,66616	2,00	Homogeneous
Group B1 – B2	1,53273	2,00	Homogeneous
Group A1B1 – A2B1	2,26699	2,82	Homogeneous
Group A1B2 – A2B2	1,58068	2,82	Homogeneous

Hypothesis testing in this study was carried out using variance analysis through testing using two-path variance analysis. With the independent variable of the learning model, the moderator variable of learning motivation and the bound variable, namely the learning outcome of volleyball. The results of the grain variance test can be summarized in table 3. below.

Table 3. Summary of the ANAVA Test Two Pathways of Volleyball Learning

Source of Variance (SV)	JK	DK	VAR	Fcount	Ftable ( $\alpha = 0,05$ )
Intergroup A (Learning Model)	181,7408	1	181,7408	6,684	4,06
Intergroup B (Learning Motivation)	676,501	1	676,501	24,882	4,06
Intergroup AB (Learning Model* Learning Motivation)	334,963	1	334,963	12,320	4,06
Error (E)	1.196,305	44	27,1888	-	-

The existence of the interaction and significance of the main influence between the form of learning method and the high or low motivation to learn volleyball in the above variance analysis,

the test was continued with the Tukey test between the data pairs to determine which group was higher on average between the two paired data groups.

Table 4. Tukey Test Results between Data Groups

Group	n	Qcount	Qtable	Information
A1 – A2	48	3,89	4,01	insignificant
B1 – B2	48	7,51	4,01	Significant
A1B1 – A2B1	24	9,18	5,67	Significant
A1B2 – A2B2	24	1,39	5,67	insignificant

## DISCUSSION

The results of the hypothesis testing show a significant difference in student learning outcomes between the two teaching methods used. Further tests revealed that students who were taught using the Teams Games Tournament (TGT) method had higher learning outcomes than those who were taught using the conventional method (Magaña et al., 2025; Rosas et al., 2025). Additionally, the analysis of learning motivation indicated that motivation had a significant impact on learning outcomes, with higher motivation leading to better performance (Øgård et al., 2025; Ren, 2025).

The first hypothesis testing indicated that the Teams Games Tournament (TGT) method was more effective than the conventional method in improving volleyball learning outcomes for eighth-grade students at SMP Negeri 26 Padang. The difference in outcomes between the groups reflects the effectiveness of the cooperative learning approach in increasing student engagement and understanding. TGT fosters collaboration, group discussions, and friendly competition, creating a more active and student-centered learning environment compared to the teacher-centered conventional method (Fan et al., 2025; Johansen et al., 2025; Putri et al., 2025).

The second hypothesis shows that there is an interaction between the type of learning method and student motivation, which affects learning outcomes. Students with high motivation who were taught using the TGT method achieved better learning outcomes. In contrast, students with low motivation performed better in the conventional method. This suggests that the interaction between the teaching method and motivation is crucial in influencing students' academic achievement (Salloum et al., 2025; Zhang et al., 2025).

Students with high motivation performed better in TGT compared to the conventional method, while students with low motivation performed better with the conventional method. These findings highlight the importance of considering both student motivation and the teaching method when planning and delivering lessons. Motivated students thrive in methods like TGT that encourage collaboration and competition, while less motivated students may benefit more from the traditional, more structured approach.

## CONCLUSION

The study concludes that there are significant differences in volleyball learning outcomes among eighth-grade students at SMP Negeri 26 Padang based on the teaching methods and levels of learning motivation. Students taught using the Teams Games Tournament (TGT) method demonstrated better learning outcomes compared to those taught using conventional methods. Furthermore, there is an interaction between the teaching method and student motivation that

significantly affects learning outcomes. Specifically, highly motivated students benefited more from the TGT method, achieving better results than those taught with conventional methods. Conversely, students with low motivation achieved higher learning outcomes when taught using the conventional method compared to those who learned through the TGT approach.

### CONFLICTS OF INTEREST STATEMENT

Regarding this study, the author declares that there is no conflict of interest.

### AUTHOR CONTRIBUTIONS

Study concept and design: Norma Asdika. Acquisition of data: Arsil Arsil. Analysis and interpretation of data: Kamal Firdaus. Drafting the manuscript: Norma Asdika. Critical revision of the manuscript for important intellectual content: Muhamad Sazeli Rifki. Statistical analysis: Norma Asdika.

### REFERENCES

- Arifin, A. Z., Kristiyandaru, A., Indahwati, N., & Prakoso, B. B. (2024). Pengaruh Model Pembelajaran Kooperatif Team Game Tournament terhadap Motivasi Belajar Siswa dalam Pembelajaran PJOK Materi Bolavoli Kelas X SMK. *Journal of Education Research*, 5(4), 5062–5070. <https://doi.org/10.37985/jer.v5i4.1709>
- Colledani, D., Barbaranelli, C., & Anselmi, P. (2025). Fast, smart, and adaptive: using machine learning to optimize mental health assessment and monitor change over time. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-91086-w>
- DiCesare, D., Scheveck, B., Adams, J., Tassone, M., Diaz-Cruz, V. I., Van Dillen, C., Ganti, L., Gue, S., & Walker, A. (2025). The pit crew card game: a novel gamification exercise to improve EMS performance in critical care scenarios. *International Journal of Emergency Medicine*, 18(1). <https://doi.org/10.1186/s12245-024-00748-5>
- Fan, G., Liu, D., Zhang, R., & Pan, L. (2025). The impact of AI-assisted pair programming on student motivation, programming anxiety, collaborative learning, and programming performance: a comparative study with traditional pair programming and individual approaches. *International Journal of STEM Education*, 12(1). <https://doi.org/10.1186/s40594-025-00537-3>
- Johansen, F., Toft, H., Stalheim, O. R., & Løvstletten, M. (2025). Exploring the potential of virtual reality in nursing education: learner's insights and future directions. *Advances in Simulation*, 10(1). <https://doi.org/10.1186/s41077-025-00337-3>
- Lin, S., & Muenks, K. (2025). How students' perceptions of older siblings' mindsets relate to their math motivation, behavior, and emotion: a person-centered approach. *Social Psychology of Education*, 28(1). <https://doi.org/10.1007/s11218-024-09968-2>
- Magaña, E. C., Ariza, A. C., Ruiz-Palmero, J., & Guillén-Gámez, F. D. (2025). Virtual, augmented, and mixed reality in the University environment: an analysis of scientific production. *Journal of New Approaches in Educational Research*, 14(1). <https://doi.org/10.1007/s44322-025-00027-y>
- Novitasari, M., Sudargo, S., & Sugiyanti, S. (2019). Studi Komparasi Hasil Belajar Matematika Menggunakan Model Pembelajaran Teams Games Tournament dan Model Pembelajaran Student Teams Achievement Divisions. *Imajiner: Jurnal Matematika Dan Pendidikan Matematika*, 1(4), 16–23. <https://doi.org/10.26877/imajiner.v1i4.3848>
- Øgård, M., Hillen, S. A., & Wuttke, E. (2025). Thematic assignments making vocational concepts visible during students' work placements in Norwegian vocational education. *Empirical*

- Research in Vocational Education and Training*, 17(1). <https://doi.org/10.1186/s40461-025-00180-w>
- Peng, M. Y.-P., Cai, T., & Yue, X. (2025). Exploring the effect of transformation leadership on student generic skills: a moderated mediation model. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-04406-w>
- Piliana, I. W. W., Artanayasa, I. W., & Satyawan, I. M. (2020). Pengaruh Model Pembelajaran Kooperatif Tipe Teams Games Tournament Terhadap Hasil Belajar Passing Control Sepak Bola. *Jurnal Ilmu Keolahragaan Undiksha*, 8(2), 100–107. <https://doi.org/10.23887/jiku.v8i2.29815>
- Putri, A., Rosmansyah, F. W., Triejunita, C. N., Sukmana, Y., Purnami, N., Sakina, S., Amalia, Y. S., & Rosmansyah, Y. (2025). An interactive mobile three-dimensional virtual laboratory for learning ear anatomy. *Smart Learning Environments*, 12(1). <https://doi.org/10.1186/s40561-025-00371-8>
- Ren, X. (2025). We want but we can't: measuring EFL translation majors' intention to use ChatGPT in their translation practice. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-04604-6>
- Ridwan, M., Royana, I. F., & Setyawan, D. A. (2020). Keefektifan Model Reciprokal Teaching dan Teams Games Tournament Terhadap Hasil Passing Bawah Bola Voli. *Journal for Lesson and Learning Studies*, 3(3), 346–354. <https://doi.org/10.23887/jlls.v3i3.28339>
- Rosas, D. A., Padilla-Zea, N., & Burgos, D. (2025). Modeling the physiological response of flow in groups: a mathematical approach. *Smart Learning Environments*, 12(1). <https://doi.org/10.1186/s40561-025-00375-4>
- Salloum, S. A., Alomari, K. M., Alfaisal, A. M., Aljanada, R. A., & Basiouni, A. (2025). Emotion recognition for enhanced learning: using AI to detect students' emotions and adjust teaching methods. *Smart Learning Environments*, 12(1). <https://doi.org/10.1186/s40561-025-00374-5>
- Sharma, S., Mahotra, A., Thapa, T. R., Thapa, P., Bhandary, S., Bhushal, S., & Paudel, S. (2025). Factors influencing utilization of school health nurse program among secondary students of Lalitpur, Nepal: a mixed-method study. *BMC Public Health*, 25(1). <https://doi.org/10.1186/s12889-025-21972-5>
- Shi, X. (2025). Study on learning adaptability of STEM students in the new college entrance examination context. *Discover Education*, 4(1). <https://doi.org/10.1007/s44217-025-00425-6>
- Sonjaya, A. R. (2014). Pengaruh Model Pembelajaran Kooperatif Tipe TGT (Team Games Tournament) Terhadap Motivasi Belajar dan Kemampuan Motorik Siswa Asrama Kelas VII. *Edusentris*, 3(2), 149–161.
- Sverdlik, N., Slobodin, O., & Katz, I. (2025). Exploring the interplay of students' values and lecturers' teaching orientation during the shift to distance learning: a person-environment perspective on students' need satisfaction. *Social Psychology of Education*, 28(1). <https://doi.org/10.1007/s11218-024-09963-7>
- Tu, W., Huang, W.-C., Ma, N., & He, J. (2025). Mixed ownership reform and digitalisation. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-04613-5>
- Wardana, M. K. K., Adi, I. P. P., & Suwiwa, I. G. (2020). Pengaruh model pembelajaran kooperatif tipe team games tournament (tgt) terhadap hasil belajar passing control sepakbola. *Jurnal Penjakora*, 7(2), 126–134. <https://doi.org/10.23887/penjakora.v7i2.26403>
- Zhang, W., Guan, Y., Hu, Z., Wang, C., Lu, D., & Lu, H. (2025). Interplay of student characteristics multidimensional engagement and influencing factors in online computer science education. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-90142-9>