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Team Games Tournament (TGT) Learning Model to Improve Students' Abilities and Motivation Junior High School

Indi Astrina [1], Muh. Adnan Hudain[2], Juhanis[3]
[1, 2, 3] Departement of Physical Education & Sport, Universitas Negeri Makassar, Indonesia

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ABSTRACT

Many eighth-grade students at Junior High School 37 Makassar face obstacles in mastering volleyball skills and have low learning motivation during physical education lessons. Conventional learning approaches are considered less able to create active participation and enthusiasm in practicing basic volleyball techniques. This study aims to improve volleyball skills and student learning motivation through the implementation of the Team Games Tournament (TGT) learning model. This study uses the Classroom Action Research method, which is implemented in three stages, namely pre-cycle, Cycle I, and Cycle II. The subjects of the study were eighth-grade students of Junior High School 37 Makassar. Data was collected through observation sheets, volleyball skills tests, motivation observation sheets, and documentation. Data analysis was carried out descriptively by combining quantitative and qualitative approaches. The research findings show a consistent increase in each cycle. In the pre-cycle stage, students' skills and motivation were in the moderate category. After the implementation of the TGT model, the results in Cycle I began to show improvements and reached a peak in Cycle II, where volleyball skills and student learning motivation increased significantly. This study shows that the TGT model is effective as a learning strategy to improve both physical performance and psychological aspects of students. These results can be a reference for physical education teachers in implementing a competitive but fun cooperative learning model to achieve curriculum targets.

Corresponding Author:
Indi Astrina,
Departement of Physical Education & Sport, Universitas Negeri Makassar, Indonesia
Email: indiastrina1001@gmail.com

I. INTRODUCTION

Physical Education, Sports, and Health (PJOK) is a strategic instrument in the national education system that focuses not only on physical fitness but also on mental, emotional, and social development simultaneously (Andryawan et al., 2024; Mardiana et al., 2024; Setiawan, 2025; Usman et al., 2024). Students explore their movement potential in line with their developmental stages through measured physical activity (Azizin et al., 2024; Widiatma et al., 2022). At the junior high school level, the primary

focus of PJOK is to equip students with fundamental movement skills applicable to both daily life and sporting achievement (Anwar et al., 2024; Kalaja et al., 2012).

Volleyball occupies a crucial position within the junior high school curriculum structure, integrating technical, physical, and affective aspects (Batez et al., 2021; Saputra et al., 2022). This sport demands precise hand-eye coordination, muscular strength, endurance, and quick decision-making (Beldman et al., 2025). As a team sport, volleyball is also an ideal vehicle for building social character through communication and cooperation between players. The rapid growth in volleyball's popularity recently (Irfan et al., 2023) requires the evolution of learning methods to be more effective and efficient (Karmila et al., 2024).

However, the reality on the ground shows a significant discrepancy between curriculum targets and student achievement. Students at Junior High School 37 Makassar did not achieve mastery of basic techniques like underhand passing, overhand passing, and serving, falling short of the completion standard. This obstacle stems not only from physical limitations but also from low learning motivation due to a learning pattern that tends to be monotonous and instructional and lacks active participation. Previous improvement efforts using the Project-Based Learning (PjBL) model were deemed suboptimal in the context of physical education and health because the duration of theoretical discussions often reduced students' time on task, or active movement time on the field.

This research aims to fill this gap in the literature and practice through a different approach. The main novelty of this research lies in the integrative synergy between equipment modifications (Modified Mini Volleyball) and a tiered tournament mechanism in the Teams Games Tournament (TGT) model, adapted specifically to the local characteristics of students at junior high school 37 Makassar.

Unlike previous studies that generally tested the effectiveness of TGT only on cognitive or motor learning outcomes (Fenanlampir, 2021; Ruhiat et al., 2023; Shofa & Suroto, 2024), this study explores how the competitive structure in TGT functions as a psychological stimulant to increase intrinsic motivation, simultaneously accelerating mastery of modified basic techniques. The use of a lighter ball and adjusted court size in mini volleyball (Sonjaya, 2024) provides a sense of success in every student movement, which is then reinforced by the collegial spirit of the TGT model (Ginanjar et al., 2021).

Another innovative aspect lies in the data analysis approach within a Classroom Action Research (CAR) framework. This study measures final outcomes and conducts operational behavioral correlations, namely how changes in social behavior (teamwork in TGT) directly correlate with improvements in objective physical performance on the field. This investigation provides a comprehensive picture of the intervention's effectiveness on students' psychomotor and affective domains simultaneously.

Practically, this study aims to formulate an inclusive and enjoyable learning strategy, while also providing a theoretical contribution to strengthening the literature on the advantages of the competitive cooperative model at the junior high school level. By optimizing time on task and reducing the fear of failure, it is hoped that this research

will be able to create a new precedent for effective PJOK teaching in schools with limited facilities.

2. METHOD

This study employed a Classroom Action Research (CAR) design, a systematic approach to transforming and directly improving the quality of classroom learning practices. This research design adopted a cyclical model consisting of four main stages: planning, acting, observing, and reflecting. The implementation of CAR in this study emphasized collaborative aspects between researchers and practitioners to identify instructional barriers and formulate interventions relevant to students' specific needs. This approach provided space for educators to make continuous practical improvements through active student involvement in the evaluation and reflection process. By focusing on solving real-world problems in the classroom, this method is expected to create a more adaptive and effective learning ecosystem based on measurable improvements in pedagogical performance. The Classroom Action Research approach is presented in Figure 1.

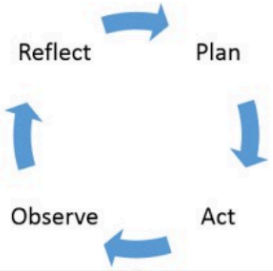

Figure 1. Classroom Action Research

The research was conducted for approximately 1 month, adjusted to the physical education learning schedule at the school. The timing refers to the school's academic calendar. The study took place between October and November 2025. The research was planned to be conducted over four weeks, which included four meetings or actions, organized into two cycles, with each cycle comprising two actions. This classroom action research was carried out at Junior High School 37 Makassar, South Sulawesi. In this study the population in this study is all students of class VIIIA at Junior High School 37 Makassar who are taking physical education lessons. The student observation sheet is used to watch student activity, activeness, cooperation, and sportsmanship during learning using the TGT model. The observation sheet contains behavioral indicators with a rating scale of 1-4 (very poor to very good). Tables and figures are presented in the center, as shown below, and they are cited in the manuscript.

Table 1. Student Observation Sheet

No	Observed Aspects	Score 1	Score 2	Score 3	Score 4
1	Student activeness in teamwork (Keaktifan siswa dalam kerja kelompok)				
2	Participation in games and tournaments (Partisipasi dalam permainan dan turnamen)				
3	Cooperation with group members (Kerjasama dengan anggota kelompok)				
4	Sportsmanship in playing (Sportivitas dalam bermain)				
5	Enthusiasm and attention during learning (Antusiasme dan perhatian selama pembelajaran)				
6	Responsibility for group tasks (Tanggung jawab terhadap tugas kelompok)				

Each cycle in this research followed the following procedures:

- Planning: Developing a lesson plan using the Teams Games Tournament (TGT) model, preparing modified mini volleyball game media, and preparing assessment instruments.
- Acting: Implementing learning according to the TGT syntax, including class presentations, forming heterogeneous groups (teams), games, tournaments, and team recognition.
- Watching: Conducting systematic observations of student activities, cooperation, and sportsmanship during the tournament.
- Reflecting: Analyzing data from the interventions to determine the success of the intervention and planning improvements in the next cycle if success indicators have not been achieved.

Data were collected through two main instruments to ensure the validity of the results: (1) Student Observation Sheet: This sheet is used to keep track of how active, engaged, cooperative, and sportsmanlike students are while the TGT model is being used. This sheet has a rating scale from 1 to 4 (Very Poor to Very Good) for behavioral indicators. (2) Volleyball Skills Test: A technical tool used to check how well students can pass the ball and how well they do it before and after the intervention.

The data obtained were analyzed using comparative descriptive analysis. Researchers compared the results of the skills test and motivation observation scores between the initial conditions (pre-cycle), Cycle I, and Cycle II. Improvements in learning quality were measured based on the percentage of classical completion and the average increase in student behavior scores in each cycle.

3. RESULTS AND DISCUSSION

Results

Description of Pre-Cycle Conditions

Preliminary observations prior to the implementation of the Team Games Tournament (TGT) model showed that the volleyball skills and learning motivation of eighth-grade students at Junior High School 37 Makassar remained moderate. Technically, the majority of students faced significant challenges in mastering basic movement mechanics, particularly underhand passing and tactical coordination between team members.

This performance gap was exacerbated by low student engagement in the learning process. The dominance of conventional instructional methods led to a tendency toward passivity, with students demonstrating little initiative and enthusiasm during practice sessions. This current situation underscores the need for a more dynamic and participatory learning strategy to simultaneously stimulate students' psychomotor and affective aspects.

Cycle I Results: Initial Implementation of the TGT Model

In Cycle I, researchers began implementing the TGT model combined with a modified mini volleyball.

- Volleyball Skills: Test results showed improvement compared to the pre-cycle, but had not yet reached the classical success indicators. Some students were still adapting to the tournament mechanism.
- Learning Motivation: Observation sheets revealed increased student enthusiasm during the game sessions. However, teamwork still needed to be strengthened as some students continued to dominate the game.

Table 2. Summary of Classroom Action Research Results: Cycle I

Observation Aspect	Achievement Results (Cycle I)	Fieldwork Findings
Volleyball Skills	Moderate Improvement	Test results showed progress compared to the pre-cycle but had not yet reached the classical success indicators. Students were still adapting to the tournament mechanism.
Learning Motivation	Increased Enthusiasm	Observations showed a significant increase in student enthusiasm during the game sessions.
Group Dynamics	Requires Strengthening	Teamwork was suboptimal; certain students were found to be dominating the games, hindering inclusive participation.

Cycle II Results: Optimization and Significant Improvement

Building upon reflections from Cycle I, researchers made improvements to group division and explanations of tournament rules. The results of Cycle II demonstrated the following achievements:

- Improved Skills: The implementation of TGT consistently improved students' physical performance. Modified equipment made it easier for students to perform

techniques correctly, resulting in a significant increase in the percentage of learning completion.

- Improved Motivation: Students demonstrated greater responsibility for group assignments and highly active participation in tournaments. This demonstrates that the healthy competition element in TGT effectively stimulates students' intrinsic motivation.

Table 3. Summary of Classroom Action Research Results: Cycle II

Observation Aspect	Achievement Results (Cycle II)	Field Findings
Physical Skills	Significant Improvement	The implementation of TGT consistently improved students' physical performance. The use of modified equipment facilitated accurate technique mastery, resulting in a significant increase in learning completion rates.
Intrinsic Motivation	Very High	The healthy competitive element of TGT effectively stimulated students' internal motivation. Students demonstrated active participation in tournaments.
Responsibility & Management	Optimal	Student responsibility for group assignments increased because of improved group division and explanation of tournament rules.

Summary Based on Motivation Observation Aspects

The observation instruments used, the following details the improvements in each aspect:

- Active Cooperation: Students were more proactive in helping teammates with lower abilities.
- Tournament Participation: All students participated in the tournament without fear of making technical errors.
- Sportsmanship: Mutual respect emerged within the group, even in a competitive atmosphere.
- Enthusiasm & Attention: Students' full attention was focused on the teacher's instructions and game strategy.

Table 4. TGT Implementation, Student Ability, and Motivation

Observation Category	Pre-Cycle	Cycle I	Cycle II
TGT Implementation (Observasi TGT)	79.58	82.29	83.71
Student Ability (Observasi Kemampuan)	74.58	76.71	90.28
Student Motivation (Observasi Motivasi)	69.60	71.26	81.86

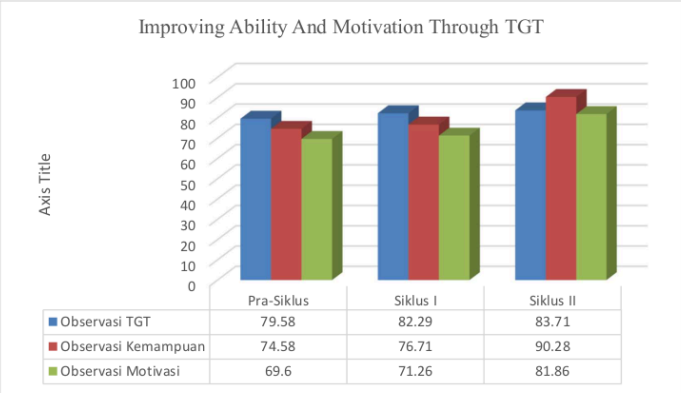

Figure 2. Observation Results

Interpretation Based on Data Analysis Techniques

The mean increased sharply in each cycle, indicating consistency between instruments. Data analysis shows that students' average scores experienced a sharp increase in each cycle. This increase was not partial but rather demonstrated high consistency across assessment instruments, both in terms of volleyball technical skills and learning motivation. This indicates that the TGT model has a comprehensive effect; as students' motivation increases through the tournament mechanism, their physical ability to practice volleyball techniques automatically accelerates due to the more intense and enjoyable training frequency.

There was no decrease in scores between cycles, demonstrating effective interventions. One crucial finding of this study was the absence of a decrease in scores (zero regression) between cycles. This success demonstrates that the interventional combination of the TGT model and game modifications was highly effective and targeted. Any obstacles encountered in Cycle I was immediately addressed during the reflection step, resulting in optimal model effectiveness in Cycle II. The stability of this improvement indicates that the changes in students' learning behavior and skill mastery are sustainable, not merely transient improvements.

All scores reached the "Very Good" category, according to the success indicator (≥80%). In accordance with the successful criteria established in this study (≥80%), all final scores in Cycle II achieved the "Very Good" category. This achievement exceeded the minimum expected completion standards. This success confirms that TGT elements, such as teams, games, and tournaments, can create a competitive yet supportive learning environment for students of all ability levels.

Data visualization through diagrams shows a consistent growth line from the pre-cycle stage, Cycle I, to Cycle II. This upward trend provides empirical evidence that (1) the pre-cycle stage serves as a baseline that shows the limitations of the old method. (2) Cycle I: Becomes an adaptation phase where students begin to recognize the TGT

structure and begin to show increased interest. (3) Cycle II: Becomes a consolidation phase where students have fully internalized the TGT model, resulting in maximum volleyball performance and motivation. Overall, the consistency of progress at each stage confirms that the TGT model works effectively as a stimulant for class VIII A students at Junior High School 37 Makassar. This model successfully changes the classroom atmosphere from initially passive to more dynamic, which ultimately has a direct impact on strengthening students' psychology and affective competencies in the subject of physical education.

These findings confirm that the TGT learning model is highly effective in improving volleyball learning outcomes and student motivation. This success is driven by the TGT structure, which allows students to learn while playing in a supportive atmosphere. The combination of the mini-volleyball modification and the TGT model has proven to be a solution to the limited student engagement experienced by previous methods.

Discussion

This study shows that the implementation of the Team Games Tournament (TGT) learning model combined with a modified mini volleyball game had a significant impact on the psychomotor skills and affective motivation of eighth-grade students at Junior High School 37 Makassar.

Transformation of Technical Skills and Motivation

In the pre-cycle phase, students' volleyball skills and learning motivation were in the moderate category. This was due to the use of conventional methods, which tended to make students passive and difficult to master basic techniques such as underhand passing. After the intervention, a consistent upward trend was observed: (1) Cycle I (Adaptation Phase): Students began to understand the TGT structure and showed increased enthusiasm, although the classical success indicator was not fully achieved as students were still adapting to the tournament mechanism. (2) Cycle II (Consolidation Phase): Results showed very significant improvement. The use of modified equipment made it easier for students to perform techniques correctly, resulting in a sharp increase in the percentage of learning completion (Bharathi et al., 2024; Dunlosky et al., 2013). All final scores in this cycle reached the "Very Good" category (≥80%), exceeding the minimum completion standard.

Analysis of the Effectiveness of the TGT Model

This success was driven by key elements in TGT: teams, games, and tournaments.

- Increased Intrinsic Motivation: The healthy competitive element of the tournament stimulated active student engagement. This was evident in the emergence of sportsmanship, proactive cooperation, and the loss of fear of making technical errors.
- Consistent Growth: Data analysis showed no decrease in scores (zero regression) between cycles. This demonstrates that the reflection conducted after Cycle I

successfully addressed existing obstacles, resulting in sustainable changes in student learning behavior and skill mastery, not just temporary improvements.

Theoretically and empirically, the results of this study reinforce previous findings regarding the effectiveness of cooperative learning models in physical education (Boke et al., 2025; Jiang et al., 2023; Legrain et al., 2019; Yang et al., 2021). They support the theory that equipment modification can reduce physical barriers and increase technical success in middle school-aged students. This aligns with the characteristics of TGT, which emphasizes that individual success contributes to team points, thus fostering peer support (Perdana et al., 2023; Saripudin et al., 2025). Furthermore, it confirms that the tournament model is more effective in increasing training intensity than conventional lectures or repetitive drills (Riyanti et al., 2024).

The integration of the TGT model has proven to be an effective solution to the limited student engagement experienced with traditional methods. By increasing motivation through tournaments, students' physical abilities in practicing volleyball techniques are automatically accelerated due to the more intense and enjoyable training frequency.

4. CONCLUSION

The application of the TGT model combined with mini volleyball modifications consistently improved students' technical (psychomotor) skills. This was evidenced by the scores achieved in Cycle II, which all fell into the "Very Good" category (≥80%) and exceeded the minimum completion standard. The TGT model effectively increased students' learning motivation (affective), as evidenced by increased enthusiasm, responsibility for group assignments, and active participation in tournaments without fear of making mistakes. A steady growth trend was observed from the pre-cycle stage to Cycle II without a decrease in scores (zero regression). This indicates that the combination of the TGT model and game modifications is an effective solution for transforming the classroom atmosphere from passive to dynamic and enjoyable. In addition to physical skills, this model successfully fostered positive social attitudes such as proactive cooperation among team members and sportsmanship (mutual respect) in a healthy competitive atmosphere.

As a recommendation, teachers are advised to adopt the TGT model as an alternative learning model for other team sports to prevent students from becoming bored with conventional methods. Teachers should modify equipment or game rules (such as mini volleyball) to suit students' ability levels, making basic techniques easier to master. In addition, further research is needed on the effectiveness of the TGT model at different levels of education or in individual sports to see the generalizability of this model.

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