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The Effect of Cooperative Learning Type Team Games Tournament (TGT) Towards Students' Vocabulary Mastery Viewed from Motivation

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Abstrak

Penguasaan kosakata merupakan aspek penting dalam pembelajaran bahasa Inggris karena mendukung kemampuan siswa dalam memahami dan menggunakan bahasa secara efektif. Namun, keterbatasan kosakata dan rendahnya motivasi belajar masih menjadi kendala dalam proses pembelajaran. Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran kooperatif tipe Team Games Tournament (TGT) terhadap penguasaan kosakata siswa, pengaruh motivasi belajar, serta interaksi antara model pembelajaran dan motivasi. Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi-eksperimen faktorial 2 × 2. Sampel penelitian terdiri atas 40 siswa kelas XI SMAN 1 Pujut yang terbagi menjadi kelompok eksperimen menggunakan TGT dan kelompok kontrol menggunakan Problem-Based Learning (PBL). Data dikumpulkan melalui tes kosakata berupa pre-test dan post-test serta angket motivasi belajar, kemudian dianalisis menggunakan statistik deskriptif dan ANOVA dua jalur. Hasil penelitian menunjukkan bahwa rata-rata nilai post-test kelompok TGT mencapai 80,18, lebih tinggi dibandingkan kelompok PBL sebesar 72,33. Selain itu, siswa dengan motivasi belajar tinggi memperoleh rata-rata nilai 81,95, sedangkan siswa dengan motivasi rendah memperoleh 70,55. Temuan ini menunjukkan bahwa penerapan TGT memberikan hasil penguasaan kosakata yang lebih baik dibandingkan PBL dan bahwa motivasi belajar berkaitan dengan pencapaian kosakata siswa. Dengan demikian, TGT dapat menjadi alternatif model pembelajaran untuk meningkatkan penguasaan kosakata bahasa Inggris dengan mempertimbangkan motivasi belajar siswa.

Kata kunci: Team Games Tournament; penguasaan kosakata; motivasi belajar; pembelajaran kooperatif; pembelajaran bahasa Inggris.

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Abstract

Vocabulary mastery is an essential aspect of English language learning because it supports students' ability to understand and use language effectively. However, limited vocabulary knowledge and low learning motivation remain challenges in the learning process. This study aimed to investigate the effect of the Team Games Tournament (TGT) cooperative learning model on students' vocabulary mastery, the influence of learning motivation, and the interaction between learning models and motivation. A quantitative approach with a 2×2 factorial quasi-experimental design was employed. The participants consisted of 40 eleventh-grade students at SMAN 1 Pujut, divided into an experimental group taught using TGT and a control group taught using Problem-Based Learning (PBL). Data were collected through vocabulary pre-tests and post-tests and a learning motivation questionnaire, then analyzed using descriptive statistics and two-way ANOVA. The findings revealed that the TGT group achieved a higher mean post-test score (80.18) than the PBL group (72.33). Furthermore, students with high learning motivation obtained a higher mean score (81.95) than those with low motivation (70.55). These findings indicate that TGT produced better vocabulary learning outcomes than PBL and that learning motivation was associated with students' vocabulary achievement. Therefore, TGT can serve as an alternative instructional model for improving English vocabulary mastery while considering students' learning motivation.

Keywords: Team Games Tournament; vocabulary mastery; learning motivation; cooperative learning; English language learning.

INTRODUCTION

Vocabulary mastery is a fundamental component of English language learning because it enables learners to understand and communicate meaning effectively through listening, speaking, reading, and writing. Students with limited vocabulary often experience difficulties understanding written texts, expressing ideas, and participating in classroom communication. Hiebert and Kamil (2005) emphasized that vocabulary knowledge involves understanding word meanings and recognizing how words function in communication. More recent research has demonstrated that vocabulary knowledge is closely associated with language proficiency and reading comprehension (Schmitt et al., 2017). Webb and Nation (2017) also explained that successful vocabulary learning requires repeated exposure, meaningful practice, and opportunities to use words in different contexts. Therefore, vocabulary instruction should not focus only on memorizing word meanings but should also

provide meaningful learning experiences that help students recognize, retain, and use English vocabulary appropriately.

In addition to instructional strategies, students' motivation plays an important role in vocabulary learning. Motivation encourages learners to participate actively, maintain their attention, and continue learning despite difficulties. Santrock (2008) described motivation as a process that initiates, directs, and sustains behavior. From a more recent perspective, Dörnyei and Ryan (2015) explained that language learning motivation is influenced by learners' goals, attitudes, and learning experiences. Oga-Baldwin et al. (2017) further demonstrated the relationship between motivation and engagement in foreign language learning. These perspectives suggest that students with higher motivation may demonstrate greater persistence in learning unfamiliar words, completing vocabulary exercises, and participating in classroom activities. Consequently, English teachers need to consider not only the teaching methods used in the classroom but also the motivational characteristics of their students when designing vocabulary instruction.

Vocabulary learning difficulties were also identified among students at SMAN 1 Pujut. Based on the preliminary observations reported in the original study, several students experienced difficulties understanding English word meanings, memorizing vocabulary, spelling words correctly, and using words appropriately in different contexts. These difficulties were accompanied by limited motivation to participate actively in vocabulary learning. Classroom activities frequently involved completing textbook assignments, identifying unfamiliar words, looking up their meanings in dictionaries, and memorizing vocabulary individually. Although such activities may support basic vocabulary recognition, they provide relatively limited opportunities for collaborative interaction and meaningful vocabulary practice. This situation indicates the importance of implementing a more engaging instructional approach that encourages students to participate actively, exchange knowledge, and develop their vocabulary through structured learning activities.

One instructional approach that may address these difficulties is cooperative learning through Team Games Tournament (TGT). TGT combines classroom presentations, heterogeneous learning teams, academic games, tournaments, and team recognition to create a cooperative and competitive learning environment (Slavin, 2008; Rusman, 2011).

Through this approach, students work together to understand learning materials and participate in academic competitions that contribute to their teams' achievement. Cooperative learning has been associated with positive academic and social learning outcomes when students are provided with opportunities for meaningful interaction and shared responsibility (Gillies, 2016). In vocabulary instruction, TGT may encourage learners to review word meanings, practice spelling, discuss unfamiliar vocabulary, and strengthen their understanding through repeated participation in team activities. Firman (2022) investigated the use of Modeled Talk in teaching vocabulary and its relationship with students' learning motivation. The study emphasizes the importance of considering instructional strategies and motivational factors in vocabulary learning. This perspective is relevant to the present study because the Team Games Tournament (TGT) model also involves instructional activities intended to encourage students' participation and support vocabulary development.

However, students may respond differently to this approach depending on their learning motivation. Although previous research by Nur Laili et al. (2014) reported a positive effect of TGT on students' vocabulary mastery, that study did not specifically investigate the interaction between instructional models and students' motivation. This limitation provides a rationale for examining whether the effectiveness of TGT differs between students with high and low learning motivation, particularly when compared with Problem-Based Learning (PBL).

Based on these considerations, the present study investigated the effects of cooperative learning through Team Games Tournament (TGT) on students' vocabulary mastery at SMAN 1 Pujut, with particular attention to students' learning motivation. Unlike the previous study, which primarily examined the effectiveness of TGT in vocabulary instruction, the present research considered both instructional models and motivational levels within a factorial research design. Specifically, the study aimed to determine whether there was a significant difference in vocabulary mastery between students taught through TGT and those taught through Problem-Based Learning (PBL), whether students with high and low motivation differed significantly in vocabulary mastery, and whether an interaction existed between instructional models and learning motivation. By examining these three

aspects, the study sought to provide empirical evidence concerning the role of cooperative learning and motivation in English vocabulary instruction and to offer practical considerations for teachers in selecting instructional strategies appropriate to students' learning needs. (Sadeghi et al, 2022)

METHOD

Research Design

This study employed a quantitative approach using a quasi-experimental design with a non-equivalent control group and a 2 × 2 factorial arrangement. The design was used to investigate the effects of teaching strategies and learning motivation on students' English vocabulary mastery. According to Creswell and Creswell (2018), quantitative research allows researchers to examine relationships among variables through numerical measurement and statistical analysis. The factorial design enabled the researcher to examine the main effects of teaching strategies and motivation, as well as their interaction on vocabulary achievement. The experimental group received instruction through the Teams Games Tournament (TGT) cooperative learning model, while the control group was taught using Problem-Based Learning (PBL). Both groups completed a pre-test and a post-test to assess their vocabulary mastery before and after the treatments.

Population and Sample

The population consisted of 40 second-grade students at SMAN 1 Pujut, distributed across two classes, A and B, with 20 students in each class. All students were included as research participants through total sampling. The two existing classes served as the experimental and control groups, respectively. The use of intact classroom groups was consistent with the quasi-experimental design, in which participants are not necessarily assigned individually at random (Creswell & Creswell, 2018).

Research Instruments and Data Collection

Data were collected using a vocabulary test and a learning motivation questionnaire. The vocabulary test consisted of 25 multiple-choice questions administered as a pre-test and post-test to measure students' vocabulary mastery. Each correct answer received one point, while incorrect answers received zero, and the total scores were converted into a 0–

100 scale. Students' learning motivation was measured using a 25-item questionnaire with a four-point Likert scale ranging from strongly disagree (1) to strongly agree (4). The questionnaire was administered after the treatment and post-test to identify students' motivation levels. Likert-type questionnaires are commonly used to measure respondents' attitudes and perceptions through structured response categories (DeVellis & Thorpe, 2021). The collected data were used to classify students into high- and low-motivation groups for further statistical analysis.

Data Analysis

The collected data were analyzed using descriptive and inferential statistics with IBM SPSS Statistics version 25. Descriptive statistics, including mean, median, mode, and standard deviation, were used to summarize students' vocabulary achievement and motivation scores. Before hypothesis testing, normality and homogeneity tests were conducted to examine the assumptions of parametric analysis. Subsequently, a two-way Analysis of Variance (ANOVA) was employed to determine the main effects of teaching strategies (TGT and PBL), motivation levels (high and low), and the interaction between these two factors on students' vocabulary mastery. Two-way ANOVA is appropriate for examining the effects of two categorical independent variables on a continuous dependent variable, including their interaction (Field, 2018). Students' motivation questionnaire scores were also analyzed descriptively and interpreted using percentage categories ranging from very low to very high. The statistical analysis was conducted to determine whether vocabulary achievement differed significantly according to the teaching strategy, students' motivation, and the interaction between both factors.

RESULT AND DISCUSSION

The analysis focused on three research questions: the effect of the instructional model on vocabulary mastery, the relationship between learning motivation and vocabulary achievement, and the interaction between instructional model and motivation.

Students' Vocabulary Achievement

The descriptive results showed that students taught using TGT achieved a higher

average vocabulary score than those taught using PBL. The TGT group obtained a mean score of 80.18, whereas the PBL group achieved 72.33, indicating a difference of 7.85 points. Students with high motivation also demonstrated better vocabulary achievement (M = 81.95) than those with low motivation (M = 70.55).

Table 1. Descriptive Statistics of Vocabulary Achievement by Learning Model and Motivation

Learning model	Motivation	N	Mean	SD
TGT	High	20	84.00	4.856
TGT	Low	20	76.35	5.112
PBL	High	20	79.90	6.324
PBL	Low	20	64.75	11.327
TGT	Overall	40	80.18	6.263
PBL	Overall	40	72.33	11.868

The highest mean score was found among highly motivated students taught through TGT (84.00), while the lowest was observed among students with low motivation taught through PBL (64.75). These descriptive findings suggest that both instructional approach and motivation were associated with vocabulary achievement.

Statistical Assumption Tests

Before hypothesis testing, the researcher conducted normality and homogeneity tests. The Kolmogorov–Smirnov test produced a significance value of .162, while the Shapiro–Wilk test yielded .066. Both values exceeded .05. Levene's test also indicated a non-significant result (p = .454), suggesting that the homogeneity-of-variance assumption was satisfied.

Two-Way ANOVA Results

The effects of learning model, motivation, and their interaction on vocabulary

achievement.

Table 2. Summary of Two-Way ANOVA Results

Source	df	F	p-value
Learning model	1	2.197	.042
Motivation	1	6.249	.015
Learning model × Motivation	1	21.378	.000
Error	76	—	—

It showed that the learning model influenced vocabulary achievement ($p = .042$), motivation contributed to vocabulary achievement ($p = .015$), and the interaction between learning model and motivation was significant ($p < .001$).

Discussion

The Effect of Team Games Tournament on Students' Vocabulary Mastery

The findings indicated that students taught through Team Games Tournament (TGT) achieved higher vocabulary scores than those taught through Problem-Based Learning (PBL). The experimental group obtained a mean score of 80.18, compared with 72.33 in the control group. This difference suggests that TGT provided a potentially beneficial learning environment for vocabulary development. Through cooperative activities, academic games, and group competitions, students had opportunities to recognize, practice, and recall English vocabulary while interacting with their classmates.

This finding is consistent with Slavin's (2008) cooperative learning framework, which emphasizes group responsibility, individual participation, and shared achievement. The five components of TGT—class presentation, teams, games, tournaments, and team recognition—provide opportunities for students to participate actively in learning. In vocabulary instruction, these activities may encourage repeated exposure to unfamiliar words and collaborative problem-solving. The finding also supports the earlier research of Nur Laili et al. (2014), which reported a positive effect

of TGT on students' vocabulary mastery.

Recent research provides further support for using game-related approaches in language education. Zhang and Yu (2022) found that game-based learning and gamification were positively associated with learning achievement and motivation. Similarly, Zhang and Hasim (2023), in their systematic review of EFL/ESL instruction, identified increased engagement, positive learning attitudes, and improved language performance among the potential benefits of gamified instruction. These studies support the pedagogical rationale for incorporating structured games into vocabulary lessons, although gamification and TGT are not identical instructional approaches.

However, the benefits of game-based instruction should not be interpreted as universal. A study published in Heliyon (2022) found that gamified vocabulary instruction improved students' motivation but did not produce a statistically significant difference in vocabulary development between the experimental and control groups. This comparison suggests that learning outcomes may depend on the characteristics of the participants, the implementation of instructional activities, and the duration of treatment.

The Relationship Between Learning Motivation and Vocabulary Mastery

The results also demonstrated a difference in vocabulary achievement between students with high and low motivation. Highly motivated students obtained a mean score of 81.95, while students with low motivation achieved 70.55. A statistically significant motivation effect ($p = .015$). These findings suggest that motivation was an important factor associated with students' vocabulary achievement.

The relationship can be understood through the motivational framework presented, particularly the importance of attention, relevance, confidence, and satisfaction. Students who are motivated to learn may be more willing to participate in classroom activities, practice unfamiliar vocabulary, and complete learning tasks. Motivation may also encourage students to continue learning when they experience difficulties with pronunciation, spelling, or word meaning.

This interpretation is supported by the application of self-determination theory to language education. The 2019 article Self-determination for all language learners: New applications for formal language education explains how intrinsic and extrinsic motivational processes can influence learners' engagement in language education. It highlights the importance of supporting meaningful and internally regulated motivation rather than relying entirely on external rewards. Imran and Sandiarsa (2018), in their result study explored the Team Games Tournament (TGT) model incorporates group collaboration, shared responsibility, and academic competition. These characteristics provide a rationale for examining TGT alongside students' learning motivation and vocabulary mastery.

Zhang and Yu (2022) similarly found positive effects of game-based learning and gamification on student motivation. Their findings suggest that game-related activities can support motivation through participation, achievement, and feedback. In the present study, the combination of collaborative tasks and competitive activities may have provided opportunities for students to engage with vocabulary learning more actively. Nevertheless, the motivation questionnaire results alone do not establish which specific aspects of TGT were responsible for the observed differences.

The Interaction Between Learning Model and Motivation

The third finding concerned the interaction between instructional model and motivation. A significant interaction, $F(1, 76) = 21.378$, $p < .001$. Descriptively, highly motivated students taught through TGT achieved the highest mean score (84.00), followed by highly motivated students taught through PBL (79.90). Among students with low motivation, the TGT group obtained 76.35, while the PBL group obtained 64.75.

These results indicate that the difference between TGT and PBL was not identical across the two motivation categories. The descriptive advantage of TGT was 4.10 points among highly motivated students and 11.60 points among students with low motivation. Thus, the reported scores suggest that TGT may have been particularly beneficial for students classified as having lower motivation. One possible explanation is that TGT combines peer support, structured participation, and competitive elements

that can encourage students who are less engaged in conventional learning activities. Through team discussions and tournaments, students may receive assistance from classmates and experience opportunities for achievement. This interpretation is compatible with the cooperative learning principles discussed by Slavin (2008) and the motivational benefits identified by Zhang and Hasim (2023). Nevertheless, competitive activities should be implemented carefully. Zhang and Hasim (2023) also identified potential disadvantages of gamification, including competition-related anxiety and short-lived motivational benefits. Teachers should therefore balance competition with cooperation, constructive feedback, and opportunities for all students to participate.

CONCLUSION

Based on the research findings, the Team Games Tournament (TGT) cooperative learning model provides better results in improving students' vocabulary mastery than Problem-Based Learning (PBL). Students taught using TGT achieve a higher mean score (80.18) than those taught using PBL (72.33). Furthermore, learning motivation plays an important role in students' vocabulary achievement. Students with high motivation obtain a higher mean score (81.95) than students with low motivation (70.55). These findings indicate that both learning models and motivation contribute to differences in students' vocabulary mastery. However, the interaction between learning models and motivation requires further statistical confirmation. Overall, TGT serves as an effective alternative for supporting vocabulary learning and encouraging students' active participation in English classrooms.

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