

Effect of Cooperative Learning Team Team Tournament Type Against Learning Competencies in the Cognitive Realm of Class XI Students at SMAN 4 Sungai Penuh

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Abstract - The purpose of this study was to determine the effect of cooperative team type games tournament learning on knowledge domain competencies of students of class XI at SMA 4 Sungai Penuh. The study was conducted in May 2019. This type of research is quasi-experimental research. The population is class XI students of SMAN 4 Sungai Penuh who are registered academically in 2018/2019. The sample is because it consists of two classes, so all classes are sampled. So, XI MIPA C as the experimental class and XI MIPA B as the control class. The instruments used are in the form of tests and non-tests. Data analysis was performed using the t test, two-way ANOVA test and Mann Whitney U test. The findings show that there is a significant difference between the biology competencies of students in the experimental class and the control class, where the biological competencies of students in the experimental class are higher than in the control class. Assessment is carried out on student competence in the knowledge aspect. On the knowledge aspect the average score of students in the experimental class was 74.93 and in the control class was 65.40. So, it can be concluded that biology learning by applying Team Games Tournament Cooperative learning with the help of image media can improve student competence in cognitive aspects.

Keywords - *Learning Biology; Initial Ability; Competence; Media Picture; TGT.*

I. INTRODUCTION

Education is one of the most important fields for building a whole human being. This is in accordance with the laws of the Republic of Indonesia No. 20 of 2003 concerning the education system, namely national education functions to develop capabilities and shape the character and civilization of a nation that is dignified in order to educate the life of the nation. With the aim of developing the potential of students, in order to become human beings who believe and devote to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent and become democratic and responsible citizens.

Learning is a process of knowledge construction, Jerome Bruner in (Romberg and Kaput, 1999). Learning is not transferring that which is outside of him, but learning more about how the brain processes and interprets new experiences with the knowledge that is already possessed in a new format. Students who have initial knowledge of the subject matter will more easily accept and shape, and develop new knowledge.

Biology is a science that has a role in improving the quality of education, in order to support the development of modern technology and to advance the human mindset that exists in the world. Therefore biology needs to be studied at

all levels of education to equip students to be able to think logically, be critical, creative, innovative and able to work together. Biology is also one of science learning that requires students to think more creatively and independently. Biological material is related to nature widely and systematically, so that biology is not only mastery of a collection of knowledge in the form of facts, concepts, or principles but also a process of observation and discovery (Ministry of National Education, 2003). Biology as a study of living things is obtained through a process of investigation or research using scientific methods

Given the importance of the role of biology and in accordance with the biology learning above, then the biology learning process in the classroom should be interesting, fun and student-centered. Biology learning involves students seeking extensive sources of information from various sources. Biology learning requires students to be able to master the competencies that have been set. Mastery of competence by students is inseparable from the role of the teacher as a guide and facilitator in learning activities. Mastery of competence by students is inseparable from the role of the teacher as a guide and facilitator in learning activities. As an educator the teacher must be able to find a good way for students to take interest, and be happy with the material being taught. Students according to Munandar (2009: 40), "Students are of good quality academically, skills (skills), emotional maturity, and spiritual morals will be produced by qualified teachers". Therefore teachers are required to master the material and learning strategies so that student learning competencies increase.

Based on the results of observations of researchers on September 26, 2018 in the XI class MIPA of SMAN 4 Sungai Penuh, in biology learning activities, it can be seen that the teacher is still using conventional learning models, namely the delivery of material with the lecture method, question and answer and then ended by giving practice in the form of written questions, The author also observed that when the biology learning process took place, it was seen that only a small number of students who looked active and focused on paying attention to the lesson, chatting with other students in the learning process took place, so they seemed unwilling to listen to the material presented by biology teachers. In addition, there are students who only hear and record teacher explanations without wanting to convey their ideas or opinions about the material they are learning. This has an effect on the lack of good interaction in the implementation of biology learning.

Conventional learning applied by teachers in class has an impact on students' lack of enthusiasm in the learning process. Many students do not want to ask questions and tend to take for granted the material presented by the teacher. this shows that the implementation of biology in class XI IPA 10 Kerinci looks less able to motivate students' skills to think critically and express opinions and only a few students who express their opinions, and even then it is dominated by high-ability students and other students prefer not to be actively involved and choose to be quiet in the learning process. Another impact of conventional learning used by teachers is that students are not accustomed to discussing with friends in solving questions given by the teacher and are not skilled in expressing opinions in front of the class.

This can be seen during the learning process of biology at SMAN 10 class XI IPA is that learning is emphasized more on the cognitive aspects of students, where the teacher evaluates students' competencies more than the results of their learning. The weak cognitive abilities of these students are caused not only by the low desire of students to explore biological concepts through a process of thinking, also influenced by students' weak initial abilities. If the initial ability of students is low, it will affect the process of forming new understanding in the student. This is because, the initial ability is the foundation in forming a new learning concept. Based on the results of the Daily Examination (UH), it is known that there are still many students who get scores under the KKM, namely (75).

With the application of cooperative learning Type TGT each student can play an active role and have a sense of responsibility towards the group in collecting scores on the turnout. A democratic classroom atmosphere and pleasant tournament activities will provide opportunities to achieve optimal learning outcomes. In the learning process, teachers are faced with a variety of students' initial abilities made possible to influence the learning process and competence. The initial ability can describe the readiness of students to receive lessons to be delivered by the teacher. According to Slameto (2010: 25) "How new materials can be studied properly, depending on what is known (advance organizers). Thus, the initial ability of students is a prerequisite for students to take lessons, so that they will achieve better learning competencies.

The initial ability and learning model are two very important things to be considered by the teacher before starting the learning process. Cooperative learning model Type TGT can improve student learning towards better.

Students are also easier to understand the learning material because in learning, the teacher considers the students' initial abilities so that student competence is expected to improve.

Based on the above problems, the researcher was interested in conducting a study entitled "The Influence of Team Games Tournament Cooperative Learning Model (TGT) and Early Ability to Learning Competencies in the Knowledge Sphere of Class XI Students of SMAN 4 Sungai Penuh Science.

II. RESEARCH METHOD

This research is a quasi-experimental study. The population is Grade XI Students of SMAN 4 Sungai Penuh registered in the 2018/2019 academic year. For samples because they consist of two classes, they are all used as research samples. So, class XI C as the experimental class and class XI B as the control class. The instruments used are in the form of tests and non-tests. Data analysis was performed using the t test, two-way anava test and Mann Whitney U test.

III. FINDING AND DISCUSSION

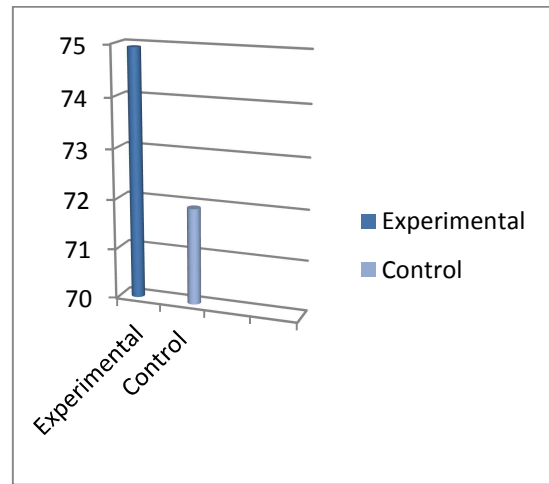
The data obtained in this study are learning competencies aspects of knowledge, attitudes and skills of students in the experimental and control classes.

3.1 Data on Student Knowledge Competence

The competency data of students' knowledge is presented in Table 1 below.

Tabel 1. Data of Students' Knowledge Competence

Class	Average Score
Experimental	74,93
Control	65,40



Graph 1

The assessment of student knowledge competency is done using test questions. Based on Table 1. and Graph 1 above, it is clear that the average score of knowledge competency students in the experimental class is higher than in the control class, which is 74, 93 in the experimental class and 65, 40 in the control class. This shows that the realm of competency in the knowledge of students in the experimental class using the TGT learning model is higher than the control class using conventional models which are based on low high initial abilities. This is because the team game tournament model is a student who is trained to develop students' skills, thus attracting the attention of students to learn. This is in accordance with Desstya et al. (2012), that the influence of the TGT learning model has a good effect on students' knowledge competencies.

The TGT learning model is a type of learning whose activities are student-centered. TGT cooperative learning places more emphasis on the learning process of group collaboration. The goal to be achieved is not only academic ability, namely mastery of subject matter, but also there are elements of cooperation to master the material, the material is delivered in small parts, accompanied by questions related to the material delivered and the students answer it. For the sake of sake students will feel the interaction directly with the instructor. This media makes it easy for students to understand the subject matter being studied, because students in groups and alternately will complete the game. Students' answers are wrong, can be justified directly, so that being able to straighten out concepts that were initially poorly understood by students, finally can be understood by students, finally it can be understood well and correctly.

Learning with the TGT method using image media is designed so that students are more motivated to learn, because this learning is more fun. Sharon Ainsworth (2008) in his study concluded that when students learn to use media images, it is something that is very important in understanding information. Learning to use picture media can condition students in social learning, and this effective communication can increase. TGT learning is in accordance with social learning, which conditions students to cooperate with each other in understanding the material provided. Learning methods equipped with academic games encourage students both individually and in groups to compete in winning matches.

In other words, the learning process in the two sample classes namely the experimental class and the control class have significant differences. The experimental class using the application of the problem based learning model has an average value of competency in the knowledge aspect better than the average value of the knowledge competency of the control class using conventional learning models.

IV. CONCLUSION

Based on the results of the study, it can be concluded that the influence of the Game Tournament Team learning model and the initial ability to biology learning competencies significantly influence the competency domain of students' knowledge because it can improve their biological competencies.

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