Results Increasing Student Learning Through The Use of Biology Learning Model Cooperative Think Pair Share (Tps) The Student Class XI IPA SMA Negeri 5 Makassar.

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Abstract. This research is a research class actions that aims to improve the students learning biology class XI IPA SMA Negeri 5 Makassar through the use of cooperative learning TPS. The subject of this research is the students' class XI IPA SMA Negeri 5 Makassar even semester 2008/2009 year lessons as much as 32 students. Investigation of the factors is a cooperative learning model TPS, activities, results and study biology students. Implementation research consists of two cycles. Engineering data collection, namely to study the activity contains a number of indicators in accordance with the observation activities syntax TPS cooperative learning model that analyzed the quantitative and qualitative, while the results of data obtained from the value of learning tasks and the value of the test study analyzed the results of descriptive statistics. The observed activity results shows that students learn in general was increasing from cycle I to cycle II on each indicator to study the activity observed. The statistical analysis of the results of descriptive biology students study shows the average value for the students in the cycle that I 77,04. The frequency of students who obtain good grades in all categories, namely 18.75%, good categories, namely 81.25%, enough categories, less and failure is 0%. In the second cycle obtained by the average value of students is 81.07. The frequency of students who obtain good grades in all categories, namely 71.88%, good categories, namely 28,12%, enough categories, less and failure is 0%. In general, it was increasing the value of biological study of Cycle I to Cycle II Class XI students IPA SMA Negeri 5 Makassar on the concept of food digestion system.

Keywords: Cooperative TPS, Activity, Students Learning

INTRODUCTION

Background

The education process is closely related to the learning process in the classroom. The teacher's role as an educator is expected to create effective teaching and learning conditions, comfortable, and fun so that the learning objectives can be achieved to the maximum (Usman, 1998). To create an atmosphere of learning that a teacher needs to do the model selection and appropriate learning methods that can improve student learning outcomes.

SMA Negeri 5 Makassar is one of the top schools in the city of Makassar, which has a standard completeness material that can be categorized as high. Especially for subjects of biology, completeness standard material values are in the range 75 -100. Therefore, the students are very demanded to be more active in each of the learning process so that students are better able to understand any given subject matter. But in fact from the observation of schools, it was found that the activity of students in the learning process biology is very small. They tend to wait for the material given by the teacher without trying to develop the knowledge and the potential they have in reviewing the

lesson independently. To overcome this, teachers are required to be capable of designing a learning activity that can enable students, so as to facilitate the students understand the lesson.

The material on the human digestive system is one of the materials in biology is quite complex. This material contains theory and basic concepts about the structure, the function of the digestive organs, and digestive processes that occur in the human body that demands understanding, reasoning power and require prior knowledge for students to understand these concepts. Therefore, we need a learning model that provides more opportunities to each student to think of (thinking) the material provided so that each student already has prior knowledge of the material to be learned and this will greatly affect student learning outcomes.

One model of learning that is relevant and appropriate to the level curriculum for student-centered education and is able to increase the activity of students in the learning process is a cooperative learning model (cooperative learning). According Trianto (2007: 41), cooperative learning comes from the concept that students can easily find and understand difficult concepts if they were in discussions with his friend.

One type of cooperative learning model that can be applied in biology in the classroom learning the type cooperative model of TPS (Think Pair Share) or think in pairs sharing. In this model students are given the opportunity to work independently and in collaboration with others. This learning model gives plenty of time for students to think about the material being studied, and exchange ideas with other students before their ideas put forward in front of the class. According to Lie (2005), this model makes interaction with other students around the tasks given greater for pairs of two people, students' mastery of the concepts that are difficult higher and motivate students in learning so that learning outcomes can be improved.

Based on the above background, the researchers are interested in doing research by applying cooperative learning model Think Pair Share (TPS) on the subjects of biology with the title "Peningkatan Biology Student Learning Outcomes through use of Cooperative Learning Model Type Think Pair Share (TPS) on Students class XI SMA Negeri 5 Makassar ".

Problem Formulation

The formulation of the problem to be studied in this research that is there a learning outcome biology class XI IPA at SMAN 5 Makassar through the use of the type cooperative learning model Think Pair Share (TPS) on the material digestive system?

Objective

The purpose of this study is to improve learning outcomes biology class XI IPA at SMAN Makassar through the use of the type cooperative learning model Think Pair Share (TPS) on the material digestive system.

METHODS

The time and place of study

The research was conducted from January to February 2009 in SMA Negeri 5 Makassar, located on Jl. Taman Makam Pahlawan subdistrict Panaikang Tello Panakkukang Makassar.

Research procedure

This study is a class action (Classroom Action Research), which includes four stages of implementation: planning, action, observation / evaluation and reflection. This study was planned to consist of two cycles, with each cycle consisting of 4 times face to face. Every time face-to-face learning lasts for 2 hours or 2 x 45 minutes. At the end of each cycle the revision of actions, and evaluation of learning outcomes.

Data collection techniques

The data collection techniques performed in this action research, namely; a) learning activity data, taken using observation sheet. In the charging process observation sheets, all indicators of activity was observed contained

therein. If students do any activity that is the benchmark, then he will get a checklist (√) in the observation sheet. b) Data increasing mastery of the material taken from the data achievement test cycle I and II then compare both the cycle.

Data analysis

The data were then analyzed using descriptive statistical analysis of qualitative and quantitative. Qualitative analysis is used to describe students' learning activeness known from observations of students in the classroom activity, whereas quantitative analysis is used to describe the results of students who study biology are known from the results of the assessment of each cycle. Qualitative analysis can be done by using the percentage of students learning activities, whereas for quantitative analysis of the data presentation is done in the form of a frequency distribution table where students can be grouped into several groups. According Arikunto (2005) learning outcomes data obtained by the students can be categorized as the following table:

Table 1. Categorization mastery level learning outcomes

Interval values	Qualifications
80-100	Very Good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

RESULTS AND DISCUSSION

Research Cycle I

Activities Student

To record all activities into learning, the observation / observation of the activities of students through observation sheet that includes a number of indicators of activity are prepared in accordance with the syntax of cooperative learning model Think Pair Share (TPS).

Table 2. Description of learning activities of students of class XI IPA 3 SMA Negeri 5 Makassar in the cycle I.

Activity		Cycle I				
		Meeting			Average	Percent (%)
		I	II	III		
Initial activity	Active listening, noting the topics and learning objectives	19	20	20	20	62,5
	Answering to questions teacher	2	3	2	2	6,3
Core activities	Listening / recording material explanation by the teacher	10	17	15	14	43,8
	Active in thinking (think) problem given by the teacher	25	25	27	26	81,3
	Actively in group discussions (pair)	19	20	25	21	65,6
	Active in class discussions (share) Active in the presentation	17	20	19	19	59,4
	Active in asking questions	5	5	5	5	15,6
	Active in answering questions	5	5	5	5	15.6
	Drawing conclusions material	2	3	3	3	9.4
End	Quiz correctly (do not cheat)	24	26	26	25	78.1

activities

Biology student learning outcomes

Data from the cycle I student learning acquired through learning outcome evaluation conducted at the end of the cycle I.

Table 3. Description of learning outcomes Biology class XI IPA 3 SMAN 5 Makassar cycle I.

Interval Values	Qualification	The number of students	Percentage (%)
80 - 100	Very Good	6	18,75
66 - 79	Good	26	81,25
56 - 65	Enough	0	0
40 - 55	Less	0	0
30 - 39	Fail	0	0
Jumlah		32	100

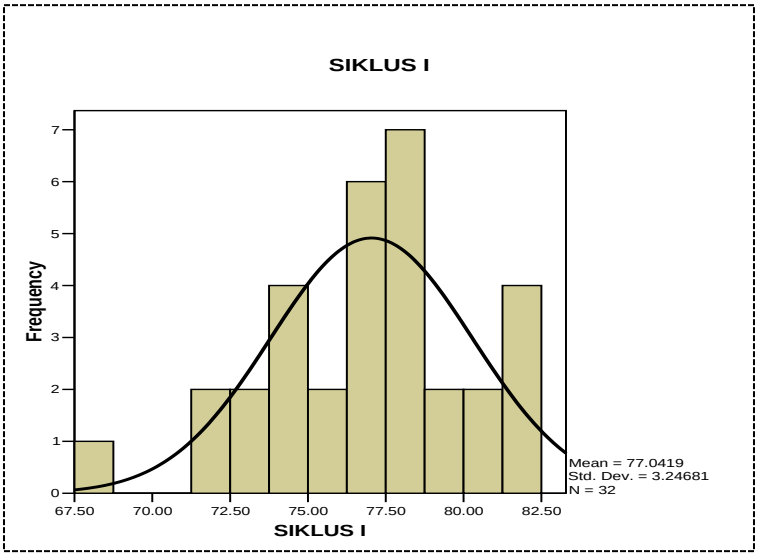

Figure1. Histogram learning outcomes of students of class XI SMAN 5 Makassar in cycle I.

Reflection

Based on the observation and evaluation of the first cycle tests were carried out, to determine the pace of learning in the second cycle, do reflections on learning outcomes cycle I.

Decision

Various obstacles that occur in the first cycle, used as material for further reflection to the second cycle by seeking improvements in a number of the shortcomings of the implementation of cooperative learning model TPS in cycle I.

The results Cycle II

Results of activity observation

The results of the observation of learning activities of students in the second cycle indicates a change, the occurrence of a significant increase for each indicator compared to the activity observed silkus I.

Table 4. Description of learning activities of students of class XI SMA Negeri 5 Makassar IPA3 in the cycle II.

Activity		Cycle II				
		Meeting			Average	Percent (%)
		I	II	III		
Initial activity	Active listening, noting the topics and learning objectives	19	25	25	23	71,9
	Answering to questions teacher	2	3	4	3	9,4
Core activities	Listening / recording material explanation by the teacher	17	20	25	21	65,6
	Active in thinking (think) problem given by the teacher	27	29	30	29	90,6
	Actively in group discussions (pair)	20	22	28	23	71,9
	Active in class discussions (share) Active in the presentation	20	20	22	21	65,6
	Active in asking questions	5	5	6	5	15,6
	Active in answering questions	5	6	6	6	18,8
	Drawing conclusions material	3	3	4	3	9,4
End activities	Quiz correctly (do not cheat)	24	29	29	27	84,4

Biology student learning outcomes

Data from the second cycle students learning acquired through learning outcome evaluation conducted after the end of the second cycle.

Table 5. Description of learning outcomes Biology class XI IPA 3 SMA Negeri 5 Makassar on the cycle II.

Interval Values	Qualification	The number of students	Percentage (%)
80 - 100	Very Good	23	71,88
66 - 79	Good	9	28,12
56 - 65	Enough	0	0
40 - 55	Less	0	0
30 - 39	Fail	0	0
Jumlah		32	100

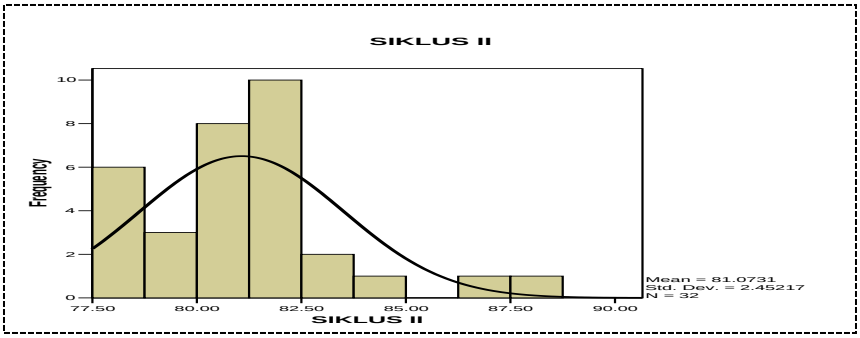

Figure 2. Histogram learning outcomes of students of class XI IPA 3 SMA Negeri 5 Makassar on the cycle II.

Table 6. Description of the acquisition value of learning outcomes Biology from the first cycle to the second cycle, students of class XI SMA Negeri 5 Makassar IPA3.

Serial Number	The Value of Learning Outcomes		Serial Number	The Value of Learning Outcomes	
	Cycle I	Cycle II		Cycle I	Cycle II
1	79.67	80.33	17	78.67	80.00
2	73.00	82.33	18	78.67	86.67
3	82.33	82.33	19	74.67	78.00
4	78.00	78.67	20	78.67	80.00
5	82.33	83.67	21	78.67	88.33
6	73.00	81.67	22	81.33	81.67
7	80.33	82.00	23	76.33	78.67
8	75.67	79.33	24	78.67	83.67
9	81.33	82.00	25	81.00	81.67
10	78.67	80.00	26	74.33	79.33
11	76.33	80.00	27	79.00	80.00
12	76.67	82.33	28	74.33	77.67
13	76.67	84.67	29	72.33	80.67
14	76.67	80.00	30	68.67	78.33
15	77.00	79.00	31	74.33	78.00
16	72.33	82.00	32	75.67	81.33

Note	Value	
	cycle I	cycle II
Average	77,04	81,07
Persentage	77,04	81,07
improvment	4,03	
maximum	82,33	88,33
minimum	68,67	77,67

The above table shows that after the data value learning outcomes analyzed quantitatively, it is generally an increase in the value of the Class XI student studying Biology IPA3 from the first cycle to the second cycle. Increasing the value of student learning outcomes of 4.03%.

Reflection

Based on the reflections that have been implemented in the first cycle, the improvement efforts have been made in the implementation of this cycle. The changes that occurred in the second cycle showed that with the implementation of cooperative learning model TPS in biology, can have a positive impact on the activities and student learning outcomes.

Decision

The decision of the two cycles that have been implemented using cooperative learning model TPS, the results are as follows:

- The active participation by students both personal and group activity of increasing
- The attention of students in participating subjects increased
- The result of increased student studying Biology

Discussion

Based on the results of qualitative analysis of student activity observation sheet, where students in the second cycle has demonstrated better activity during the learning activities. The students have been able to communicate well with the group's friends to understand the problems in the given subject matter. Thus students are able to understand the lesson because most of the learning activities comes from their own. Teachers only as a mentor and motivator for students.

Descriptive analysis showed that the results of studying Biology for the first cycle, on the subject of the digestive system is taught by using cooperative learning model TPS obtained average value is 77.04 on the average value that may be achieved 100. The frequency of students who achieve grades splendidly relatively low at only 18.75% or six students. 81.25% or 26 students included in the category of good and 0% or no students in the category enough, less, and failed.

Meanwhile the results of studying Biology at the second cycle values obtained an average of 81.07 from the ideal value that may be achieved is 100. The frequency of students who received grades in both categories so that as many as 23 students or 71.88%, while 28.12 % or nine students included in either category, and 0% of the students in the category enough, less, and failed. In general, an increase in the value of the Class XI student studying biology IPA3 from the first cycle to the second cycle. Increasing the value of student learning outcomes of 4.03%. The results showed that the increased activity of student learning linearly to learning outcomes obtained from the first cycle to the second cycle. The success rate of a process of learning is influenced by many factors. One factor increasing learning outcomes Biology students who are taught by using cooperative learning model TPS due to the learning process students are given more time to think about the material being studied, and exchange ideas with other students before their ideas put forward in front of the class.

The existence of a phase thinking (thinking) in a cooperative learning model TPS tehadap very big influence students' understanding and mastery of the material being studied and will certainly have a big impact on student learning outcomes. This is supported by Keller in Abdurrahman (1999), which states that one of the factors that affect student learning outcomes are factors originating from within the students, the intelligence factor and early mastery of the students. The opportunities given to students to think about the material or the problems that the teacher would build understanding or mastery of beginning students to the material to be covered. Furthermore, in the phase of pairing (pairs), students will pair up two people to discuss the matter or issues that have been thought previously, it allows students to make the perception or answers previously been thought, are complementary and work together well and effectively in formulating the answer of the material or the problems assigned by the teacher, so that would give birth to an answer that really correspond to what is desired. In the next phase, the phase of share (shering / share), students will present the results of their group's discussion in front of the class, express their answers in front of the class to all students, and other students to provide input and feedback that will create a class discussion on eventually will build students' concept of uniformity of the material or the problems assigned by the teacher. It can be seen from the data the percentage of student learning outcomes has increased very significantly from the first cycle to the second cycle, ie the first cycle only six students (18.75%), which are in the very good category and 26 students (81 , 25%) which is in the good category and there are no students in the category enough, less, and failed. While on the second cycle, there are 23 students (71.88%) which is in the category excellent and

only nine students (28.12%) who were in the good category, and no students were in the category enough, less, and failed.

Based on data from the above results show that the implementation of cooperative learning model think, pair and share in teaching biology in schools can have a positive influence on activity and learning outcomes IPA3 biology class XI SMA Negeri 5 Makassar. This is supported by the results of previous studies that also implement cooperative learning model TPS in learning biology in school and showed an increase in activity and student learning outcomes. An increase in activity and learning outcomes Biology students learn by using cooperative learning model think, pair and share due to this learning model gives plenty of time for students to think and interact with their partners and the students' understanding of the material is increased so that the learning outcomes of students increased.

CONCLUSION

Based on the research and discussion above, it can be concluded that through the use of cooperative learning model Think Pair Share (TPS) can improve learning outcomes Biology students of class XI SMA Negeri 5 Makassar, which is the average value of student learning outcomes in the first cycle namely 77.04 into 81.07 in the second cycle.

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