

Efforts to Improve Collaboration Skills through the Team Games Tournament (TGT) Learning Model Assisted by Card Battle Media among Grade X (Phase E) Students at SMAN 3 Padang

Putri Leony Agustin^{1*}, Fitri Arsih¹, Ardi¹, Azhira²

¹Biology Education Study Program, Faculty of Mathematics and Natural Sciences,
Universitas Negeri Padang, Indonesia

²SMAN 3 Padang, Indonesia

*Corresponding author: leonyp157@gmail.com

Abstract

This classroom action research aimed to improve students' collaboration skills through the implementation of a cooperative learning model, specifically the Team Games Tournament (TGT) type, assisted by card battle media in class X E7 (Phase E) at SMAN 3 Padang. The study was conducted in September 2025 in two cycles; each Cycle consisted of planning, implementation of actions, observation, and reflection. The participants were 40 students in the 2025/2026 academic year. Collaboration skills were measured using an observation sheet developed based on collaboration indicators, including effective teamwork, adaptation among members, shared responsibility, deliberation and decision-making, and effective communication, and were supported by documentation and field notes. The results showed a consistent increase in students' collaboration skills across cycles: the baseline condition was 60.25%, which increased to 72.40% in Cycle I and reached 82.70% in Cycle II (collaborative category). Thus, the TGT model assisted by card battle media was proven effective in improving the collaboration skills of Grade X E7 students at SMAN 3 Padang.

Article History

Received: September, 2025

Reviewed: September, 2025

Published: October, 2025

Key Words

Collaboration Skills;
Team Games Tournament
(TGT); Card Battle
Media; Classroom Action
Research.

How to Cite: Agustin, P.L., Arsih, F., Ardi, A., & Azhira, A. (2025). Efforts to Improve Collaboration Skills through the Team Games Tournament (TGT) Learning Model Assisted by Card Battle Media among Grade X (Phase E) Students at SMAN 3 Padang. *DIDAKTIKA: Jurnal Penelitian Tindakan Kelas*, 3(2). 76-81.

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Introduction

Education is a fundamental foundation for advancing Indonesia; therefore, its implementation must be optimized to produce a high-quality generation (Miasari et al., 2022). Indonesia is currently adopting a new learning paradigm that centers the Pancasila Student Profile as a key reference for formulating educational policies and reforms (Haqiem & Nawawi, 2023). The government continuously updates the curriculum to remain relevant to ongoing developments, including the introduction of the Merdeka Curriculum, which provides a broader space for teachers and students in learning activities (Rahmadayanti & Hartoyo, 2022). This educational transformation is expected to produce graduates who are not only academically capable but also possess strong character and high adaptability to face future challenges.

The Merdeka Curriculum prioritizes character formation through the Pancasila Student Profile, which comprises six core dimensions: faith and noble character, independence, cooperation, global diversity, critical reasoning, and creativity (Irawati et al., 2022). This aligns with the demands of 21st-century learning. Learning in the 21st century emphasizes critical thinking, problem solving, communication, the ability to filter information, and collaboration (Ihwanto et al., 2022). Collaboration skills are particularly important because students are often required to work together to solve problems in both

learning and social contexts (Wulandari et al., 2021). Greenstein (2012), as cited in Redhana (2019), explains that collaboration involves working effectively and respectfully in diverse teams, integrating multiple perspectives, generating ideas, solving problems, and practicing fluency and a willingness to make decisions to achieve shared goals (Redhana, 2019).

Based on observations conducted from July 21 to August 1, 2025, at SMAN 3 Padang, collaboration skills among Phase E students were still relatively low. In group learning processes, most students tended to complete tasks individually, showed limited initiative to communicate, and experienced difficulties in dividing roles and responsibilities. This was reinforced by an interview with a Biology teacher on September 23, 2025, who stated that some Phase E students still required learning encouragement and did not contribute optimally when working in groups, often treating group work unseriously. This condition also resulted in dominance by a few students, while others remained passive due to shyness. According to Nurwahidah et al. (2021), low student collaboration skills can be attributed to the use of less innovative media, limited and less effective instructional methods, and teachers' insufficient guidance in developing collaboration skills. Low collaboration skills cause students to experience difficulties in completing tasks, which in turn affects learning outcomes and lowers human-resource quality (Najaah, 2021). As a result, students struggle to work together in completing group tasks and do not obtain optimal learning outcomes.

Learning involves several main components, namely students, teachers, methods, objectives, materials, media, and evaluation (Rusnawati, 2020). If one element is not implemented or is implemented sub-optimally, the learning process becomes less effective (Qomarudin, 2021). Using an appropriate learning model can have positive effects, including improved learning outcomes, increased interest in learning, or enhanced motivation. Moreover, the implementation of a proper learning model can influence students' collaboration skills (Yanto et al., 2023). Samosir (2023) also argues that collaboration skills can improve when learning models focus more on students and encourage them to be more active. Continued use of conventional models may lead to boredom and reduced motivation. Sari et al. (2024) state that applying Student-Centered Learning (SCL) can increase students' activeness and learning motivation compared with Teacher-Centered Learning (TCL). One learning model that can improve collaboration skills is the cooperative Team Games Tournament (TGT) model (Setyaningrum & Asrofah, 2024). In this model, student teamwork is emphasized in completing tasks because students in the same group support one another and are motivated by group success; thus, each individual has an equitable opportunity to contribute (Pei-qi, 2023).

To ensure that the TGT model can be implemented optimally, innovative and interactive learning media are needed to support teachers in developing students' collaboration skills. Learning media and instructional methods are key components with a close relationship in learning processes. Learning media function as tools that support knowledge delivery from teachers to students, whereas instructional methods refer to the strategies applied during learning activities (Sueni, 2019). Various types of learning media can be combined with the TGT model, including visual media such as images, cards, or boards. One variation of card-based visual media is known as card battle. Card battle is a learning medium made using manila paper and designed attractively for classroom use. Through this game, students are required to thoroughly understand the material so that they can use the cards effectively and win the tournament, thereby making learning more meaningful and motivating students to collaborate actively within their teams. Based on the problem description above, the researchers were interested in conducting a study (mini

research) on efforts to improve collaboration skills through the Team Games Tournament (TGT) model assisted by card battle media among Grade X (Phase E) students at SMAN 3 Padang. The purpose of this study was to determine the improvement of collaboration skills among Grade X (Phase E) students through the implementation of TGT.

Research Method

This study employed Classroom Action Research (CAR), which aimed to improve students' learning outcomes in Biology, particularly on the topic of data presentation. The research was conducted in two cycles, with each Cycle consisting of four stages: planning, action implementation, observation, and reflection. The study was conducted at SMAN 3 Padang from September to November 2025. The participants were all students of class X E7 at SMAN 3 Padang in the 2025/2026 academic year, totaling 40 students.

The research instrument was an observation sheet used during the learning process that implemented the Team Games Tournament (TGT) model to measure students' collaboration skills. The observation sheet was developed based on collaboration-skill indicators, as outlined by Trilling and Fadel (2009), including working effectively as a team, adapting to group members, sharing responsibility for collaborative work, deliberating to make decisions, and communicating effectively within the group. Documentation and field notes were also used to complement the observation data. The achievement of students' collaboration skills observed was then matched with the collaboration-skill achievement criteria shown in Table 1.

Table 1. Criteria for Collaboration Skill Achievement

Score	Description
> 80	Highly collaborative
> 60–80	Collaborative
> 40–60	Moderately collaborative
> 20–40	Less collaborative
≤ 20	Not collaborative

Research Findings and Discussion

Based on the research results, the Team Games Tournament (TGT) learning model successfully improved the collaboration skills of Grade X E7 students at SMAN 3 Padang. This improvement is reflected in the percentage scores from the baseline condition of 60.25%, which increased by 12 percentage points to 72.40% in Cycle I. In Cycle II, collaboration skills increased by a further 10 percentage points to 82.70%. The percentage increase in collaboration skills is presented in Table 2.

Table 2. Percentage Increase in Students' Collaboration Skills

Research Variable	Baseline	Cycle I	Cycle II
Collaboration skills	60.25%	72.40%	82.70%

Table 2 shows that the collaboration-skill percentage for class X E7 students at SMAN 3 Padang averaged 60.25% at baseline, which falls within the moderately collaborative category. After implementing the model in Cycle I, students' collaboration skills increased to 72.40% (still within the collaborative range). In Cycle II, collaboration skills increased to

82.70%, reaching the collaborative category. These results indicate that students' collaboration skills improved in every Cycle. With the final-cycle target set by the researchers at 82%, the target was achieved. This finding provides evidence that the cooperative TGT model can improve the collaboration skills of class X E7 students at SMAN 3 Padang. Based on the research findings, implementing the TGT model was proven to facilitate students' collaborative learning. During implementation, the teacher provided opportunities for students to help one another in completing assigned tasks. Students were also guided in developing the ability to express their opinions through discussion activities. These actions were carried out to enable students to work together effectively and achieve group synergy.

Initial observations indicated that most students displayed a lack of teamwork ability. This condition was reflected in various behaviors during the learning process. A prominent phenomenon was that many students tended to be passive within groups. They appeared reluctant to express opinions, ideas, or thoughts they may have had. Their involvement in group discussions was minimal, and some contributed little to the group activity. Another issue that affected the quality of collaboration was the dominance of certain group members. This situation created an unbalanced group dynamic, with only a small number of students contributing actively, while others became passive observers. Such dominance not only hindered the participation of other members but also reduced learning opportunities for all members to develop evenly. As a result, collaboration processes that should have run optimally and yielded meaningful learning did not occur fully. According to the assessment results, the mean collaboration ability remained in the low-to-moderate range.

During Cycle I, the implementation of TGT began to have a positive effect on group interactions. The use of card battle media in the tournament session encouraged students to be more active and engaged in teamwork. Students started to formulate strategies together, divide tasks, and discuss to win inter-group competitions. However, collaboration skills were not yet evenly distributed. Some students remained passive during initial discussions, although they became more active when the game session began. Communication among group members improved, but several groups still relied heavily on certain members. Observation results showed that the average collaboration score increased, although it had not yet reached a high category. The highest score in Cycle I came approximately 72%.

In Cycle II, improvements were implemented to address the issues that emerged in the previous Cycle. The improvement efforts began by reinforcing the rules of cooperation that all group members were required to follow. These rules were explained in more detail and agreed upon to ensure that each student understood their responsibilities and roles within the group. In addition, group composition was adjusted to be more balanced and heterogeneous. Grouping in this Cycle considered academic ability, personality characteristics, and behavioral tendencies in teamwork. The aim was to create more equitable group dynamics, ensuring that no member dominated and no member remained overly passive. These changes had a positive impact on the learning atmosphere. Students began to show greater comfort when working with peers in their groups. The previously observed awkwardness and hesitation were diminished, replaced by more open and cooperative attitudes. Observation results showed a significant increase in score. The highest collaborative score reached 82%, and the mean score across all indicators increased. This improvement indicates that the TGT model, assisted by card battle media, effectively enhanced collaboration skills in class X E7.

The improvement in collaboration skills through the cooperative TGT model, assisted by card battle media, occurred due to several factors. First, the TGT model created an

enjoyable learning atmosphere. Through the game and tournament elements, students became more enthusiastic and motivated to learn. This aligns with Slavin (2015), who states that TGT can improve students' learning motivation due to its game and tournament components. Second, the card battle medium contributed to increased collaboration by enabling students to interact and work together within groups to complete tasks. This is consistent with Sudjana (2019), who explains that learning media can facilitate collaborative learning. Based on the discussion above, it can be concluded that implementing the cooperative TGT model, assisted by card battle media, can improve the collaboration skills of Class X E7 students. Enjoyable learning, engaging media, and opportunities to collaborate within groups were key factors supporting the improvement in students' collaboration skills.

Conclusion

The cooperative Team Games Tournament (TGT) model can improve the collaboration skills of class X E7 students at SMAN 3 Padang. The mean collaboration skill score increased in each Cycle. At baseline, collaboration skills reached only 60.25% (moderately collaborative). After implementing TGT in Cycle I, the score increased by 12 percentage points to 72.40% (collaborative). Improvements in instructional strategies in Cycle II resulted in a further increase of 10 percentage points, reaching 82.70% (collaborative). Thus, the TGT model, assisted by card battle media, is effective as an instructional strategy for optimally developing students' collaboration skills.

Recommendations

Teachers may apply the TGT model, assisted by card battle media, as an alternative instructional strategy to improve students' collaboration skills. In implementation, teachers should ensure heterogeneous group composition by considering students' academic abilities, personality characteristics, and behavioral tendencies, so that balanced group dynamics are formed. Teachers should also consistently reinforce cooperation rules and emphasize the importance of effective communication and clear role distribution within groups.

Acknowledgements

The authors thank Mrs. Dra. Azhira, M.Pd., as the supervising teacher at SMAN 3 Padang, and Mr. Drs. Ardi, M.Si., as the academic supervisor, for their guidance and direction, which enabled the authors to complete this article on time. The authors also thank the students of class X E7 at SMAN 3 Padang for their contributions to the completion of this article.

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