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Group Learning in Optimizing the 5 Part of Collaborative Learning and Learning Performance

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Abstract: The method was obtained from the results of research in the form of classroom action research that uses 2 periods in class X-B MAN 3 Kediri and the topic of discussion is plants (plantae). By using a group learning style helps in the improvement process: 1) the teacher provides learning topics in cycle I to cycle II where the teacher finds it difficult to manage the class situation because students are still unfamiliar with the group learning model but in cycle II the teacher is able to manage the class because students already familiar with the group model; 2) the 5 parts of the collaborative learning style obtained results in the second cycle, level K amounted to 1.248%, level C amounted to 11.248%, and level B amounted to 87.5%; and 3) student learning performance which was calculated with an average score collateral average and profit at the end of the study from the beginning of the data, cycle I, and cycle II. The mean values (54.7, 67.5, and 81.4) were the scores obtained and the end of the collateral learning resulted in the percentage (12.9%, 53.12%, and 93.75%). The research conducted at the end of the second cycle there were several students who scored (< 70) so that these students must be guided in understanding the material that has not been understood. The teacher must give thorough attention to all students in order to improve the 5 parts collaborative and student performance.

Keywords: Group Learning Model, 5 Collaborative Elements, Learning Performance

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INTRODUCTION

To test the effectiveness of the collaborative method, we conducted a study in one of the integrated madrasah that has good quality, namely MAN 3 Kediri, Indonesia, which is located on Jl. Bandung no. 7 poor cities. This can be seen from MAN 3 Kediri (schools or students) who have received various awards in participating in various competitions at both regional and national levels.

According to the observations we made at MAN 3 Kediri, especially in class X-B, we found an analysis related to the curriculum and methods that were often used as well as the situation in X-B MAN 3 Kediri. The Education Unit Level Curriculum is the reference used in MAN 3 Kediri. Education Unit Level Curriculum as an improvement of Competency-Based Curriculum which contains an idealistic plan in education. There are several aspects that need to be considered in classroom education, namely cognitive, affective and psychomotor aspects. But this has not been able to be implemented because some educators still use the old method, namely the teacher who explains (Sotto, 2021).

Not all students have difficulty in the learning process using the method of explaining. However, when viewed from the conditions in the class, only (+25%) students were able to catch the lesson well so that in the room it seemed dominated by students whose skills exceeded ordinary students and students had an introverted attitude. Judging from the presentation method, it causes students to be less proficient in the implementation of the learning process. Through this presentation method it causes boredom, sleepiness, laziness, and does not pay attention to the explanations experienced by students. On average (+75%) students are not active in asking questions and it is difficult to express their opinions so that there is no reciprocal interaction between teachers and students (Zhou *et al.*, 2019).

On this occasion we carried out an observation related to students in order to meet the scores in individual Standards in Minimum Learning Completeness. Whereas in the classical Standards in Minimum Learning Completeness, if the students of class X-B MAN Kediri get a score of > 70, the number of students who must get that value is 85%, it is declared complete learning. As many as 4 students who completed and 27 students who did not understand the subject of animalia, we obtained the data from student data.

The researcher also asked the students of class X–B of MAN 3 Kediri about what methods have been or are often used in the biology learning process. Especially cooperative methods, we obtained information that students rarely learn to use cooperative methods in

every learning process. Students are often given material by explaining the material to be tested at the end of the lesson. Students often complain with this way of learning because it is felt that the material presented is still not fully understood by students. Individual students are also often given assignments in the form of summarizing the material. Furthermore, it is then collected so that in its implementation there is less cooperation between students in solving a learning problem.

There are 32 students in class X–B of MAN 3 Kediri, which are dominated by women. At the time of the test for the subject of animalia the number of students in class X-B MAN 3 Kediri was 31 students but entering the subject of plantae there was 1 student who entered class X-B (transferring students from Australia) so that the number became 32 students. This proves the learning techniques used are not able to increase student activity, independence, and individual obligations which result in less than optimal learning outcomes. From the explanation above, it can be explained that learning biology for class X-B students has not been maximized and still needs improvement to improve it.

After seeing the description of class X–B MAN 3 Kediri, especially from the scores obtained by students during the test on the subject of animalia, an effective and strategic effort is needed to solve this problem. In overcoming this problem we need a more effective strategy. One of the efforts that we must overcome is how we can make students more active in asking and answering the problems that have been taught. This is related to students' ability to hone thinking and communication skills. Based on the research and findings that have been done, it is stated that collaborative learning can improve students' learning activities (Haataja *et al.*, 2022). This is because in collaborative learning, students learn to understand the concept by studying in groups whose members have different thoughts (Dewi, Mudakir, & Murdiyah, 2016).

UNESCO believes that there are 4 pillars in education, namely: "learning to know, learning to do, learning to be", and "learning to live together". Learning to analyze (learning to know) in this system can see something that is useful and something that is not useful in life. Learning something (learning to do), learning plays a role as a cause of changes in cognitive domains, builds skills, and consciously selects and accepts values, attitudes, rewards, feelings, and willingness to act or respond to a stimulus. Learning to be oneself (learning to be) is defined as the process of understanding one's needs and identity. Learn to do things according to the norms and rules that apply in society. Learning to live in society (learning to live together) in a world where cultural, geographical and ethnic differences build

pluralism, so that everyone learns to live together peacefully, it is hoped that we will be able to overcome various conflicts, especially in diverse areas, culture, very large (Laksana, 2016).

These four pillars are important for teachers to support their students. The ideals of the four pillars of education are realized in a classroom atmosphere through the process of education and learning. Learning to learn to live together (learning to live together) means that we help each other in social life (gotong royong) (Yaumi, 2016). Collaborative education among students needs to be taught from an early age so that social awareness can develop together. Techniques that can be used to increase social awareness is to invite students to learn how to work together (collaborate) in learning so that these habits can be implemented in social life (Setiyanti, 2012).

Collaborative learning is a learning system carried out by 2 or more people who work well together (Guo *et al.*, 2020). This learning method has differences with non-collaborative learning methods. Globally, in the group learning model, fewer students actively follow it. The concept of group work does not have 2 things, namely; positive interdependence and awareness of the responsibility of each individual, the composition of group members usually does not take into account heterogeneity (Van Der Linden, Erkens, Schmidt, & Renshaw, 2000). Positive dependence means that group members depend on one another. This means that the work will not find a bright spot if it is only done individually. This concept provides an understanding that in our lives as humans we will not be able to live alone to meet their needs. It is certain that humans as social beings definitely need the help of others (Uno, 2016).

The choice of learning method has a major impact on the quality of education in the education and learning process. According to Supriyadi (2011), to achieve educational goals, must use the best learning model. That is, to achieve quality education, it must be held in the right way and then given to students in the right way. Learning techniques that involve students who work actively in the learning flow, both sentimentally and socially, must continue to grow and be oriented so that students can achieve more optimal results.

Studying Biology is an effort to find knowledge about living things, besides that, biology also tries to build, develop and improve attitudes, thinking skills, and practice scientific research methods in the field of biology. Apriono (2013) explains that collaborative learning aims to strengthen learning skills through group collaboration, equalizing students with different backgrounds and abilities. Honing skills to solve problems through discussion, and encouraging the democratic process in the classroom (Eneluwe, 2020; S. Lu and Smiles, 2022).

Collaborative methods have not been widely used in the field of education, including at MAN 3 Kediri, although Indonesian people are very happy to show the tradition of gotong royong. If schools aim to train people who are conciliatory and able to cooperate between individuals, then collaborative methods should be used regularly. As explained by Suryani (2010) who argue that "an example of the benefits of collaborative learning is reducing interpersonal conflict"(Adjei *et al.*, 2022).

Individuality of students who receive the material presented differently, there are students who have a fast, medium, and low understanding of the material. To stimulate student learning, teachers can apply various strategies or learning methods in the classroom. According to Khoiriyah (2016), collaborative learning is one of the learning strategies oriented to a constructivist perspective. Collaborative learning model is a learning method in which there are interactions and transactions between students in learning activities that implement the rules in the constructivist view. Cooperative learning can increase student activity. According to Van Der Linden, Erkens, Schmidt, & Renshaw (2000), using collaborative learning methods is very effective in expressing differences of opinion between students (Handoko and Ghofur, 2020).

In the learning process there are many learning models that can be used, but this time we use the collaborative method because it has features such as think-pair-share and think-pair-square, send greetings and questions, numbered heads, structured numbered heads, Two Stay Two Stray or group, jigsaw, and others (Amania and Achmadi, 2019). One of the models in cooperative learning as mentioned above is the group model which was improved by Spencer Kagan in 1992, which is a method that provides opportunities for groups to share results and information with other groups. The structure of group learning is in one group consisting of four students who later will be two students as a source of information for their guests and two students will split up into other groups separately. This learning model has never been implemented in MAN 3 Kediri.

Research on group model collaborative learning has been done previously. Suryani (2010) found that the implementation of the group model can improve student activity and achievement. The results of this study are supported by the results of research found by Wulandari and Anggis (2020), namely that student learning activities and achievements can be improved through the application of this group model.

Based on the explanation from the background above, research will be conducted on the group learning model. The objectives of this research are: 1) to identify the teacher's activities

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in the implementation of collaborative learning model of group learning in optimizing the 5 parts of collaborative learning and learning performance; 2) knowing how to apply the model; 3) find out how the application of group model collaborative learning in improving learning performance (Eneluwe, 2020).

METHOD

Type of Research

The research uses classroom action research studies, which is a form of reflective study that takes specific steps to improve learning practices in the classroom in a more specific way (Suyanto, 2018). The improvement efforts made to carry out the planned actions are aimed at overcoming the problems that occur in the classroom. Classroom action research for this study consisted of two cycles, each of which consisted of four phases, as reported by the PGSM drafting team, the phases are: 1) planning action, 2) acting, 3) observing, and 4) reflecting that during data collection, the researcher was supported by four observers who observed the learning process. Observers observed the activities of teachers and students in groups from the beginning of the school year to the end of cycles I and II. **Figure 1** shows the spiral of classroom action research which includes activities (1) action planning, (2) action implementation, (3) observation, (4) reflection.

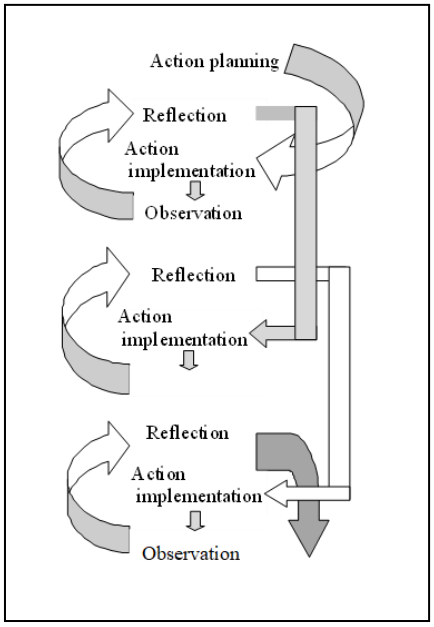


Figure 1. Classroom action research spiral

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This study was conducted at MAN 3 Kediri, Indonesia. The subjects of this study were students of class X–B MAN 3 Kediri, totaling 32 students who had several differences in education and ethnic background. **Table 1** is a presentation of data, data sources, instruments, and data collection procedures:

Table 1 Data, Data Sources, Instruments, and Data Collection Procedures

No	Data	Source Data	Instrument	Data collection procedure
1.	Group learning model	• Teacher • Students	• Teacher activity observation sheet • Student response questionnaire	• Study lesson plans • Record teacher activities on the teacher activity observation sheet • Give questionnaires to students
2.	Five elements of collaborative learning	• Students • Students	• Student activity observation sheets • Student response questionnaire	• Record student activities on student activity observation sheets • Give questionnaires to students
3.	Cycle I and Cycle II test scores	• Students • Students	• Cycle I test questions • Cycle II test questions	• Give a test at the end of the first cycle of learning • Give a test at the end of cycle II learning

The success criterion is that the frequency of student learning activities in the 5 parts of the collaborative method must be better, which means that the profit of good grades (B) is increasing while the decrease in profit occurs at the level of less (K). Indicators of academic success are seen as the percentage of individual students whose scores increase between observers I and cycle I, and between cycles I and cycle II. On the other hand, the profit of students' scores decreased between observations I and cycle I, and between cycles I and II. Classical validity between the initial observations, period I, and period II, using the percentage criteria always increases from observation I to cycle I, and from cycle I to cycle II.

Data analysis

To get the data using the observation method in the learning process of plantae material through a collaborative model taken using a teacher activity research sheet and student response questionnaires. Teacher activity data analyzed descriptively supported by student response data (questionnaire) given at the end of each cycle. Student response questionnaires

were analyzed by calculating the percentage of students who answered the option (strongly agree, agree, disagree, and disagree).

Data for 5 sections of collaborative learning were obtained from questionnaire sheets filled out by students including observation sheets for 5 sections of collaborative learning during the learning process. The results are entered in the observation sheet. The 5 sections consist of: (1) Direct interaction; (2) individual obligations; (3) are positively interrelated; (4) discussion skills between individuals in groups; and (5) group process review. To find out student activities in the learning process, the data that has been recorded on the student activity observation sheet is calculated using the following formula to calculate the average attendance:

$$\text{Student learning activity level K} = \frac{Students\ at\ level\ K}{Incoming\ students} x\ 100\%$$

$$\text{Student learning activity level C} = \frac{Students\ at\ level\ C}{Incoming\ students} x\ 100\%$$

$$\text{Student learning activity level B} = \frac{Students\ at\ level\ B}{Incoming\ students} x\ 100\%$$

Description: K = Less, C = Enough, B = Good

To determine the increase in the value of individual learning performance in all cycles by comparing the initial value of cycles I and II. In Table 3.6 the criteria for giving individual improvement scores are listed. The individual improvement score is the association of the two previous types of scores.

FINDING AND DISCUSSION

Cycle I

Teacher Activities in Learning

Cycle I was carried out in twice meetings. On Wednesday, April 30, 2018 at 09.40-11.00 the first time was held. While the second meeting was held on Wednesday, May 14, 2018 at 09.40-11.00. The first and second meetings are both held on Wednesdays, this is because class XII has an exam so that class X and XI are off. Learning is carried out for 1 hour or carried out for 40 minutes so that the accumulation of learning in the first cycle is 4x40 minutes. The material discussed is about Plantae, with sub-topics of mosses and ferns. Implementation of collaborative learning model through 5 stages, namely; 1) planning, 2) teacher presentations, 3) group activities, 4) group presentations and 5) reviews and awards. On the teacher activity observation sheet there are steps that the teacher must take based on the lesson plan.

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As supporting data about the teacher's activities during the learning process, the following is a list of the results of the questionnaire which was filled out by students after the first cycle of the learning process was completed. The following are the results of the teacher's activities in the learning **Table 2.**

Table 2. Questionnaire results of teacher activities in learning

No	Statement	Frequency	%
1.	The teacher provides initial motivation when starting learning		
	• Strongly agree	14	45.16
	• Agree	16	51.61
	• Disagree	1	3.22
	• Don't agree	0	0
2.	The teacher provides a way out (providing assistance) when there are difficulties in the discussion.		
	• Strongly agree	19	61.29
	• Agree	10	32.25
	• Disagree	1	3.22
	• Don't agree	1	3.22
3.	The teacher helps students formulate conclusions from the material being studied.		
	• Strongly agree	14	45.16
	• Agree	14	45.16
	• Disagree	1	3.22
	• Don't agree	2	6.45
4.	The use of the TSTS model makes learning fun		
	• Strongly agree	11	35.48
	• Agree	17	54.83
	• Disagree	3	9.67
	• Don't agree	0	0

Based on the results of the questionnaire that has been filled out by students in table 4.6, it can be seen the percentage of students who choose the positive option. In the first statement "Teachers provide initial motivation when they start learning", 96.77% of students who chose the positive option, while 3.22% of students who chose the option did not agree and disagreed with 0% of students who chose the option. The number of students who choose the positive option proves that the teacher has managed learning well because students are guided to enter the material to be discussed so that they become enthusiastic. The existence of students who choose the option of not agreeing may be because these students do not understand the meaning of the statement in the questionnaire about what is meant by motivation. Students may interpret motivation by giving encouragement to students, even though the motivation

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referred to in the statement above is to direct students to understand the material to be studied by providing apperception and guiding questions.

Student Activities in Learning

A student activity recorder is provided as a student activity dashboard which contains 5 parts of collaborative learning, namely face-to-face correlation elements, individual roles, interrelationships, interpersonal and group discussion skills and group process reviews. The following is a table of the results of the analysis of the level of collaborative learning activities in cycle I.

Table 3. The results of the research on the level of collaborative learning activities achieved by the group in cycle I

Elements	Level	Group								Σ	%
		1	2	3	4	5	6	7	8		
Face-to-face interaction	K	-	-	-	-	1	2	-	-	3	9.6%
	C	2	2	1	3	2	2	-	-	12	38.7%
	B	2	2	3	-	1	-	4	4	16	51.6%
Communication skills between individuals and groups	K	1	-	-	-	-	1	-	-	2	6.4%
	C	1	2	3	3	2	1	1	1	14	45.1%
	B	2	2	1	-	2	2	3	3	15	48.3%
Positive interdependence	K	1	-	-	-	-	3	-	-	4	12.9%
	C	-	2	3	3	2	1	4	1	16	51.6%
	B	3	2	1	-	2	-	-	3	11	35.4%
Individual responsibility	K	-	1	-	-	-	-	-	-	1	3.2%
	C	2	2	2	3	3	4	4	3	23	74.1%
	B	2	1	2	-	1	-	-	1	7	22.6%
Process evaluation of group	K	-	-	-	-	-	1	-	-	1	3.2%
	C	2	2	4	3	3	2	3	2	21	67.7%
	B	2	2	-	-	1	1	1	2	9	29.1%

Notes:
Average K: 7.1%
Average C: 55.4%
Average B: 37.4%

According to **Table 3**, it can be seen that the groups that carried out collaborative discussions were very useful, namely groups 3, 4 and 7. This was because in groups 3, 4 and 7 none of their group members reached level K so it can be said that the group had carried out discussions quite well. While the other groups need improvement so that students in the group who still reach level K are fewer or even absent in the next cycle.

Achievement of the Five Elements of Collaborative Learning

The following is a summary of the percentage of achievement of the 5 parts of classical collaborative learning which will be explained in **Table 4**.

Table 4. Summary of the percentage of achievement of the five elements of cooperative learning

Observed Elements	Level of Achievement (%)		
	Less	Enough	Good
1. Face-to-face interaction	9.6	38.7	51.6
2. Individual responsibility	3.2	74.1	22.6
3. Positive dependency	12.9	51.6	35.4
4. Communication skills between individuals and groups	6.4	45.1	48.3
5. Evaluation of group process	3.2	67.7	29.1
Average	7.06	55.44	37.4

Students at level K pass 7.06%, at level C it is 55.44% and at level B is 37.4%. The student results obtained from the above analysis can be interpreted that student learning activities are always at a sufficient level, meaning that this collaborative learning process is still not optimal. The achievement of the five parts of collaborative learning still needs to be improved, especially on the elements of discussion between individuals and groups who need each other. In this cycle students are still difficult to express questions or opinions clearly. The data from the study of the level of collaborative learning activity in the first cycle shows student activities during the learning process. To support the data on the results of the analysis of the cooperative learning level in the first cycle, Table 5 lists the results of filling out the questionnaire by students after the implementation of the first cycle of learning.

Table 5. Results of the student learning activity questionnaire

No	Statement	Frequency	%
1.	I can work with groups during learning		
	• Strongly agree	10	32.25
	• Agree	17	54.83
	• Disagree	4	12.90
	• Don't agree	0	0
2.	I practice listening to my friends' opinions when studying in groups		
	• Strongly agree	9	29.03
	• Agree	21	67.74
	• Disagree	1	3.22
	• Don't agree	0	0

No	Statement	Frequency	%
3.	Friends in one group are quite clear in asking opinions and questions		
	• Strongly agree	2	6.45
	• Agree	21	67.74
	• Disagree	8	25.80
	• Don't agree	0	0
4.	I understand the explanation from the group about the material being discussed		
	• Strongly agree	5	16.12
	• Agree	19	61.29
	• Disagree	7	22.58
	• Don't agree	0	0
5.	The application of the group model can make me actively ask questions and express opinions		
	• Strongly agree	5	16.12
	• Agree	16	51.61
	• Disagree	9	29.03
	• Don't agree	1	3.22
6.	Friends don't raise their hands first when they ask questions very agree		
	• Strongly agree	1	3.22
	• Agree	11	35.48
	• Disagree	14	45.61
	• Don't agree	5	16.12

The results of the study of the student learning movement questionnaire above can have a determination that the number of students who choose the positive option is higher than the students who choose the negative option. The higher number of positive options indicates the learning process has been going quite well because the students themselves filled out the questionnaire based on how they felt. Meanwhile, students who chose the negative option in the questionnaire were possible because students were not familiar with the group model collaborative learning method. The group model is still being implemented for the first time in class X-B MAN 3 Kediri so students are still awkward and need a process to get used to the model.

Learning Achievement

There are 15 students who have a score of < 70 or 46.875%. When compared with the initial data, the first cycle is better because classically there has been an increase in the percentage of learning performance. In the initial data, the percentage of students' classical learning achievement was 12.9% while in the first cycle it was 53.125%. This shows an

increase in the percentage of the initial data on classical learning achievement to the first cycle of 40.225%. Students who have not achieved graduation in understanding the lessons at least in the first cycle are expected to decrease in quantity in the second cycle. In cycle I the teacher will recondition something that is not understood by students so that in cycle II learning can be done better and is able to reduce some students who have not received reference scores and some students who have not yet passed. Classically, students in class X-B MAN 3 Kediri have not finished yet, but when viewed from the scores of each individual, students in class X-B MAN 3 Kediri have a significant increase, seen from the initial data to cycle I.

Cycle II

Teacher Activities in Learning

Observation cycle II requires 3 meetings and takes 4x40 minutes (160 minutes). The subject of analysis taken according to the second cycle of action is Plantae with the sub-topic of seed plants (spermatophyte). The first meeting in cycle II was held on Thursday, May 15, 2018 at IV (08.40-09.20). The provision of time for the first meeting is 1 lesson hour (40 minutes). On Wednesday, May 21, 2018 at V-VI hours (09.40-11.00) is the second meeting. At the second meeting, the time provided was 2 hours of lessons (80 minutes) while on Thursday, May 22, 2018 at IV (08.40) the third meeting was held with 1 lesson time (40 minutes).

According to the results of the data on the teacher in doing in the second cycle, the beginning was the planning phase, teacher presentations, group activities, group presentations and evaluations and awards, it can be concluded that in general the 5 parts of group learning have been carried out properly. The deficiencies in the first cycle have been addressed in the second cycle. These shortcomings, for example, the teacher does not give gifts, etc. The following **Table 6** lists the results of the questionnaire that was filled in by students after the learning process in cycle II was completed.

Table 6. Questionnaire scores of teacher activities in learning cycle II

No	Statement	%	
		Cycle I	Cycle II
1.	The teacher provides initial motivation when starting learning		
	• Strongly agree	45.16	31.25
	• Agree	51.61	62.5

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No	Statement	%	
		Cycle I	Cycle II
	• Disagree	3.22	6.25
	• Don't agree	0	0
2.	The teacher provides a way out (providing assistance) when there are difficulties in the discussionSangat setuju		
	• Strongly agree	61.29	43.75
	• Agree	32.25	50
	• Disagree	3.22	6.25
	• Don't agree	3.22	0
3.	The teacher helps students formulate conclusions from the material being studied Sangat setuju		
	• Strongly agree	45.16	43.75
	• Agree	45.16	50
	• Disagree	3.22	6.25
	• Don't agree	6.45	0
4.	The use of the TSTS model makes learning fun		
	• Strongly agree	35.48	37.5
	• Agree	54.83	56.25
	• Disagree	9.67	6.25
	• Don't agree	0	0

To obtain these results students must fill out a questionnaire on the activities carried out by the teacher in learning, it can be called the implementation of the second cycle which has shown more positive results than the first cycle, although the increase is not too high. When viewed from the 4 statements contained in **Table 6**, in general the number and percentage of students who chose the positive option increased from cycle I to cycle II. In the first statement about "The teacher provides initial motivation when starting learning" there is indeed a decrease in the percentage of students who choose the positive option from cycle I (96.77%) to cycle II (93.75%) but the frequency of students choosing the positive option remains the same. ie 30 students.

Student Activities in Learning

A tool to capture student actions is a student activity investigation sheet that includes 5 parts of collaborative learning. Viewed from **Table 7**, the data from the analysis of the level of collaborative learning activities targeted by the group in cycle II will be displayed. Complete data on the results of student action research during the second cycle of learning will be presented in **Table 7**.

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Table 7. Research results on the level of cooperative learning activities achieved by the group in cycle II

Elements	Level	Group								Σ	%
		1	2	3	4	5	6	7	8		
Face-to-face interaction	K	-	-	-	1	-	-	-	-	1	3,12%
	C	1	-	-	-	-	-	-	-	1	3,12%
	B	3	4	4	3	4	4	4	4	30	93,75%
Communication skills between individuals and groups	K	-	-	-	-	-	-	-	-	-	0%
	C	1	-	-	-	2	-	1	-	4	12,5%
	B	3	4	4	4	2	4	3	4	28	87,5%
Positive interdependence	K	-	-	-	1	-	-	-	-	1	3,125%
	C	1	2	-	-	-	-	-	-	3	9,375%
	B	3	2	4	3	4	4	4	4	28	87,5%
Individual responsibility	K	-	-	-	-	-	-	-	-	-	0%
	C	-	3	-	1	1	1	-	-	6	18,75%
	B	4	1	4	3	3	3	4	4	26	81,25%
Process evaluation of group	K	-	-	-	-	-	-	-	-	-	0%
	C	1	1	-	-	-	-	1	1	4	12,5%
	B	3	3	4	4	4	4	3	3	28	87,5%

Notes:
Average K: 1,25%
Average C: 11,25%
Average B: 87,5%

Judging from the data located in **Table 7**, we can find out the achievements that have been made in cycle II. these groups have differences in different learning activities. These levels include level K, level C and level B.

Achievement of the Five Elements of Cooperative Learning

Based on **Table 7**, it can be seen the summary results of the percentage of achievement of the five elements of classical cooperative learning. The following is a summary of the percentage of achievement of the five elements of classical cooperative learning in **Table 8**.

Table 8. Summary of the percentage of achievement of the five elements of cooperative learning cycle II

Observed Elements	Level of Achievement (%)					
	Less		Enough		Good	
	Cycle I	Cycle II	Cycle I	Cycle II	Cycle I	Cycle II
1. Face-to-face interaction	9.6	3.12	38.7	3.12	51.6	93.75
2. Individual responsibility	3.2	0	74.1	18.75	22.6	81.25

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3. Positive dependency	12.9	3.12	51.6	9.37	35.4	87.5
4. Communication skills between individuals and groups	6.4	0	45.1	12.5	48.3	87.5
5. Evaluation of group process	3.2	0	67.7	12.5	29.1	87.5
Average	7.06	1.248	55.44	11.248	37.4	87.5

The data loaded is data from the study of the level of learning activities with the collaborative method in cycle II showing the ongoing learning process carried out by students. As a support for the evidence of the collaborative study level assessment in cycle II, **Table 9** lists the results of the learning activity questionnaires that have been filled out by students after learning cycle II.

Table 9 Questionnaire results of student learning activities

No	Statement	%	
		Cycle I	Cycle II
1.	I can work with groups during learning		
	• Strongly agree	32.25	28.12
	• Agree	54.83	65.62
	• Disagree	12.90	6.25
	• Don't agree	0	-
2.	I practice listening to my friends' opinions when studying in groups		
	• Strongly agree	29.03	25
	• Agree	67.74	71.87
	• Disagree	3.22	3.12
	• Don't agree	0	-
3.	Friends in one group are quite clear in asking opinions and questions		
	• Strongly agree	6.45	6.25
	• Agree	67.74	84.27
	• Disagree	25.80	9.37
	• Don't agree	0	-
4.	I understand the explanation from the group about the material being discussed		
	• Strongly agree	16.12	9.37
	• Agree	61.29	75
	• Disagree	22.58	12.5
	• Don't agree	0	3.12
5.	The application of the group model can make me actively ask questions and express opinions		
	• Strongly agree	16.12	6.25

No	Statement	%	
		Cycle I	Cycle II
	• Agree	51.61	68.75
	• Disagree	29.03	25
	• Don't agree	3.22	-
6.	Friends don't raise their hands first when they ask questions		
	• Strongly agree	3.22	6.25
	• Agree	35.48	31.25
	• Disagree	45.61	46.87
	• Don't agree	16.12	15.62

According to the results of the questionnaire analysis of student learning activities in **Table 9**, it can be determined that the average number of students who choose the positive option in cycle II has increased compared to cycle I. All statements contained in the questionnaire Table 9 have an increase in frequency and the percentage of students who choose the positive option. In the first statement there was an increase of 6.66%, the second statement amounted to 0.1%, the third statement amounted to 16.33%, the fourth statement amounted to 6.96%, the fifth statement amounted to 7.27% and the sixth statement amounted to 0.76%. The increase in the number of students in cycle II who chose the positive option showed that the learning process had gone quite well because the students themselves filled out the questionnaire based on how they felt.

Based on descriptive analysis, it can be seen that by using a group model collaborative learning system can improve student achievement scores. With that came the research hypothesis which reads: "The application of the collaborative learning model of the group model can improve the five elements of collaborative learning for students of class X-B semester II MAN 3" is accepted.

Learning Achievement

There are 2 students who get a score of < 70 or 6.25%. This causes students to have not been declared complete in learning in cycle II, so that the 2 students are complete in learning, these students are given additional tutoring. This activity has the aim of increasing understanding of the material and students are able to improve their grades to be even better. Classically, the learning activities in cycle II, many students achieve mastery in learning and absorption in learning has reached > 70%, has been more than 85%, which is 93.75%.

At the beginning of the data, the learning process carried out classically was 12.9%, the level of classical student learning reached 53.12%. Meanwhile, in the second cycle, students

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obtained 93.7% results, which the data shows that the learning process can increase the value from the beginning of the data to the first cycle and from the first cycle to the second cycle. This is the hypothesis that is proposed, namely "By applying collaborative learning model groups can grow students' cognition of the material being taught and can improve the performance of students in class X-B semester II MAN 3 Kediri". The increase in student achievement during the classical learning process from initial data to cycle I then to cycle II can be seen from the results obtained by students which are illustrated in the following **Figure 1.**

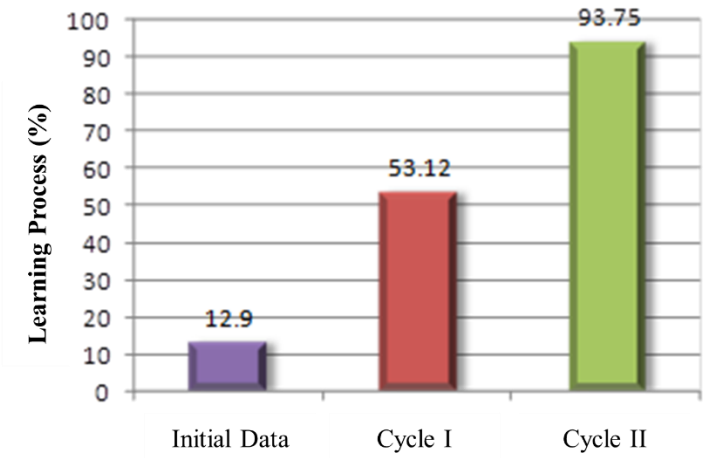


Figure 1. Graph showing the increase in learning achievement from the initial stage, cycle I, and cycle II

CONCLUSION

The conclusions obtained from the research are; (1) the teacher's reaction when conducting learning guidance in cycle I and cycle II begins with the planning phase, the presentation of the learning to be carried out by the teacher, group work, group presentations, and reviews and awards it can be concluded that these activities have been implemented properly according to with lesson plan; (2) the application of the collaborative (group) learning model to the second semester X-B students of MAN 3 Kediri with the plantae theme will be able to make it easier to increase the 5 collaborative parts from cycle I to cycle II; (3) the application of the collaborative learning model (groups) carried out by class X-B second semester students of MAN 3 Kediri with the theme of plantae can improve student learning

performance whose measurements are measured with grades in general and the passing rate of classical learning from the initial data of cycle I and cycle II (Chan, Wan and Ko, 2019).

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