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Student Learning Outcomes With The Student Teams Achievement Division (Stad) Learning Model At Sman 3 Jember On The Material On The Theory Of The Formation Of The Universe

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ABSTRACT

Educational problems always arise along with the development and increase of students' abilities, situations and environmental conditions that exist due to the influence of information and culture as well as the development of science and technology. The geography subject for the material of the Theory of the Formation of the Universe according to the results of observations and interviews made to class X social studies 3 students at SMAN 3 Jember is considered boring material. This study used the classroom action research method. The research will be carried out as many as two cycles, if in cycle I it has been achieved as desired, namely achieved classical completeness, then the implementation of the cycle is stopped, but if the results achieved have not reached the desired one, then continued in cycle II by optimizing the researcher's hard work in applying the STAD learning model so that the expected goals are achieved. The results of learning activities in cycle II are better than learning in cycle I. The application of the STAD model learners has succeeded in increasing students' abilities and increasing student activity by 93.75%, growing awareness to always uphold cooperation in solving problems together so as to realize a high social sense between friends in school

Keywords: *Student Teams Achievement Division Learning Model, Theory of the Formation of the Universe*

ABSTRAK

Permasalahan pendidikan selalu muncul bersamaan dengan berkembang dan meningkatnya kemampuan siswa, situasi dan kondisi lingkungan yang ada akibat pengaruh informasi dan kebudayaan serta berkembangnya ilmu pengetahuan dan tekhnologi. Mata pelajaran geografi untuk materi Teori Pembentukan Jagad Raya menurut hasil observasi dan wawancara yang diakukan pada siswa kelas X IPS 3 di SMAN 3 Jember dianggap sebagai materi yang membosankan. Penelitian ini menggunakan metode Penelitian tindakan kelas. Penelitian akan dilakukan sebanyak dua siklus, jika pada siklus I telah tercapai seperti yang diinginkan yaitu dicapai ketuntasan klasikal, maka pelaksanaan siklus dihentikan, tetapi jika hasil yang dicapai belum mencapai yang diinginkan, maka dilanjutkan pada siklus II dengan mengoptimalkan kerja keras peneliti dalam menerapkan model pembelajaran STAD sehingga tujuan yang diharapkan tercapai. Hasil kegiatan pembelajaran pada siklus II menjadi lebih baik dari pembelajaran pada siklus I. Penerapan pembelajara model STAD berhasil meningkatkan kemampuan dan meningkatkan keaktifan siswa sebesar 93,75%, menumbuhkan kesadaran untuk selalu

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menegakkan kerjasama dalam memecahkan permasalahan secara bersama-sama sehingga terwujud rasa sosial yang tinggi antar teman dalam sekolahan.

Kata kunci : Model Pembelajaran Student Teams Achievement Division, Teori Pembentukan Alam Semesta

INTRODUCTION

According to Undang-Undang No. 20 2007 concerning the National Education System, it is stated that "Education is a planned conscious effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual power, self-control, personality, intelligence, noble character, and skills needed for themselves, society, nation and state. Education is a conscious effort in a planned learning process so that later students become better human beings. Basic education as an early education is also very influential on the subsequent education." (Haryanto, 2012) Education is an effort to build and develop the human personality either spiritually or physically.

One of the efforts that can be made to improve the quality of education in Indonesia is to improve the learning process in the classroom, in order to create learning objectives as desired together. The teaching and learning process should always be evaluated whether in the learning process that has been implemented the learning targets implemented are achieved in accordance with the objectives. In addition, evaluation can also be used to find problems faced in learning activities.

Educational problems always arise along with the development and increase of students' abilities, situations and environmental conditions that exist due to the influence of information and culture as well as the development of science and technology. To answer problems in learning, teacher creativity and teacher innovation are needed in choosing learning methods and models that are in accordance with student intake, infrastructure conditions and the complexity of the subject matter.

The geography subject for the material of the Theory of the Formation of the Universe according to the results of observations and interviews made to class X social studies 3 students at SMAN 3 Jember is considered boring material, so it requires teacher efforts in choosing the right learning model so that students can understand the purpose of learning the basic competencies of this Universe Formation Theory. The results of observations on learning in class X social studies 3 show that students tend to be less interested in participating in learning and less responsive students in participating in learning in class.

A good learning strategy is if a teacher has complete teaching tools and masters the material. According to (Djamarah, 1996) One of the important basic strategies as a guide for implementing learning strategies to succeed as expected, it is necessary to choose a teaching method and model that is in accordance with student conditions. So far, the learning strategies used by teachers in the learning process still use the classical lecture learning method. The classical teaching system, will

make students feel that the learning carried out by the teacher is too fast so they tend to fall behind with their smart friends in the process of absorbing lessons.

There are learning strategies that can encourage student enthusiasm for learning, so that students are not bored and take into account student characteristics so as to improve student learning outcomes, namely by applying cooperative learning methods (Ibrahim, 2000). The STAD learning model is one way in cooperative learning methods that can foster cooperation, critical thinking and can help friends understand the subject matter together. (Ariani, T. & Agustini, 2018) Student Team Achieviment Division (STAD) learning is more meaningful because students will directly connect the knowledge learned with daily life, while (Rusman, 2011) The Student Team Achievement Division (STAD) is a generic method of classroom arrangement and not a comprehensive teaching method for a particular subject, teachers use their own lessons and materials.

According to (Pambudi, 2016) "Cooperative learning is a learning method oriented towards learning together in a small group to discuss problems together with group members, so that difficult problems can be solved".

The cooperative learning method consists of two learning models, namely the STAD (Student Teams Achievement Division) and TGT (Team Games Tournament) learning models. (Abidin, 2016) The STAD model is the simplest of cooperative learners, where after cooperative learning takes place students are given tests I and II to determine individual academic abilities.

Based on the understanding of the STAD learning model above, broadly speaking, STAD learning can realize a learning system that makes it easier for students to understand and remember the subject matter together without any meaningless competition between students. Hope is realized if the STAD learning model is applied which emphasizes togetherness and collaboration which is an advantage in social learning. In addition, by studying the material on the diversity of Indonesian culture, it is hoped that students can recognize regional culture and national culture, and in the end be able to cultivate a sense of love for their homeland by preserving their culture as a form of local wisdom. For several reasons above, researchers tried to examine student learning outcomes with the Student Teams Achievement Division (Stad) Learning Model at Sman 3 Jember on the Material of the Theory of Universe Formation.

METHOD

This research uses the classroom action research method (Cahyadi, 2014) Classroom action research comes from the English term Classroom Action Research, which means research conducted in a class to determine the consequences of actions applied to a research subject in that class. This research was conducted at SMA Negeri 3 Jember. Determination of research subjects using the population method, namely all students of class X social studies 3 odd semesters at SMA Negeri 3 Jember.

The plans and steps that can be taken by creating and compiling action or implementation designs and procedures with Lewin's spiral model using 2 cycles, each cycle consisting of 4 stages, namely planning, action, observation and reflection.

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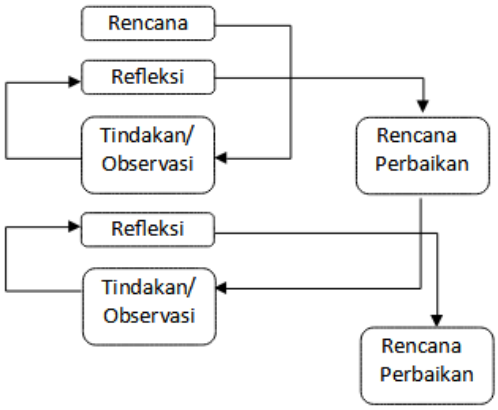

Figure 1. spiral class action research model (Hopkins, 1993) (In PGSM Project Assessment Team, 1997:7)

Arikunto in Iskandar (2015) based on the spiral model image above, the class action research that researchers will apply is in the form of a recycled assessment process consisting of 4 phases, namely planning, taking action, observing and reflecting.

The research will be carried out as many as two cycles, if the first cycle has been achieved as desired, namely achieved classical completeness, then the implementation of the cycle is stopped, but if the results achieved have not reached the desired one, then continued in cycle II by optimizing the hard work of researchers in applying the STAD learning model so that the expected goals are achieved.

The data analysis used in this study is a qualitative descriptive analysis that seeks to explain the data obtained from observations, interviews and explain data on student learning outcomes that are still quantitative in full, both before the action and after the action. Researchers used an observation sheet based on Djamali (2001: 126) which contains aspects that must be observed when applying the STAD learning model as in table 1.

Table 1. Student observation sheet

NO	Aspek Penilaian															
	Keaktifan				Kemauan				Kemampuan				Tanggungjawab			
	SR	R	T	ST	SR	R	T	ST	SR	R	T	ST	SR	R	T	ST
1.																
2.																
3.																
dst.																

Description: SR (Very Low), R (Low), T (High) and ST (Very High). The process of data analysis in reflection here is guided by (Sunardi, 2001) which includes no stages, namely data reduction, data exposure and data inference. To be able to find out the percentage of activeness,

willingness, ability, responsibility of students in one class as in the table above, the following formula is used: (e.g. student activity)

$$Pa = \frac{\sum siswaaktif}{\sum seluruhsiswa} x\,100\,\%$$ (Depdiknas, 2004)

Based on the results of data analysis, the completeness of student learning will be determined. If the data on observation which includes the activeness, willingness, ability and responsibility of students and the classical learning completion of students reaches 85% or more, then it is said to have succeeded or achieved the desired goal. To find the percentage of student learning completeness classically used formula:

$$E = \frac{N}{P} x\,100$$

Description: E (Student learning completion rate), N (number of students completed learning) and P (Number of all students) based on Depdiknas (2004).

FINDINGS AND DISCUSSION

Based on the implementation of the research cycle, starting from the preliminary action to the cyclical action which includes 2 cycles, several research findings were obtained. In general, some of the research findings obtained from the research results are: (1) From the preliminary test results, it can be seen that 72.72% of students still have difficulties and only 9 students are complete or around 27.27% in solving questions related to the theory of the formation of the universe. This is due to the lack of application of literacy in students, as well as the reluctance of students to search for materials through the internet etc. (2) In the implementation of cycle 1, 33 students participated. Test I showed classical completeness reaching 72.72%. Of the 33 students, there are 9 students who still get a score below 76.

In test II, it shows that classical completeness reaches 78.78%, meaning that classical completeness has also not been achieved in test II. Based on the results of interviews with 2 students as representatives of students who have not been completed, there are difficulties faced by students, namely lack of readiness to participate in learning with the STAD model, students still tend to be afraid and embarrassed to ask teachers and friends in groups besides that they are still seen in the transition period, students do not apply literacy and material enrichment via the internet. The conclusions obtained finally the implementation of learning in cycle I has not been fully successful because in test I and test II have not achieved classical completion. (3) In cycle II, it was followed by 33 students and the results of the test implementation were obtained by 3 students who had not completed their studies, while the classical learning completion reached 90.9% exceeding the classical completion limit of 85%. The results of learning activities in cycle II are getting better, which is shown by the more active students in arguing and cooperating. (4) In class presentations, students are more courageous to express their desire to ask questions if they are not familiar with the material and procedures for conducting discussions. The difficulty that appears in a small number of students to the material lies in the understanding and differences in the theories of the formation of the universe presented by some experts. (5) The implementation of activities in the first cycle students still tend to learn to apply roles and discussions, the presence of one of the group members who is quiet, because they feel afraid of being wrong and still lack their familiarity in one group. This can be tolerated by researchers at the next meeting. In cycle II,

it can be seen that students sit according to their respective groups without rowdy because they are used to learning geography lessons in groups according to the researcher's request. With the readiness of students before the lesson begins, the implementation of the learning that the researcher applies runs smoothly and students can already be conditioned. When studying in groups, students are active in studying and discussing the questions on the assignment sheet so that without any cooperation between them to jointly try to understand the material. This student activity arises as a result of the motivation given by researchers without announcing the scores that have been achieved, namely that there are still many who are below the score of 76 so they are trying to improve their grades. This motivates the highest points that can be contributed to support the success of each group.

Based on the findings from the facts obtained in the class action research above, it can be concluded that students actually feel happy and interested in learning by following the application of the STAD learning model because they can easily memorize material, cooperate with each other in solving problems that they consider difficult and add familiarity between friends. The implementation of scheduled tests allows students time to study in order to face the test. The awarding of prizes to groups that get the criteria as the best group makes all students in the class compete and are responsible for the success of themselves and the group. An individual's success can contribute to the success of his or her group.

Efforts to improve student learning outcomes carried out by researchers in the subject of Geography subject matter of the Theory of the Formation of the Universe at SMA Negeri 3 Jember ultimately went smoothly and successfully, although at the beginning of learning the classroom atmosphere seemed to be still in the level of practice for students to follow learning and understand the material. This is because students are not used to learning with circular seating arrangements according to their respective groups. But with the hard work and guidance that researchers provide with teachers, this can be tolerated.

At the time of the implementation of the first cycle which begins with the presentation of the content, students are still seen actively asking about the learning steps and the material being studied in the group. With the help of the research teacher can finally perform actions at the first stage. In addition to applying learning with the STAD model, researchers also provide motivation and little material to be learned in groups. The atmosphere of content presentation in cycle II students seems to be more active in conveying ideas and asking about material they find difficult. Students are more active because they have begun to get used to learning by following the recommendations of researchers and understanding the benefits after they have learned the Theory of the Formation of the Universe. The general benefit of studying the Theory of the Formation of the Universe is that they know and can solve problems that concern the Theory of the Formation of the Universe and can describe in the form of reasoning delivered at the time of presentation. During group activities, the longer students seem enthusiastic and active in conducting discussions to complete the tasks given compared to the beginning of the implementation of group activities in cycle I. The thing that makes students unsuccessful in learning in the first cycle because students still seem reluctant to ask group mates they do not yet look familiar but with time, guidance and application of learning that is applied optimally by researchers can be anticipated. In addition, the role of students as writers exists in some students in the group making other members have no concept of the answers to the results of the discussion so that many of them do not have important material to learn before the test. This can be tolerated by researchers in the implementation of cycle

II. Group activities other than students must carry out their respective roles, it is also recommended that each group member record the results of the discussion on the questions given in the assignment sheet.

To see an increase in the percentage of data analysis results from the observation sheet which includes activeness, willingness, ability and responsibility in meeting I and meeting II in cycle I above can be seen in the following table:

Table 2. Results of cycle I observation sheet

Kategori	Tingkat Ketercapaian		
	Pertemuan I	Pertemuan II	Peningkatan
Keaktifan	68,75%	78,13%	9,38%
Kemauan	71,88%	81,25%	9,37%
Kemampuan	75,0%	78,13%	3,13%
Tanggungjawab	75%	81,25%	6,25%

In order to complete the material in groups, in cycle II it has been seen that students carry out their roles well which are shown by students with high abilities trying to give explanations to their friends who have not been able to understand the material. They tried each other to get their group an award and get the title of the best group.

The implementation of the test in the first cycle of students still finds it difficult and some are trying to ask their benchmates. Based on the results of test I, there were 7 students who did not complete their studies so that the classical completion obtained was 78.78%. The progression points that students presented to their group have shown good progress, when compared to the preliminary test as the basic score. The group that has the best development points there are 3 groups, namely groups II, III and V the three groups received awards as the 'Best' group.

The results of the analysis from test II there were 3 students who had not been completed, so as to achieve classical completeness of 90.9%. Between tests I and II, it can be seen that there has been an increase of 12.12%. The progress points achieved in the analysis results of test I when compared to the basic score of the preliminary test were quite good and all groups had the same level of appreciation, namely as the 'Best' group with the 'Good' criteria. The provision of progress points on the student's test I tends to decrease when compared to the basic score, namely test II (cycle II), thus resulting in the award rate on test I there were only 2 groups that got the 'Best' award level The student progression points in cycle I were awarded based on how much their score matched or matched the student's baseline score on the past test. In this study, the basic score on test I was determined from the student's basic score at the time of the preliminary test, while the basic score on test II was taken based on the student's score on test I. While for cycle II the awarding of progression points was given based on the basic score of the preliminary test and the basic score of test II (cycle I). To see the percentage of the level of achievement of the observation results of meeting I, meeting II in cycle II and its increase can be seen in the following table:

Table 3. Results of cycle 2 observation sheet

Kategori	Tingkat Ketercapaian		
	Pertemuan I	Pertemuan II	Peningkatan
Keaktifan	84,38%	93,75%	9,37 %
Kemauan	87,50 %	93,75%	6,25 %
Kemampuan	81,25 %	90,63 %	9,38 %
Tangungjawab	87,50 %	93,75%	6,25 %

Based on the analysis of student learning outcomes from cycle I and cycle II, it shows that after learning the STAD model is applied, students feel accustomed and happy to learn in a group way and are motivated to always find a concept by interacting with each other's group mates. Meanwhile, regarding students' mistakes in completing the material test for the Theory of Formation of the Universe due to several factors, students tend to be less thorough, less able to distinguish the material in the Theory of the Formation of the Universe.

Learning this STAD model requires the ability of the teacher to be able to manage the class well, because the initial difficulty point of applying the STAD learning model teacher is when the class arrangement becomes several small groups that make students noisy to change seats. Therefore the readiness and maturity of the applied material must be appropriate.

Based on the discussion above, the results of learning activities in cycle II are better than learning in cycle I. Application of STAD model learners has succeeded in increasing students' abilities and increasing student activity by 93.75%, growing awareness to always uphold cooperation in solving problems together so as to realize a high social sense between friends in school

CONCLUSION

Based on the results of the research and analysis of the discussions that have been carried out, it can be concluded that through the application of the STAD learning model, the learning outcomes of students of Geography subjects in the material for the Formation of the Universe class X IPS3 semester 1 at SMA Negeri 3 Jember have increased. Student learning outcomes have been able to meet the standard of success, namely > 87% classical completion, although in the first cycle student learning outcomes both individually and classically still tend to be low. The average value in cycle II increased from the previous one which was 79.69 in cycle I to 92.97. So it can be concluded that most of the students in class X IPS3 already understand the material for the Formation of the Universe.

The results of the analysis of student observation data showed that the percentage of positive behavioral achievement towards geography learning with the STAD learning model continued to increase until 93.75% of achievement. Student activity is shown by student enthusiasm and participation in question and answer activities during the learning process, especially during discussion activities.

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