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THE EFFECT OF THE TEAMS GAME TOURNAMENT LEARNING MODEL ON CRITICAL THINKING ABILITIES AND MOTIVATION TO LEARN IPAS IN 5TH GRADE ELEMENTARY SCHOOL STUDENTS

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Abstract
This study aims to determine the effect of the TGT (Teams Games Tournament) Cooperative Learning model on critical thinking skills and student learning motivation in the fifth grade science subject at Tambongwetan 1 Elementary School, Klaten Regency. This type of research is a quasi-experimental study using a Pretest-Posttest Control Group Design. The experimental class was given TGT learning and the control class was given conventional learning. The sampling technique used simple random sampling. The data analysis technique used inferential statistics. The results showed that the average critical thinking skills of the experimental class increased significantly by 30 points, and the control class only increased by 20.8 points. Student learning motivation in the experimental class also experienced a greater increase, namely by 19 points, compared to the control class which only increased by 5.11 points. The results of the inferential analysis showed a significant effect (p <0.001) of the TGT model on both dependent variables. In conclusion, the TGT model is effective for improving students' critical thinking skills and learning motivation in science learning.
Keywords: *Team Games Tournament; Critical Thinking; Learning Motivation; IPAS.*

Abstrak
Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran *Cooperative Learning* tipe TGT (*Teams Games Tournament*) terhadap kemampuan berpikir kritis dan motivasi belajar siswa pada mata pelajaran IPAS kelas V di SD Negeri 1 Tambongwetan, Kabupaten Klaten. Jenis penelitian adalah eksperimen semu dengan menggunakan desain *Pretest-Posttest Control Group Design.* Kelas eksperimen diberikan pembelajaran TGT dan kelas control diberikan pembelajaran konvensional. Teknik pengambilan sampel menggunakan simple random sampling. Teknik analisis data menggunakan ststistik inferensial. Hasil penelitian menunjukkan bahwa rata-rata kemampuan berpikir kritis kelas eksperimen meningkat signifikan sebesar 30 poin, dan kelas kontrol hanya meningkat sebesar 20,8 poin. Motivasi belajar siswa pada kelas eksperimen juga mengalami peningkatan lebih besar, yaitu sebesar 19 poin, dibandingkan kelas kontrol yang hanya meningkat sebesar 5,11 poin. Hasil analisis inferensial menunjukkan pengaruh yang signifikan (p < 0,001) dari model TGT terhadap kedua variabel terikat tersebut. Simpulannya, model TGT efektif digunakan untuk meningkatkan kemampuan berpikir kritis dan motivasi belajar siswa pada pembelajaran IPAS
Kata Kunci: *Teams Games Tournament;* Berpikir Kritis; Motivasi Belajar; IPAS.

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Introduction

Science learning at the elementary school level has an orientation that must be achieved, this orientation is determined based on the competency standards that must be achieved through the learning process (Fitriani et al., 2024; Kusmiati et al, 2024) . According to Aditiyas & Kuswanto (2024) explains the competencies that must be mastered by students in science learning are the ability to observe what is happening around them, demonstrate what has been observed, implement the knowledge obtained through the learning process at school, and be able to formulate estimates of a condition based on natural conditions. This is supported by Aji & Rahardjo (2024) one of the competency standards that students must have after learning science is being able to behave scientifically with a high attitude and curiosity, asking questions, being cooperative, and caring for living things in their environment.

To achieve this ideal, students must be equipped with the most fundamental knowledge. Specifically, the fundamental knowledge that must be taught to elementary school students is reading and writing skills (Sabrin & Ernawati, 2024) . Reading, writing, and arithmetic skills are the foundation of the skills students will learn (Ramadani & Alimuddin, 2024) . By possessing this basic knowledge, students will be able to develop critical thinking skills and be motivated to participate in science lessons at school.

According to Ramaili & Prastowo (2023), critical thinking in learning aims to direct students to have a structured and intelligent way of thinking in organizing concepts to solve problems. Furthermore, Manurung et al. (2023) stated that the development of students' critical thinking skills must be oriented towards correct and rational perceptions, analysis of assumptions and argument biases, and logical interpretation. The development of students' critical thinking skills has continuity and is interconnected that needs to be carried out through the learning process to achieve learning objectives (Abulibdeh et al., 2024) . Students' critical thinking skills are characterized by the ability to formulate problems, evaluate, and have sensitivity to things around them (Arisanti & Pusporini, 2023) .

Ideally, students' critical thinking is able to recognize emerging problems they face and students are required to be able to solve these problems (Susilowati & Sumaji, 2021) . However, the results of previous research conducted by Radityastuti et al. (2023) showed that the critical thinking skills of elementary school students are still low because the designed learning process has not encouraged students to be much involved in thinking in the learning process . Research by Anisa et al. (2021) said that the critical thinking skills of students in Indonesia are low. According to Parwati et al. (2020) stated that students' low critical thinking skills are caused by students' difficulties in conducting scientific analysis in thinking so that formulating solutions to learning problems given by teachers are difficult for students to solve. This means that students' reasoning ability in answering questions with the criteria of *high-order thinking skills* in science subjects is still not good. In addition, based on research conducted by Afifah & Kusuma (2021), students' low critical thinking skills are caused by the implementation of learning that is not appropriate to students' needs, students are not careful in answering questions, lack of problem-solving skills, and lack of student learning motivation.

Based on literature studies, learning problems in Indonesia are related to low student learning motivation. Research conducted by Hidayah (2023) found that a lack of teacher support for learning so that students understand results in students being unmotivated to participate in learning. Furthermore, student learning motivation is also influenced by environmental conditions. An unconducive environment will make it difficult for students to concentrate on learning and indirectly affect student learning motivation (Althof et al., 2023) . Based on research conducted by Mudli'ah & Manik (2023) , student learning motivation can be influenced

by the teacher's teaching methods and the student's learning environment. This is reinforced by research by Aditya et al. (2020) who stated that a lack of teacher support for students and the absence of a comfortable learning environment for students will lead to a decrease in student learning motivation. This motivation is very important for student learning success; in this case, the role of a teacher is needed as a motivator. (Jainiyah et al., 2023) . Low student learning motivation will result in students being lazy to think, which will later have an impact on learning objectives not being achieved.

Based on the researcher's observations in the field, the critical thinking skills of fifth-grade students at Tambongwetan 1 Elementary School are still relatively low. This was evident during observations and interviews with the homeroom teacher, who stated that during the science lessons, most students were only involved in passive activities such as reading, listening, taking notes, and completing assignments. The interaction between the teacher and students was not yet active. When the teacher asked questions, students tended to answer briefly and no one dared to ask questions or express opinions regarding the material being studied. The results of the science exam also showed scores that did not meet the school's Minimum Completion Criteria (KKM), which was 73. The average score obtained by students only reached 52.35. This fact indicates that the learning implemented has not been able to encourage students to develop critical thinking skills. Teachers have not designed learning strategies that challenge students to analyze, evaluate, and conclude independently.

Student motivation to learn in science lessons also appears to be low. Of the 18 fifth-grade students, only three showed interest and active participation during the learning process. Meanwhile, four students tended to be busy themselves, talking with friends, and simply taking notes without understanding the material. Learning activities were largely limited to reading books, listening to teacher explanations, and completing worksheets from student worksheets (LKS), without any activities that stimulate deeper cognitive engagement. The lack of variety in learning methods and media caused students to quickly become bored and unmotivated to be active.

Based on these conditions, a learning model is needed that can create an active, collaborative, and student-oriented learning atmosphere. The learning model must be relevant to the characteristics of science subjects, which require exploration, interaction, and higher-order thinking. This is consistent with the findings of Widaya et al., who explained that the critical thinking skills profile of Phase C students is still very low, with 61% of students not understanding the concept well, necessitating a transformation of the science learning strategy (Widaya et al., 2026). Therefore, researchers chose to implement a cooperative learning model *as* the appropriate solution. This model allows students to work in small groups to discuss, share ideas, and actively build shared understanding. Through group interactions, students learn to think logically, express opinions, respond to others' arguments, and provide cognitive support to each other—all of which align with strengthening critical thinking and learning motivation (Fauziah et al., 2022) .

The selection of this cooperative learning model is also in line with Vygotsky's Social Constructivism theory, which serves as the primary pedagogical basis. This theory emphasizes that students' cognitive development occurs through social interactions within the context of culture and the learning environment (Hughes, 2021) . In *cooperative learning*, students learn through collaboration and discussion within their *Zone of Proximal Development* (ZPD), meaning they are able to achieve higher levels of understanding with the help of peers or teachers. This strategy reflects the principle *of scaffolding* , where support is provided throughout the learning process until students are able to become independent (Nurhayati et al., 2022) . In other words,

cooperative learning is not only a method but also a concrete implementation of constructivism theory, which focuses learning on the process of building knowledge together.

According to Silva et al. (2021), the cooperative learning model is suitable for application in science learning because it is the essence of learning, presents a learning style that suits the characteristics and character of students to learn together in small groups, a means of improving students' academic performance that is still low through study groups, and encourages students to be more active in study groups to improve their critical thinking skills. The results of research by Trigustini et al. (2022) show that the cooperative model can improve students' critical thinking skills in the subject of science in grade V of elementary school. The results of this study are in line with the results of research showing that the application of the cooperative learning model in addition to improving student learning outcomes, can also increase student learning motivation (Adawiyah & Jennah, 2023) , can increase student activeness in the learning process (Mahsus & Latipah, 2021) , and can also improve students' critical thinking skills, problem solving and the ability to construct knowledge and be able to convey information well (Cynthia & Sihotang, 2023).

There are several cooperative learning models that can be applied to improve students' critical thinking skills, including the Problem-Based Learning (PBL) model combined with audiovisual media (Azkia et al., 2025); (Nuráeni et al., 2026); innovative illustrated stories based on local wisdom (Sofiasyari et al., 2025); the Group Investigation (GI) cooperative learning model, the TGT and STAD models (Maula et al., 2025). Research results (Amelia et al., 2024) reported that the application of game suit media had a significant effect on increasing learning motivation while improving student learning outcomes. Research by (Tantri et al., 2025) reported that the development of an Interactive E-Module based on the Teams Games Tournament (TGT) learning model using the ADDIE framework was declared very valid, practical, and effective in improving conceptual understanding.

In this study, the cooperative learning model was applied to improve students' critical thinking skills and learning motivation is *the Teams Games Tournament* (TGT) model. This model was developed by Slavin and combines elements of group work, educational games, and healthy competition in the learning process (Nugroho et al., 2025) . In its application, students are divided into heterogeneous groups based on academic ability, then they study together to understand the material that will be tested in the form of games or tournaments. This activity creates a fun and interactive learning atmosphere, because students not only read or listen to the teacher's explanation, but also discuss, explain concepts to teammates, and engage in challenging games.

The use of the TGT model is also based on the consideration that this approach can significantly increase student learning motivation. The game and competition elements encourage students to be more enthusiastic and passionate in participating in learning (Sinaga, 2024) . Furthermore, the tournament format allows all students to actively participate, without excessive individual pressure, because assessments are carried out as a team. This aligns with the principle of joyful learning , which is very important in the context of elementary school students (Samodra & Faridi, 2021). The TGT model is also relevant to the characteristics of science subjects, which emphasize conceptual understanding through concrete, collaborative, and contextual activities. Therefore, this model is believed to increase student cognitive and social engagement, while supporting the development of critical thinking skills and stronger learning motivation in the classroom (Agus et al., 2022).

Most previous TGT research has focused solely on cognitive learning outcomes (exam scores) or motivation alone. The novelty of this research lies in examining the reciprocal

relationship: how TGT triggers motivation and how that motivation drives students to develop deeper critical thinking skills. If proven effective, this model could be a complete package for classroom improvement. The purpose of this study was to simultaneously examine two dependent variables (critical thinking skills and learning motivation) in fifth-grade students at SD N 1 Tambongwetan in science. The statistical analysis techniques used were different, and the student characteristics were also different.

Research Methods

Research Type and Design

This study employed a quantitative approach with a quasi-experimental approach. This method was chosen for practical and ethical reasons in education, where researchers are not permitted to move students who have already formed within classes naturally (Cresswell, 2012). The research design employed a nonequivalent control group pretest and posttest group design (Sugiyono, 2019). In this design, two groups were compared: an experimental group receiving treatment in the form of the TGT cooperative learning model, and a control group using a conventional learning model.

Population and Sample

The population in this study was all fifth-grade students in the Education Coordinator (Korwil) of Kalikotes District, totaling 186 students. Sampling was conducted using a simple random sampling technique in schools that have parallel classes (Sugiyono, 2019). Based on this technique, SDN 1 Tambongwetan was selected, with class VA as the control class (18 students) and class VB as the experimental class (18 students), resulting in a total sample of 36 students.

Data Collection Techniques and Instruments

The researchers used several techniques to collect accurate data: (1) Questionnaire: Used to measure students' learning motivation with 30 statements covering the dimensions of perseverance, tenacity, interest, achievement, and independence (Sardiman, 2018; Uno, 2016); (2) Test: 35 multiple-choice questions to measure critical thinking skills based on indicators of focus, reason, inference, situation, clarity, and overview (Susanto, 2018); (3) Interviews and Documentation: Used to strengthen data regarding the initial problem and student learning outcome reports.

Data Analysis Techniques

The research instrument was tested through content and construct validity with the assistance of expert judgment (expert lecturers) and instrument trials using the Pearson product-moment correlation formula (Arikunto, 2019). Instrument reliability was measured using Cronbach's Alpha value, where the item is considered reliable if the Alpha value is > 0.60 (Sugiyono, 2019). Data were analyzed using two methods: (1) Descriptive Analysis: To present the average pre-test and post-test scores; (2) Inferential Analysis: Used for hypothesis testing. Before hypothesis testing, analysis requirements tests were conducted including normality tests using the Kolmogorov-Smirnov and homogeneity tests using the Levene Test. Final hypothesis testing was conducted by applying the t-test (Independent Sample T-Test) at a significance level of 0.05 (Sugiyono, 2019).

Analysis and Discussion

Descriptive Analysis Results

Critical Thinking Skills

critical thinking skills acquired through the tests provided varied results. Both the experimental and control classes received multiple-choice tests, differing only in the learning model used. The results are as follows:

Table 1. Results of Descriptive Analysis of Critical Thinking Skills

No	Class	Average	
		Pretest	*Post Test*
1	Control	55.23	76.03
2	Experiment	50.95	80.95

The acquisition of critical thinking skills in the control class in *the pretest session* was higher than in the experimental class with an average *pretest* of 50.95 in the control class and 55.23 in the experimental class. There was a difference of about 4.28. Meanwhile, the average *posttest acquisition* of the experimental class was higher with an average value of 80.95 while in the control class it was only 76.03 with a difference of 4.92. However, between the experimental class and the control class, both had an increase in the average critical thinking skills during *the pretest* and *posttest*. In the experimental class, the average difference was 30, while in the control class it was 20.8 with a significant increase in the experimental class.

Motivation to learn

Not much different from giving quiz questions to determine critical thinking skills in science, in measuring learning motivation using questionnaires. In the experimental class and the control class, the questionnaires were both given in *print out form*, but the difference was in the treatment given. The results obtained were as follows:

Table 2. Results of Descriptive Analysis of Learning Motivation

No	Class	Average	
		Pretest	*Post Test*
1	Control	60.94	66.05
2	Experiment	5 5.67	74.67

The learning motivation gain in the control class in *the pretest session* was higher than in the experimental class with an average *pretest* of 55.67 in the experimental class and 60.94 in the control class, there was a difference of about 5.27. Meanwhile, the average *posttest gain* in the experimental class was higher with an average value of 74.67 while in the control class it was only 66.05 with a difference of 8.62. However, between the experimental class and the control class, both had an increase in learning motivation during *the pretest* and *posttest*. In the experimental class, the average difference was 1.9, while in the control class it was 5.11 with a significant increase in the experimental class.

Prerequisite Test Results

Prerequisite tests are conducted as basic assumptions to ensure the proper use of parametric statistical techniques. This assumption is crucial as a preliminary step in using multivariate tests. These prerequisite tests include normality and homogeneity tests. Normality tests are conducted to determine whether the data distribution is normal. Homogeneity tests are conducted to determine whether the resulting data variance is homogeneous. The minimum significance level is greater than 5%, which is considered normal and the data variance is homogeneous. These tests are as follows:

Normality Test

This process is carried out to determine whether the collected data is normally distributed. The normality test was conducted using the Shapiro-Wilk method, as the sample size in this study was less than 50. Data are considered normally distributed if the significance value is greater than 5%. The test results are displayed as follows:

Table 3. Results of the Normality Test of Critical Thinking Ability (KBK)

Variables	KBK Dick (*Pretest)*	KBK Control (*Post Test)*	KBK Experiment (*Pretest)*	KBK Experiment (*Post Test)*
Df	30	30	30	30
Sig.	0.134	0.200	0.093	0.472

The results of the data normality test, both in the control and experimental classes, for *the pretest* and *posttest learning motivation data* had a significance value above 0.05, thus stating that the learning motivation data were normally distributed. Continuing with the results of the normality test for students' critical thinking skills in science, as follows:

Table 4. Results of the Normality Test for Learning Motivation (MB)

Variables	MB Control (*Pretest)*	MB (*Post Test)*	MB Experiment (*Pretest)*	MB (*Post Test)*
Df	18	18	18	18
Sig.	0.148	0.337	0.141	0.188

The results of the data normality test, both in the control and experimental classes, for *the pretest* and *posttest critical thinking ability data* had a significance value above 0.05, thus stating that the learning motivation data were normally distributed. Because the results of the normality test for the learning motivation and critical thinking ability data obtained normally distributed data, then continued with the data homogeneity test.

Homogeneity Test

A homogeneity test is performed to determine whether the variance of the obtained data is homogeneous. Data is considered homogeneous if the calculated rr significance value is more than 5%. The results of the homogeneity test are presented as follows:

Table 1*Levene Test* Results

Test of Homogeneity of Variance					
		Levene Statistics	df1	df2	Sig.
KBK_MB_Overall	Based on Mean	.662	1	34	.422
	Based on Median	.768	1	34	.387
	Based on Median and with adjusted df	.768	1	28,745	.388
	Based on trimmed mean	.701	1	34	.408

Referring to the results *of Levene's Test based on the mean*, the significance between the two dependent variables was 0.422. Because this significance value exceeds 5%, the data is stated to have homogeneous data variance.

Hypothesis Test Results

In this test, an Independent Test was conducted to see the partial influence of the implementation of the TGT type *cooperative learning model on* the critical thinking skills and learning motivation of fifth grade students. The results are as follows:

Table 6. *Independent Test* Results

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	T	df	One-Sided p	Two-Sided p	Mean Difference	Standard Error Difference	Lower	Upper
KBK_MB_Overall	Equal variances assumed	.662	.422	4,032	34	<.001	<.001	11.72	2.91	5.81	17.63
	Equal variances not assumed			4,032	30,013	<.001	<.001	11.72	2.91	5.78	17.66

Referring to the 2- *tailed significance results* , a value of <0.001 was obtained, which means that the value is lower than 0.05, so it is stated that Ha $_1$ and Ha $_2$ are accepted, indicating that there is an influence of *the cooperative learning model* on students' critical thinking abilities as Ha_1 and there is an influence of the *cooperative learning model* on students' learning motivation as Ha_2

Discussion

The Influence of the TGT Type Cooperative Learning Model on Students' Critical Thinking Skills

The Teams Games Tournament (TGT) Cooperative Learning model has been proven to have a positive impact on improving students' critical thinking skills. Based on the findings in this study, this improvement is reflected in the comparison of *pretest* and *posttest scores* between the experimental class using the TGT model and the control class using conventional learning. Before treatment, the average *pretest score* in the experimental class was 50.95, while the control class recorded an average of 55.23. The initial difference of 4.28 points indicates that the initial conditions of the two classes were relatively balanced and did not have significant differences, thus allowing the treatment given to be the main factor in changing learning outcomes.

After implementing the TGT learning model in the experimental class, there was a significant increase in posttest scores. The average posttest score for the experimental class increased to 80.95, while the control class only achieved 76.03. The final difference of 4.92 points indicates a positive effect of the TGT model on improving students' critical thinking skills. Further analysis showed that the difference between the pretest and posttest in the experimental class was 30 points, while in the control class it was 20.08 points. Although the difference in improvement between the two classes was not significant, the experimental class still showed a higher increase of 9.2 points. This increase indicates that the implementation of the TGT learning model is able to create a learning environment that encourages deeper cognitive engagement of students (Mubarokah et al., 2025).

The Teams Games Tournament (TGT) learning model structurally facilitates intensive cognitive stimulation through social interaction and healthy competition. Critical thinking is not viewed as a stand-alone cognitive ability, but rather as a result of a social construction process. Referring to Vygotsky's Theory of Socio-Cultural Development, higher-order cognitive processes (HOTS) will develop optimally when individuals are actively involved in social interactions within the Zone of Proximal Development (ZPD). During the group learning phase of the TGT model, students are placed in a heterogeneous, collaborative atmosphere (home team). This situation triggers what Piaget called Socio-Cognitive Conflict. When faced with group worksheets, students do not simply passively receive information but are forced to listen, analyze, and evaluate the differing arguments and perspectives of their peers (peer tutoring). This process of mutually explaining and defending logical arguments forces students to engage in metacognitive activities, deconstructing old understandings, and constructing new, more valid syntheses. Furthermore, during the academic tournament phase, students' critical thinking skills are independently tested through active retrieval practice. Being at a tournament table with peers of equal academic ability forces students to quickly evaluate problem stimuli under measured time pressure. This competitive context stimulates students' logical reasoning and analytical skills to distinguish valid concepts from distorted information (question deception), a key indicator of critical thinking skills.

The implementation of the TGT model encourages students to engage in group discussions, collaborate in problem-solving, and participate in quiz tournaments. These activities stimulate higher-order thinking processes such as analyzing, evaluating, and synthesizing information (Riswana & Khaerunnisa, 2024) . According to Sinaga (2024), the TGT model creates a fun and challenging learning environment through games and healthy competition, thus motivating students to be more active in learning. In this model, students are not only recipients of information but also actively construct understanding through social interaction and group collaboration. This is in line with the results of research by Rezeki et al.

(2020) which shows that students more easily understand concepts through direct experience and collaboration.

From a theoretical perspective, these results are relevant to the social constructivism perspective proposed by Vygotsky. This theory emphasizes the importance of social interaction in students' cognitive development. Through cooperative activities in TGT, students are in their zone of proximal development (ZPD), where they can learn better through peer support in discussions and tournaments (Fatkhurrozy, 2024) . The process of exchanging ideas, expressing opinions, and developing strategies in groups reflects active and contextual critical thinking practices. Thus, TGT-based learning is an effective means of fostering students' critical thinking skills because, theoretically and practically, this approach encourages meaningful and dialogical learning (Hartono, 2024) .

The findings of this study are also supported by previous research. For example, a study conducted by Fahrizal (2020) showed that the implementation of the TGT model can improve students' critical thinking skills through a collaborative and competitive approach. Another study by Putri et al. (2024) also concluded that TGT-type cooperative learning not only improves learning outcomes but also strengthens students' analytical and logical abilities in solving problems. Furthermore, the results of research by Mustika (2020) show that the TGT model can create a conducive learning atmosphere and increase interaction between students, which has a direct impact on strengthening reasoning skills and courage in expressing opinions. Furthermore, findings by Rahmawati (2025) confirmed that TGT has a significant influence on improving critical thinking aspects because it combines elements of healthy competition with collaboration in problem-solving. By referring to these various findings, it can be concluded that the implementation of the TGT-type Cooperative Learning model makes a significant contribution to developing students' critical thinking skills. This is reflected in the increase in learning outcomes and higher thinking activities in the experimental class compared to the control class.

The Influence of the TGT Type Cooperative Learning Model on Student Learning Motivation

The Teams Games Tournament (TGT) *Cooperative* Learning model has been shown to have a positive impact on improving student learning motivation. Research data shows that, although the average learning motivation of students in the control class (60.94) was higher in the pretest than in the experimental class (55.67), the difference of 5.27 points is still within a reasonable range. This indicates that the initial motivation levels of the two classes were not significantly different, making intervention through the learning model an important factor influencing the final results.

After implementing the TGT learning model in the experimental class, there was a significant increase in learning motivation. The average posttest score for student learning motivation in the experimental class reached 74.67, while the control class only increased to 66.05. The difference of 8.62 points in the posttest stage indicates a significant impact of the TGT model implementation in boosting student learning motivation. This indicates that the approach applied in the experimental class was more effective in motivating and engaging students in the learning process. Furthermore, when viewed from the magnitude of the increase between pretest and posttest scores, the experimental class experienced a jump of 19 points (74.67 – 55.67), while the control class only increased by 5.11 points (66.05 – 60.94). The difference in increase of 13.89 points confirms that learning with the TGT model is better able to meet students' needs for an affectively supportive learning environment. This increase reflects

that students involved in the cooperative learning model feel more interested, motivated, and enthusiastic to actively participate in learning activities.

In the TGT structure, a role shift occurs from teacher-centered to student-centered learning. Students are given full authority to set learning strategies within their teams and make independent decisions when answering questions at the tournament table. This authority provides a sense of psychological ownership over their own learning process. One structural novelty in TGT is the homogeneous tournament table grouping system (students with similar academic abilities compete at the same table). Psychologically, this eliminates the dominance of high-ability students and eliminates the inferiority of low-ability students. Every student has an equal opportunity to win the match and contribute points to their team. Successfully winning a tournament at their individual ability level significantly increases self-efficacy and triggers psychological satisfaction. The group collaboration phase of TGT creates an emotionally safe learning space. Positive interdependence, where individual success contributes to group success, fosters a sense of belonging, empathy, and social cohesion among team members.

The TGT model is designed to actively engage students through fun activities such as group work, educational games, and healthy competition (Mustika, 2020) . According to Putri et al. (2024), well-organized group competition can build a sense of responsibility, strengthen solidarity among students, and create a high enthusiasm for learning. This challenging learning environment and social support are key drivers for students to increase their participation and commitment to learning. In the context of elementary education, this approach is highly relevant because children tend to respond positively to learning that involves elements of play and collaboration. (Suharni, 2021) .

From a motivational theory perspective, these results are also supported by the Self-Determination Theory proposed by Deci & Ryan. According to Firdaus et al. (2020) , intrinsic motivation can develop optimally if three basic psychological needs of students are met: the need for competence, social relationships, and autonomy. The TGT model is able to fulfill all three: students feel competent when winning tournaments, feel connected to their teammates, and have the freedom to manage the learning process through active participation in groups. This makes the TGT model an approach that is not only effective from a cognitive perspective but also strengthens the affective aspect of learning (Agus et al., 2022) .

These findings align with previous research, such as that by Erawati & Rodiyana (2024), which showed that the TGT model significantly increases student learning motivation through increased social interaction and emotional engagement in the learning process. Research by Mubarokah et al. (2025) also confirmed that a healthy competitive atmosphere in TGT creates positive challenges that impact on increasing student motivation, especially in subjects that require conceptual understanding. In addition, Fakhriyah & Baalwi (2025) concluded that the TGT model provides a pleasant learning atmosphere and fosters student enthusiasm because learning is not monotonous and is participatory. Thus, the TGT type of *Cooperative Learning model* not only improves cognitive learning outcomes but is also effective in building strong learning motivation through an integrated social, emotional, and competitive approach.

Conclusion

Based on the research results, it can be concluded that the TGT type of *Cooperative Learning model* has a significant influence on improving critical thinking skills and learning motivation of fifth-grade students at SD N 1 Tambongwetan. The average increase in critical thinking skills and learning motivation in the experimental class was proven to be much higher compared to the control class using conventional methods. This cooperative approach through a tournament

system is effective in creating an interactive, enjoyable learning environment and is able to optimally improve learning outcomes.

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