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# Implementation of the Teams Games Tournament (TGT) Cooperative Learning Model as an Effort to Improve Mastery of Vernier Caliper Physics Material at SMA N 4 JAMBI CITY

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**ABSTRACT**

*To assist students' mastery of physics materials, the period of application of innovative learning models to create learning that is more interesting, effective and fun. One of the learning models that can be implemented to improve the mastery of caliper physical material is the Teams Games Tournament (TGT) type of cooperative learning model. The purpose of this study was to determine the application of the Teams Games Tournament (TGT) cooperative learning model to students' mastery of caliper material and to determine the application of the Teams Games Tournament (TGT) type of cooperative learning model to mastery of caliper material. Based on observations made by researchers in learning physics when applying the Teams Games Tournament (TGT) cooperative learning model, students are easier to master the learning material, students are also more active and easier to absorb the material being taught. This kind of learning model can also eliminate boredom and boredom of students in learning physics which is actually very difficult to achieve and master.*

***Keywords: Cooperative learning model; Team Games Tournament (TGT); Material mastery***

## INTRODUCTION

National Education Law number 20 of 2003 article 1 paragraph 1, states that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual religious strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state. Based on this understanding, it explains that education is a conscious effort in the learning process so that students become better human beings. The higher the ideals of humans, the more they demand an increase in the quality of education as a means of achieving these ideals. So, between the positions of education that are institutionalized in various forms or models in society, they always interact (influence each other) all the time (Ihsan, 2008:1-4).

According to Erlinda (2017:15) Learning is a process of effort carried out by someone to obtain a new change in behavior as a whole, as a result of his own experience which he does continuously in interaction with his environment (Slameto, 2010: 2). According to Suherman (a person is said to be learning if it can be assumed that in that person there is a process of activity that results in a change in behavior. This change in behavior can be observed and lasts a relatively long time and occurs due to effort. Learning is a complex internal process involved in

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the internal process is the entire mental which includes the cognitive, affective, and psychomotor domains).

Teaching and learning activities are the most fundamental activities carried out in the entire educational process in schools. According to Jumiatu et al. (2011: 165), success in education is primarily determined by the teaching and learning process experienced by students in the classroom and outside the classroom. This success can be seen from changes in knowledge, skills, values, and attitudes. One of the principles of learning is that learning activities should instill learning skills in the learning process. The learning process will be more meaningful if students experience and discover it for themselves. A teacher prepares optimal learning strategies, one of which is by selecting the right learning model so that the teacher's teaching task can run effectively and students will be motivated to play an active role in learning activities, which ultimately can achieve optimal learning outcomes (Trianto, 2007: 1)..

According to Susanto (2013: 1), in efforts to improve the learning process in schools, a teacher is required to be able to design and implement learning activities that can improve student mastery of the material. To assess student mastery of the material, it cannot be assessed only from the cognitive domain but also from the affective and psychomotor domains of students. Therefore, in designing optimal learning activities, teachers need to be careful in selecting, implementing, and developing learning models. The use of competitive learning in a constructive atmosphere provides students with rules and strategies to compete as individuals. They build dependency and trust in their home team so that they feel confident in competing at the tournament table (Al-Tabany, 2017). This shows that they have learned to be willing to shoulder responsibilities and tasks/obligations for themselves and their group to complete the assigned tasks.

It is very urgent for educators, especially teachers, to understand the characteristics of materials, students, and learning methodologies in the learning process, especially related to the selection of learning models. So that the learning process will be more varied, innovative in constructing knowledge insights and their implementation so as to increase student activity and creativity. The use of the TGT type cooperative learning model makes students enthusiastic to compete with other teams because in the learning process that uses the TGT type cooperative model, students are directly involved in the learning activity process including tournaments, games, besides that, the group with the best score is also given an award (Lamudin, 2013: 13).

According to Al-Tabany (2017:46), to help students master physics material, innovative learning models are needed to create more interesting, effective, and enjoyable learning. One effort that can be done is through the implementation of the Cooperative Learning Model. The Cooperative Learning Model is a social-based learning model. The low mastery of the material for students is caused by the dominance of conventional learning processes. In this learning, the classroom atmosphere tends to be teacher-centered, so that students become passive. However, teachers prefer to apply this model because it does not require tools and practical materials; it is sufficient to explain the concepts in textbooks or other references. In cooperative learning, students are actively involved in the learning

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process, thus having a positive impact on the quality of interaction and communication and can motivate students to improve their learning achievement.

According to Sukmadinata (2009:45), cooperative learning is nothing new. As teachers and perhaps students, we have used it or experienced it. In cooperative learning, students learn together in a team to complete group tasks to achieve common goals. Therefore, each group member has the same responsibility for the success of their group. These cooperative skills serve to facilitate working relationships and tasks. The role of working relationships can be built through communication between group members. Meanwhile, the role of tasks is carried out by dividing tasks among group members during activities. The advantage of cooperative learning is that students can help each other and discuss together in completing learning activities (Astuti, 2016:15).

The Teams Games Tournament (TGT) learning model is a type or model of cooperative learning that is easy to implement, involving the activities of all students without any status differences (Subroto and Umayah, 2015: 147). In addition, the Teams Games Tournament (TGT) learning model can be applied in various subjects, from exact sciences, social sciences, and languages from elementary school (elementary school, junior high school) to college. Teams Games Tournament (TGT) is very suitable for teaching learning objectives formulated with sharp objectives with one correct answer or with objectives that use open assessments such as essays or performance. So this model can be implemented for Physics subjects. There are five components in the Teams Games Tournament (TGT) cooperative learning model, namely class presentation, groups (teams), games, tournaments, and group awards (Solilah, 2018: 48).

Formulation of the problem

Based on the description above, the formulation of the research problem is: How does the application of the Teams Games Tournament (TGT) learning model affect students' mastery of vernier caliper physics material at SMA N 4 Jambi City? What is the effect of the TGT learning model on students' mastery of vernier caliper physics material?

Objective

Based on the description above, the objectives of this study are: To determine the application of the TGT type learning model to the mastery of vernier caliper physics material at SMA N 4 Jambi City. To determine the effect of the TGT learning model on students' mastery of vernier caliper physics material.

**Benefit**

Based on the description above, the benefits of the research obtained are: Students and teachers can learn and understand the application of the Teams Games Tournament (TGT) learning model on the mastery of vernier caliper physics material at SMA N 4 Jambi City. Students and teachers can know the

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effect of the Teams Games Tournament (TGT) learning model on students' mastery of vernier caliper physics material.

## METHODS

This research was conducted in October at SMA Negeri 4, Jambi City. The data observed were students' mastery of physics material at SMA Negeri 4, Jambi City. This research type was Classroom Action Research (CAR). CAR is a careful examination of a learning activity in the form of a deliberate action that occurs in a classroom. The research methodology was qualitative descriptive, where student activity was obtained from student activity observation sheets which were then analyzed descriptively.

## RESULT & DISCUSSION

Team Games Tournament (TGT) is a group learning model that involves all students in the learning process. Each group member must be able to cooperate with their peers to become the best group in games and tournaments. This method motivates students to make their group the best by winning games and tournaments. With this motivation, students will more easily understand the lesson, which will have implications for improving their understanding of the material being studied (Sueb, 2018:76).

Based on observations made by researchers in physics learning when implementing the Teams Games Tournament (TGT) cooperative learning model, students more easily master the learning material, students are also more active and easier to absorb the material taught. The Teams Games Tournament (TGT) learning model is more focused on discussion and collaboration between group members in answering questions related to the material being taught. This learning model can also eliminate boredom and boredom in students learning physics which is known to be very difficult to understand and master.

Based on direct interviews with students, it can be concluded that students enjoy learning more and are more relaxed when using the Teams Games Tournament (TGT) method. This is because not only individuals stand out in this learning method, but all group members have the right to answer questions and discuss existing problems. Students reported better understanding and mastery of the material when learning using the Teams Games Tournament (TGT) method.

This statement aligns with research conducted by Yusuf (2010:83), which shows that the application of the Teams Games Tournament (TGT) cooperative learning model to the subject of quantity and measurement can increase student interest, activity, learning, and conceptual mastery, as well as improve teacher performance. This increase in student mastery of the material also occurs due to increased student activity.

This statement is also in accordance with research conducted by Yuniarti (2011, 45) which shows that mastery of concepts after implementing learning using the TGT type cooperative learning model on the main material of the plant world in the experimental class experienced a better increase compared to the control class.

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## CONCLUSION

Based on the results of research that has been conducted regarding the Implementation of the Teams Games Tournament (TGT) Learning Model to Improve Students' Mastery of Physics Subject Material at SMA Negeri 4 Jambi City, it can be concluded that the Implementation of the Teams Games Tournament (TGT) Model is included in the successful category. There is an increase in students' mastery of Physics subject material at SMA Negeri 4 Jambi City after the implementation of the Teams Games Tournament (TGT) learning model. The learning model with the Teams Games Tournament (TGT) type can make students more relaxed and enjoy the teaching and learning process.

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