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Teams Games Tournament and Student' Critical Thinking Skills: A Review of Learning Model Effectiveness

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ABSTRAK

Artikel ini bertujuan untuk mengkaji efektivitas model pembelajaran Teams Games Tournament (TGT) dalam meningkatkan keterampilan berpikir kritis siswa. Berpikir kritis merupakan kompetensi penting dalam pembelajaran abad ke-21 karena mendukung kemampuan siswa dalam menganalisis permasalahan, mengevaluasi informasi, dan mengambil keputusan secara logis. Penelitian ini menggunakan metode literature review dengan menganalisis artikel penelitian empiris yang dipublikasikan pada jurnal nasional dan internasional terakreditasi dalam rentang tahun 2020–2024. Artikel yang direview diperoleh melalui basis data Google Scholar, ScienceDirect, dan ERIC, kemudian dianalisis menggunakan teknik content analysis. Hasil kajian menunjukkan bahwa penerapan model pembelajaran TGT secara konsisten memberikan dampak positif terhadap peningkatan keterampilan berpikir kritis siswa pada berbagai jenjang pendidikan dan bidang studi. Efektivitas model TGT dipengaruhi oleh karakteristik pembelajaran kooperatif, penggunaan aktivitas berbasis permainan, serta tahapan turnamen akademik yang mendorong keterlibatan aktif siswa dalam proses analisis, evaluasi, dan pemecahan masalah. Dengan demikian, dapat disimpulkan bahwa model pembelajaran Teams Games Tournament merupakan pendekatan pembelajaran yang efektif dalam mengembangkan keterampilan berpikir kritis siswa dan relevan dengan tuntutan pembelajaran masa kini yang berorientasi pada keterampilan berpikir tingkat tinggi.

ABSTRACT

This article aims to review the effectiveness of the Teams Games Tournament (TGT) learning model in enhancing students' critical thinking skills. Critical thinking is an essential competency in 21st-century learning, as it supports students' ability to analyze problems, evaluate information, and make logical decisions. This study employed a literature review method by analyzing empirical research articles published in national and international accredited journals between 2020 and 2024. The selected articles were obtained from Google Scholar, ScienceDirect, and ERIC databases and analyzed using content analysis techniques. The findings indicate that the implementation of the TGT learning model consistently contributes to significant improvements in students' critical thinking skills across various educational levels and subject areas. The effectiveness of TGT is attributed to its cooperative learning structure, integration of game-based activities, and competitive tournament stages that actively engage students in analysis, evaluation, and problem-solving processes. Overall, this review concludes that the Teams Games Tournament learning model is an effective instructional approach for fostering students' critical thinking skills and is highly relevant for contemporary learning contexts that emphasize higher-order thinking skills.

1. INTRODUCTION

Critical thinking skills enable individuals to analyze information, evaluate arguments, and make reasoned decisions, making them indispensable competencies in both education and everyday life (Sagar, 2024). In the learning process, critical thinking plays a crucial role in helping students solve problems related to the subject matter being studied. The development of these skills requires the implementation of learning models that are relevant to students' needs and learning characteristics. In learning, this ability helps students analyze arguments, assess evidence, and draw logical conclusions (Putri et al., 2025).

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One instructional approach that supports the enhancement of critical thinking skills is cooperative learning. Cooperative learning is defined by a structured collaboration of tasks, goals, and rewards, in which two or more learners actively work together and share knowledge and experiences to achieve common learning objectives (Lufri et al., 2020). This perspective aligns with Agusminarti and Hudi (2020), who emphasize that the choice of learning model is a key factor in determining the success of the learning process.

Among various cooperative learning models, the Teams Games Tournament (TGT) model has gained attention for its potential to foster critical thinking. Yuliyanti and Sunarsih (2019) report that the TGT cooperative learning model is effective in improving students' critical thinking skills during learning activities. Furthermore, Susilo et al. (2019) highlight that game-based learning, when integrated with appropriate instructional models, can stimulate students' engagement and enhance their ability to think critically. (Nuraeni et al., 2019) said students are expected to become individuals with character, broad insight, technology literacy, and able to solve problems innovatively. Rizki (2024) states that critical thinking is a decision-making process in solving problems in a directed and well-organized manner so that it can create appropriate alternative problem-solving solutions.

Research by Muttaqien et al. (2021) also states that the implementation of the TGT cooperative learning model has proven effective in improving students' critical thinking skills compared to conventional discussion models.

The TGT learning model, a cooperative learning model using groups and incorporating games and tournaments, can be an appropriate learning model for students because it encourages student participation and discussion to foster group cooperation (Marlita et al., 2023). This is in line with Sudimahayasa's (2015) opinion, which states that TGT learning is a cooperative learning method that is easy to implement, involves the activities of all students without distinction of status, involves students as peer tutors, and contains elements of play and reinforcement. The TGT cooperative learning model is unique compared to other cooperative learning models because it requires students to think and take responsibility independently and in groups in a fun atmosphere through tournament activities. This learning provides opportunities for students to share ideas and encourages them to increase their spirit of cooperation in completing existing activities (Nurhidayah, 2018). The TGT learning model also has weaknesses in learning.

According to Nilasari et al. (2024), a weakness of the TGT learning model is that the process of understanding the concept of cooperation in team learning takes a considerable amount of time, sometimes causing students to feel hampered by their less skilled group mates. Combining individual abilities with collaborative skills is also challenging. Teachers need to understand that group-based assessments ultimately aim to measure individual achievement. The mutual learning environment among students also has the potential to lead to understanding that does not always align with expectations.

The introduction contains the background of the research problem, research objectives, and a bit about theoretical studies. In this introductory section, the state of the art of the article must appear so that the research being carried out is indeed necessary. The article must be original because it has never been published in another journal. Articles that have been presented in a forum, such as a seminar, must be mentioned in the forum.

2. METHOD

This study employed a literature review approach by examining articles published in accredited national and international journals accessed through Google Scholar, ScienceDirect, and ERIC. The selected articles met several inclusion criteria, including being empirical

research articles written in Indonesian or English, aligning with the predetermined search keywords, having titles and content relevant to the research objectives, and being freely accessible. The reviewed articles were published between 2020 and 2024.

Data analysis was conducted using a content analysis method, which involved an in-depth examination of various literature sources discussing the effectiveness of the Teams Games Tournament (TGT) learning model in enhancing students' critical thinking skills. From the total number of articles initially identified, a screening process based on the inclusion criteria was applied, resulting in a final selection of seven articles included in the review.

3. RESULT AND DISCUSSION

Table 1. Teams Games Tournament and Student' Critical Thinking Skills: A Review of Learning Model Effectiveness

Code	Author	Research Title	Research Result
A1	Siahaan et al. (2024	The Effect of Cooperative Learning Model Type Teams Games Tournament Assisted by Kahoot! on Students' Mathematical Critical Thinking Skills	The results show that students taught using the Teams Games Tournament (TGT) model assisted by Kahoot! achieved significantly higher mathematical critical thinking skills than students taught through conventional learning. Statistical analysis using the Mann–Whitney U test confirmed a significant difference, with a large effect size (Cliff's Delta = 0.591), indicating that TGT is highly effective in enhancing students' critical thinking skills.
A2	Widyadhari et al. (2023)	Team Games Tournament Learning Model Assisted by Question Cards on Improving Students' Critical Thinking Skills	The results show that the application of the Teams Games Tournament learning model supported by question cards improves students' critical thinking skills and learning engagement.
A3	Fahrizal (2021)	The Implementation of Cooperative Learning Model Type Teams Games Tournament to Improve Students' Critical Thinking Skills in Social Studies Learning	The results indicate that the Teams Games Tournament model significantly enhances students' critical thinking skills in social studies learning. The cooperative and competitive learning atmosphere encourages students to analyze information, collaborate, and solve problems more critically.

A4	Mu'asaroh et al. (2023)	Improving Students' Critical Thinking Skills and Learning Motivation through Teams Games Tournament with Culturally Responsive Teaching	The study concludes that the integration of the Teams Games Tournament model with culturally responsive teaching leads to a significant improvement in students' critical thinking skills and learning motivation. Students show better reasoning, problem analysis, and decision-making abilities.
A5	Qausar et al. (2022)	The Effect of the Teams Games Tournament Learning Model Assisted by Wheel of Math and Card Matching on Students' Mathematical Critical Thinking Skills	The results demonstrate that the Teams Games Tournament model assisted by Wheel of Math and card matching media has a significant positive effect on students' mathematical critical thinking skills. The use of game-based media supports students' analytical and evaluative thinking processes.
A6	Sari et al. (2021)	Teams Games Tournament Learning Model Assisted by Game Media to Improve Elementary Students' Critical Thinking Skills	The findings show that the Teams Games Tournament learning model assisted by game media effectively improves elementary school students' critical thinking skills. Students become more engaged, actively participate in discussions, and show improved abilities in reasoning and problem-solving.
A7	Fauziyah & Anugraheni (2020)	The Effect of Teams Games Tournament Learning Model on Students' Critical Thinking Skills in Thematic Learning	The study indicates that the Teams Games Tournament learning model has a significant effect on students' critical thinking skills in thematic learning. Students taught using TGT demonstrate better critical analysis, reasoning, and problem-solving abilities compared to conventional learning models.

Based on the results of the analysis of seven reviewed articles (Siahaan et al., 2024; Widyadhari et al., 2023; Fahrizal, 2021; Mu'asaroh et al., 2023; Qausar et al., 2022; Sari et al., 2021; Fauziyah & Anugraheni, 2020), it can be concluded that the Teams Games Tournament (TGT) learning model is effective in improving students' critical thinking skills. This effectiveness is closely related to the characteristics of the TGT model, which emphasizes

cooperative learning, game-based activities, and structured academic competitions that actively engage students throughout the learning process. The TGT model not only delivers learning content but also positions students as active participants who collaborate, analyze problems, exchange ideas, and evaluate solutions during games and tournaments. All reviewed articles consistently report improvements in students' critical thinking skills when the TGT model is implemented, either as a standalone learning model or when combined with supporting approaches and media such as Kahoot!, question cards, game-based learning tools, and culturally responsive teaching. These findings indicate that the TGT model provides a learning environment that effectively supports the development of students' analytical, evaluative, and problem-solving abilities.

Discussion

In article A1 (Siahaan et al., 2024), the implementation of the Teams Games Tournament (TGT) learning model assisted by Kahoot! demonstrated significant success in improving students' mathematical critical thinking skills at the senior high school level. During the class presentation phase, students were guided to understand contextual problems related to probability concepts. This stage fostered initial interpretation and analysis skills, as students were required to identify given information and formulate problem statements. Furthermore, in the team discussion phase, students actively exchanged ideas, analyzed problem-solving strategies, and constructed logical reasoning collaboratively. The game and tournament stages strengthened students' evaluation and inference skills, as they had to make quick yet accurate decisions based on analytical thinking. The use of Kahoot! further enhanced students' engagement and reinforced explanatory skills through instant feedback and competitive interaction.

In article A2 (Widyadhari et al., 2023), the application of the Teams Games Tournament model assisted by question cards proved effective in improving students' critical thinking skills. The organization of students into heterogeneous teams played a crucial role in fostering collaboration and communication. Through guided group discussions, students actively analyzed questions presented on the cards, expressed arguments, and evaluated alternative solutions proposed by peers. The game-based competition encouraged students to justify their answers logically, thereby strengthening explanation and evaluation indicators. As a result, students demonstrated improved analytical and reasoning abilities throughout the learning process.

In article A3 (Fahrizal, 2021), students' critical thinking skills improved significantly when the Teams Games Tournament model was applied in social studies learning. The group learning phase served as the core component, where students collaboratively analyzed social issues and discussed possible solutions. This process strengthened analysis and inference skills, as students were required to interpret data and draw conclusions based on group discussions. The tournament phase further reinforced evaluation skills by encouraging students to assess the accuracy of answers and reflect on alternative viewpoints emerging during the competition.

In article A4 (Mu'asaroh et al., 2023), the integration of the Teams Games Tournament model with culturally responsive teaching focused on enhancing both critical thinking skills and learning motivation. The group discussion and game stages encouraged students to relate learning materials to their cultural contexts, thereby deepening understanding and analytical thinking. During the tournament phase, students evaluated problem-solving strategies while respecting diverse perspectives within their groups. This learning process strengthened evaluation and explanation skills, as students were required to articulate reasoning clearly and justify their conclusions.

In article A5 (Qausar et al., 2022), the Teams Games Tournament learning model assisted by Wheel of Math and card matching media significantly improved students' mathematical critical thinking skills. The game phase provided opportunities for students to analyze mathematical problems through interactive media, fostering interpretation and analytical skills. Meanwhile, the tournament stage encouraged students to evaluate answers critically and draw logical inferences based on mathematical reasoning. The combination of TGT and game-based media created an engaging learning environment that supported systematic thinking and problem-solving.

In article A6 (Sari et al., 2021), the Teams Games Tournament model assisted by game media was shown to effectively enhance elementary students' critical thinking skills. From the early stages of learning, students were actively involved in identifying problems and discussing possible solutions within their teams. The competitive nature of the tournament phase motivated students to think critically, evaluate peers' responses, and refine their reasoning. This process strengthened students' explanation and inference skills, as they were required to articulate ideas clearly and justify decisions during the games.

Meanwhile, article A7 (Fauziyah & Anugraheni, 2020) demonstrated that the Teams Games Tournament learning model significantly improved students' critical thinking skills in thematic learning. The structured stages of TGT, including group discussion, games, and tournaments, provided opportunities for students to analyze problems, evaluate information, and draw logical conclusions. Students showed improved reasoning and decision-making abilities as they actively participated in competitive and collaborative learning activities.

Overall, the seven analyzed articles demonstrate that all stages of the Teams Games Tournament model class presentation, team learning, games, tournaments, and group recognition—have a direct and significant relationship with strengthening critical thinking skills indicators. Each stage complements the others, forming an active, collaborative, and reflective learning cycle. The TGT model not only encourages students to understand learning content but also develops analytical thinking, evaluation skills, and logical reasoning through structured competition and cooperation.

Overall, the syntax of the Teams Games Tournament (TGT) model directly supports the achievement of all indicators of critical thinking skills. Each stage of TGT from problem presentation and collaborative discussion to competitive games and tournaments is closely related to essential aspects of critical thinking, such as analyzing problems, evaluating arguments, drawing inferences, and explaining solutions logically. Therefore, it can be concluded that the implementation of the Teams Games Tournament model significantly promotes the improvement of students' critical thinking skills and is highly relevant for 21st-century learning that emphasizes higher-order thinking skills.

4. CONCLUSION

The achievement of students' critical thinking skills indicators, including interpretation, analysis, evaluation, inference, and explanation, occurred significantly due to the implementation of the Teams Games Tournament (TGT) learning model. The TGT model provides opportunities for students to interpret information accurately through problem presentation and group discussions (interpretation), analyze problems logically during collaborative team learning (analysis), evaluate the accuracy of answers and strategies during games and tournaments (evaluation), draw conclusions based on reasoning and evidence obtained from competitive activities (inference), and explain their thinking processes clearly and coherently during group discussions and tournament sessions (explanation). Through the

structured syntax of the TGT model, which actively involves students in cooperative learning and academic competition, it is evident that students' critical thinking skills improve significantly. Therefore, the Teams Games Tournament learning model is proven to be an effective instructional approach for enhancing students' critical thinking skills in 21st-century learning contexts.

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