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IMPROVING BIOLOGY LEARNING ACHIEVEMENT ON "CELL" MATERIAL THROUGH *THINK-PAIR-SHARE OF* STUDENTS IN CLASS XI MIA-2 SMA NEGERI 21 SURABAYA

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Abstract

This research, which is designed as a three-cycle class action research, aims to describe (1) the process of improving the learning outcomes of students in class XI MIA-2 SMA Negeri 21 Surabaya Even Semester of the 2021/2022 academic year on Cell material through the *think pair share learning* model, (2) describe the results of improving the learning outcomes of students in class XI MIA-2 SMA Negeri 21 Surabaya Even Semester of the 2021/2022 academic year on Cell material through the think pair *share learning* model, and (3) determine the response of students in class XI MIA-2 SMA Negeri 21 Surabaya Even Semester of the 2021/2022 academic year to the application of the *think pair share* learning model to improve learning outcomes on Cell material.

The results of the research on student learning completeness showed that the *Think Pair Share* model had a positive impact in improving the quality of student learning which was marked by an increase in student learning completeness in each cycle, namely in cycle I of 66.7%, cycle II of 80.6%, and cycle III of 94.4%. The evaluation results also showed an increase. In Cycle I it was 66.7, Cycle II 76.9, and in Cycle III it was 80.0.

The results of research on teacher and student activities in the most dominant learning are working with tools / media, listening / paying attention to teacher explanations, and discussions between students / between students and teachers. So it can be said that student activities can be categorized as active. Meanwhile, the teacher's activities during learning have carried out the steps of the *Think Pair Share* model cooperative learning method well. It can be seen from the teacher's activities that appear, including the activities of guiding and observing students in working on LKS activities/finding concepts, explaining difficult material, giving feedback/evaluation/question and answer, the percentage of which is quite large.

Thus, it can be concluded that the *Think Pair Share* model has a positive impact in improving the quality of student learning and student learning motivation. For this reason, it is recommended to teachers, especially Biology teachers, to apply the *think pair share* learning model as an alternative to innovative learning.

Keywords: learning achievement, student response, cell, *think pair* **share**

INTRODUCTION

Biology learning does not prioritize the absorption through the achievement of information, but rather the development of skills and information processing. For this reason, learner activity needs to be increased through exercises or tasks by working in small groups and explaining ideas to others. (Ministry of Education, 2008:24).

These steps require active participation from students. For this reason, there needs to be a learning method that involves students directly in learning. The method in question is the cooperative learning method. Cooperative learning is a teaching that involves students working in groups to set common goals (Felder, 1994:2).

Cooperative learning emphasizes interaction between students. Thus, students will have active communication with their peers. With this communication, it is expected that students can master the subject matter easily because "students can more easily understand the explanation from their friends than the explanation from the teacher because their level of knowledge and thinking is more in line and commensurate The results of previous research show that cooperative learning has a very positive impact on students with low learning outcomes (Nur, 2003: 2).

Tschumi of the University of Arkansas Little Rock introduced an introductory science computer course three times, the first time students worked individually, and twice in groups. In the first class only 36% of students scored a C or better, and in the cooperative classes 58% and 65% of students scored a C or better (Felder, 1994:14).

Based on this explanation, the researcher wants to conduct a study with the title "Increasing Biology Learning Achievement on the Material "Cell" through the Think-Pair-Share Learning Model for Class XI MIA-2 SMA Negeri 21 Surabaya Even Semester 2021/2022".

OVERVIEW

Learning Achievement

Learning achievement has several main functions, namely as follows.

(1) Learning achievement is an indicator of the quality and quantity of knowledge that students have mastered.
(2) Learning achievement as the satisfaction of curiosity.
(3) Psychologists usually refer to this as the tendency of *curiosity* (*couriosity*) and is a common human need, including the needs of students in an educational program.
(4) Learning achievement as an information material in educational innovation.
(5) Learning achievement can be used as a driving force for students in improving science and technology and acts as feedback (*feed back*) in improving the quality of education.
(6) Learning achievement is an internal and external indicator of an educational institution.
(7) Learning achievement can be used as an indicator of the absorption capacity (intelligence) of students (Arifin, 1990: 3).

In the learning process, there are several factors related to learning difficulties. These factors include:

(1) Factors that come from within (internal) are:
    (a) Students find it difficult to digest the material because they find it difficult.
    (b) Students lose their passion for learning because they get low grades.
    (c) Students believe that it is difficult to apply self-discipline in learning.
    (d) Students complained that they could not concentrate.
    (e) Students are not diligent enough to do something, especially learning.
    (f) Low self-concept.
    (g) Emotional disturbance.
(2) Factors that come from outside (external), namely:
    (a) Socio-economic ability or circumstances.
    (b) Teachers' lack of proficiency in learning materials and strategies.
    (c) Non-academic tasks.
    (d) Lack of support from those around her.
    (e) Physical environment (Suparno, 2001: 52-57).

Think-Pair-Share (TPS)

Kagen (in Ibrahim, 2000:27) mentioned the steps in cooperative learning type TPS are as follows.

(1) *Think*, where the teacher asks a question and students are asked to think about the question independently for a while.
(2) *Pair*, where the teacher asks students to pair up with other students. They are asked to discuss what they have thought of in the first stage. Usually the teacher gives 4-5 minutes to pair up.
(3) *Share*, where the teacher asks students to share with the whole class what they have discussed. This can be done by alternating pairs until about a quarter of the pairs have had the opportunity to report the results of their group discussions.

Based on these three steps, the stages carried out by the teacher in TPS type learning are as follows.

Table 1 Learning Implementation Stage through *Think-Pair-Share*

No.	Stages	Activities
1	**Stage 1** Preparation of learning materials	Before presenting the lesson, the teacher prepares student activity sheets and forms cooperative groups.
2	**2nd stage** Think	(1) The teacher asks questions (2) Students are asked to think about the question independently for a while.
3	**Stage 3** Pair	(1) The teacher asks students to pair up with other students. Usually the teacher gives 4-5 minutes to pair up. (2) Students are asked to discuss what they have thought about in the first stage.
4	**4th Stage** *Share*	(1) The teacher asks the students to share with the whole class what they have discussed. (2) This can be done by alternating pairs until about a quarter of the pairs have had the opportunity to report the results of their group discussions.
5	**5th stage** Evaluate	The teacher evaluates the discussion.
6	**6th stage** The teacher gives a conclusion.	Conclusions are given on the basis of learning implementation and evaluation results.

RESEARCH METHODS

Research Design

In accordance with the type of research chosen, namely action research, this study uses the action research model of Kemmis and Taggart (in Wardhani, 2007: 5), which is in the form of a spiral from one cycle to the next. Each cycle includes *planning*, *action*, *observation*, and *reflection*. The steps in the next cycle are revised planning, action, observation, and reflection. Before entering cycle 1, preliminary actions were taken in the form of problem identification. The spiral cycle of the stages of classroom action research can be seen in the following figure.

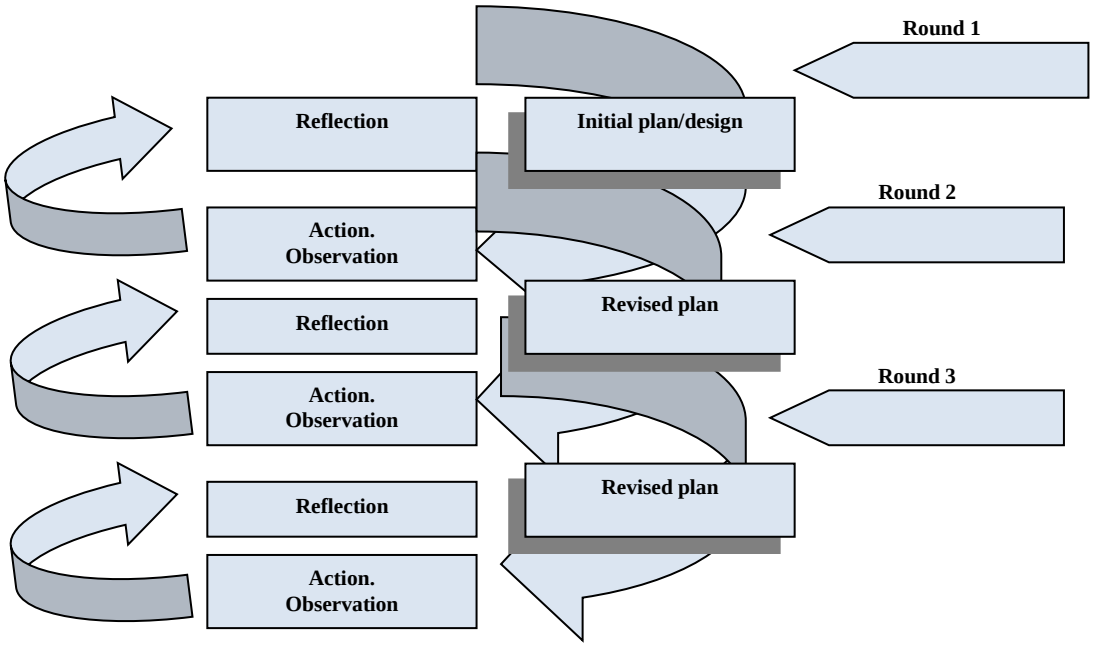


Figure 1 Kemmis & Mc Taggart Classroom Action Research Model

Place, Time, and Subject of Research

The place of research is the place used in conducting research to obtain the desired data. This research took place in class XI MIA-2 SMA Negeri 21 Surabaya, Jalan Argopuro 11-15 Surabaya. This research was conducted in the Even Semester of the 2021/2022 academic year which began in February to April 2022. The subjects in this study were students in class XI MIA-2 in the 2021/2022 academic year, totaling 36 students, consisting of 24 female students and 12 male students.

Data Collection Methods

The research data were obtained through observation of the management of the cooperative learning method of the *Think Pair Share* model, observation of student and teacher activities, and tests.

Table 2 Learning Management Observation Format

No.	Aspects Observed	Value
I	**Learning Observation** **A. Introduction** 1. Motivating students 2. Delivering learning objectives 3. Connecting with previous lessons 4. Organize students in study groups	
	B. Core activities 1. Present the steps of the cooperative learning method 2. Guiding students to do activities 3. Practice cooperative skills 4. Supervise each group in turn 5. Provide assistance to groups that are having difficulty	
	C. Cover 1. Guiding students to summarize 2. Provide evaluation	

II	**Time Management**	
III	**Class Enthusiasm** 1. Students are enthusiastic 2. Enthusiastic teacher	
Total		

RESEARCH RESULTS AND DISCUSSION

Research Results

1. Cycle I

a. Planning Stage

At this stage, the researcher prepared learning tools consisting of lesson plan 1, LKS 1, test question 1 and supporting teaching tools. In addition, observation sheets for the management of the cooperative learning method of the *Think Pair Share* model were also prepared, and observation sheets for teacher and student activities.

b. Implementation Stage

Observation was carried out simultaneously with the implementation of learning. At the end of the learning process students were given a test with the aim of knowing the level of student success in the learning process that had been carried out. The data on the results of research in cycle I are as follows:

Table 3 Recapitulation of Learning Management (Cycle I)

No.	Aspects Observed	Assessment		Rt-2
		P1	P2	
I	**Learning Observation**			
	A. Introduction			
	1. Motivating students	2	2	2
	2. Delivering learning objectives	2	2	2
	3. Connecting with previous lessons	3	3	3
	4. Organize students in study groups	3	3	3
	B. Core activities			
	1. Present the steps of the cooperative learning method	3	3	3
	2. Guiding students to do activities			
	3. Practice cooperative skills	3	3	3
	4. Supervise each group in turn	3	3	3
	5. Provide assistance to groups that are having difficulty	3 3	3 3	3 3
	C. Cover			
	1. Guiding students to summarize	3	3	3
	2. Provide evaluation	3	3	3
II	**Time Management**	2	2	2
III	**Class Enthusiasm**			
	1. Students are enthusiastic	2	2	2
	2. Enthusiastic teacher	3	3	3
Total		**38**	**38**	**38**

Based on this table, the aspects that received *unfavorable* criteria were motivating students, conveying learning objectives, time management, and enthusiastic students. The four aspects that received *unfavorable* scores are a weakness that occurred in cycle I and will be used as material for reflection and revision that will be carried out in cycle II.

The next observation results are teacher and student activities as in the following table

Table 4 Teacher and Student Activities in Cycle I

No.	Observed Teacher Activity	Percentage
1	Delivering objectives	5,0
2	Motivating students	8,3
3	Linking to previous lessons	8,3
4	Delivering material/steps/strategies	6,7
5	Explaining difficult material	13,3
6	Guiding and observing students in discovering concepts	21,7
7	Ask students to present and discuss the results of the activity	10,0
8	Providing feedback	18,3
9	Guiding students to summarize the lesson	8,3
No.	**Observed student activities**	**Percentage**
1	Listen/ pay attention to the teacher's explanation	22,5
2	Studying material from books	11,5
3	Work with fellow group members	18,7
4	Discussion between students / between students and teachers	14,4
5	Presenting learning outcomes	2,9
6	Present/respond to questions/ideas	5,2
7	Writing relevant to learning	8,9
8	Summarize the learning	6,9
9	Take an evaluation test	8,9

Based on the table, it can be seen that the most dominant teacher activity in cycle I was guiding and observing students in finding concepts, which was 21.7%. Other activities with quite large percentages were giving feedback/evaluation, asking questions and explaining difficult material, which amounted to 13.3% each. Meanwhile, the most dominant student activity is doing/ paying attention to the teacher's explanation, which is 22.5%. Other activities with quite large percentages were working with fellow group members, discussions between students/ between students and teachers, and studying material from books, namely 18.7% 14.4 and 11.5% respectively.

Table 5 Test scores in Cycle I

No.	Student Name	L/P	Value	Completeness	
				T	TT
1	ADELLA ICHA ARDHANI	P	72	√	
2	ADINDA AYU PUSPITA K.	P	72	√	
3	ALFIAN NAUFAL RIZKY U.	L	45		√
...					
36	YASIR ALIF ABDULLAH	L	73	√	
Total Score			**2.651**	**24**	**12**
Maximum Score			**3.600**	**66,7%**	**33,3%**
Average Score			**73,6**		
Completeness					

Table 6 Recapitulation of Student Test Results in Cycle I

No.	Description	Cycle I Results
1	Average UH test score	73,6

2	Number of students who completed learning	24
3	Percentage of learning completeness	66,7%

The table if made into a graph will look like the following graph.

Graph 1 Student Test Results in Cycle I

From the table, it can be stated that by applying the cooperative learning method of *Think Pair Share* model, the average value of students' learning quality was 73.6 and learning completeness reached 66.7% or there were 24 students out of 36 students who had completed learning. These results showed that in the first cycle classically students had not yet completed learning, because students who obtained a score ≥ 78 were only 66.7% smaller than the desired percentage of completeness, which was 85%. This was because students still felt new and did not understand what the teacher meant and used by applying the *Think Pair Share* model cooperative learning method.

c. Observation

In the implementation of learning activities, information was obtained from the following observations:

(1) The teacher is not good in motivating students and in conveying learning objectives.
(2) Teachers are not good at time management
(3) Students are less enthusiastic during the learning process.

d. Reflection

(1) Teachers need to be more skillful in motivating students and more clear in conveying learning objectives. For this reason, students are invited to be directly involved in every activity that will be carried out.
(2) Teachers need to distribute time well by adding necessary information and giving notes.
(3) Teachers should be more skillful and passionate in motivating students so that students can be more enthusiastic.

2. Cycle II

a. Planning Stage

At this stage, the researcher prepared learning tools consisting of lesson plan 2, LKS 2, test II questions and supporting teaching tools. In addition, observation sheets for cooperative learning management of the *Think Pair Share* model and teacher and student observation sheets were prepared.

b. Implementation Stage

The implementation of learning activities for cycle II was carried out on September 11, 2022 in Class XI MIA-2 with 36 students. In this case the researcher acts as a teacher. The learning process refers to the lesson plan by paying attention to the revisions in cycle I so that the shortcomings in cycle I are not repeated in cycle II.

Observation was carried out simultaneously with the implementation of learning. At the end of the learning process students were given a test II with the aim of knowing the level of student success in the learning process that had been carried out. The instrument used was test II. The data on the results of research in cycle II are as follows.

Table 7 Learning Management in Cycle II

No.	Aspects observed	Assessment		Average
		P1	P2	
I	**Learning Observation**			
	A. Introduction			
	1. Motivating students	3	3	3
	2. Delivering learning objectives	3	4	3.5
	3. Connecting with previous lessons	3	3	3
	4. Organize students in study groups	3	3	3
	B. Core activities			
	1. Present the steps of the cooperative learning method	3	4	3,5
	2. Guiding students to do activities			
	3. Practice cooperative skills	4	4	4
	4. Supervise each group in turn	4	4	4
	5. Provide assistance to groups that are having difficulty	4	4	4
		3	3	3
	C. Cover			
	1. Guiding students to summarize	3	4	3,5
	2. Provide evaluation	4	4	4
II	**Time Management**	3	3	3
III	**Class Enthusiasm**			
	1. Students are enthusiastic	4	3	3,5
	2. Enthusiastic teacher	4	4	4
Total		**48**	**50**	**49**

From the table, it can be seen that the aspects observed in the learning activities (cycle II) carried out by the teacher by applying the *Think Pair Share* model cooperative learning method received a fairly good assessment from the observer. Of all the assessments, there were no deficient scores. However, the assessment is not yet an optimal result, for this reason there are several aspects that need attention to improve the application of further learning. These aspects are motivating students, guiding students to formulate conclusions/find concepts, and time management.

With the improvement of the first aspects of the application of the *Think Pair Share* cooperative learning method, it is expected that students can conclude what they have learned and express their opinions so that they will understand more about what they have done.

The following presents the results of observations of teacher and student activities.

Table 8 Teacher and Student Activities in Cycle II

No.	Observed Teacher Activity	Percentage
1	Delivering objectives	6,7
2	Motivating students	6,7
3	Linking to previous lessons	6,7
4	Delivering material/steps/strategies	11,7
5	Explaining difficult material	11,7
6	Guiding and observing students in discovering concepts	25,0
7	Ask students to present and discuss the results of the activity	8,2
8	Providing feedback	16,6
9	Guiding students to summarize the lesson	6,7
No.	**Observed student activity**	**Percentage**
1	Listen/ pay attention to the teacher's explanation	17,9
2	Studying material from books	12,1
3	Work with fellow group members	21,0
4	Discussion between students / between students and teachers	13,8
5	Presenting learning outcomes	4,6
6	Present/respond to questions/ideas	5,4
7	Writing that is relevant to the KBM	7,7
8	Summarize the learning	6,7
9	Take an evaluation test	10,8

Based on table I, it can be seen that the most dominant teacher activity in cycle II is guiding and observing students in determining concepts, which is 25%. When compared to cycle I, this activity has increased. Teacher activities that decreased were giving feedback/evaluation/question and answer (16.6%), explaining difficult material (11.7). Asking students to discuss and present the results of activities (8.2%), and guiding students to summarize the lesson (6.7%).

Meanwhile, the most dominant student activity in cycle II was working with fellow group members, namely (21%). When compared to cycle I, this activity has increased. Student activities that experienced a decrease were listening / paying attention to the teacher's explanation (17.9%). Discussion between students / between students and teachers (13.8%), writing relevant to KBM (7.7%) and summarizing learning (6.7%). The student activities that have increased are studying material from books (12.1%), presenting learning outcomes (4.6%), responding / asking questions (6.7%).

Table 9 Test scores in Cycle II

NO	STUDENT NAME	L/P	VALUE	ACHIEVEMENT	
				T	TT
1	ADELLA ICHA ARDHANI	P	73	√	
2	ADINDA AYU PUSPITA K.	P	73	√	
3	ALFIAN NAUFAL RIZKY U.	L	55		√
...					
36	YASIR ALIF ABDULLAH	L	75	√	
Total Score			**2.767**	**29**	**7**
Maximum Score			**3.600**	**80,6%**	**19,4%**
Average Score			**76,9**		
Completeness					

Table 10 Recapitulation of Student Test Results in Cycle II

No.	Description	Cycle II Results
1	Average UH test score	76,9

2	Number of students who completed their learning	29
3	Percentage of learning completeness	80,6

If the table is made into a graph, it will look like this.

Graph 2 Student Test Results in Cycle II

From the table, the average value of student learning quality was 76.9 and learning completeness reached 80.6% or there were 29 students out of 36 students who had completed learning. These results show that in cycle II, the classical learning completeness has increased compared to cycle I. The increase in student learning outcomes was due to the teacher informing the students that at the end of each lesson, there would always be a lesson to be held. The increase in student learning outcomes was because the teacher informed that at the end of each lesson there would always be a test so that at the next meeting students were more motivated to learn. In addition, students also began to understand what the teacher meant and wanted by applying the cooperative learning method of *Think Pair Share* model.

c. Observation

In the implementation of learning activities, the following information was obtained from the observation results:

(1) Motivating students
(2) Guiding students to formulate conclusions/find concepts
(3) Time management

d. Reflection

The implementation of learning activities in cycle II still has shortcomings. So there is a need for revision in cycle II, among others:

(1) Teachers in motivating students should be able to make students more motivated during the learning process.
(2) Teachers should be closer to students so that there is no feeling of fear in students either to express opinions or ask questions.
(3) Teachers should be more patient in guiding students to formulate conclusions/find concepts.
(4) Teachers must distribute time well so that learning activities can run as expected.
(5) Teachers should add more sample problems and give students practice problems to do in every learning activity.

3. Cycle III

a. Planning Stage

At this stage, learning tools consisting of lesson plan 3, worksheet 3, test questions 3 and supporting teaching tools were prepared. In addition, the observation sheet of cooperative learning management of Thing Pair Share model and observation sheet of teacher and student activities were also prepared.

b. Implementation Stage

The implementation of learning activities for cycle III was carried out on September 18, 2022 in Class XI MIA-2 with 36 students. In this case the researcher acts as a teacher. The learning process refers to the lesson plan by paying attention to the revisions in cycle II, so that the shortcomings in cycle II are not repeated in cycle III.

c. Observation

Observation was carried out simultaneously with the implementation of learning. At the end of the learning process students were given test III with the aim of knowing the level of student success in the learning process that had been carried out. The instrument used was test III. The data on the results of research in cycle III are as follows.

Table 11 Learning Management in Cycle III

No.	Aspects observed	Assessment		Average-2
		P1	P2	
I	**Observation of KBM**			
	A. Introduction			
	1. Motivating students	3	3	3
	2. Delivering learning objectives	4	4	4
	3. Connecting with previous lessons	4	4	4
	4. Organize students in study groups	4	4	4
	B. Core Activities			
	1. Present the steps of the cooperative learning method	4	4	4
	2. Guiding students to do activities			
	3. Practice cooperative skills	4	4	4
	4. Supervise each group in turn	4	4	4
	5. Provide assistance to groups that are having difficulty	4	3	3,5
		3	3	3
	C. Cover			
	1. Guiding students to summarize	4	4	4
	2. Provide evaluation	4	4	4
II	Time Management	3	3	3
III	Class Enthusiasm			
	1. Students are enthusiastic	4	4	4
	2. Enthusiastic teacher	4	4	4
Total		**53**	**52**	**52,5**

Description :
Value : Criteria
1. : Not Good
2. : Not good enough

3. : Good enough
4. : Good

From the table, it can be seen that the aspects observed in the learning activities (cycle III) carried out by the teacher by applying the *Think Pair Share* model cooperative learning method received a *fairly good* assessment from the observer were *motivating students, providing assistance to groups experiencing difficulties*, and *time management*.

The improvement of these aspects in applying the cooperative learning method of the *Think Pair Share* model is expected to succeed as much as possible.

Table 12 Teacher and Student Activities in Cycle III

No.	Observed Teacher Activity	Percentage
1	Delivering objectives	6,7
2	Motivating students	6,7
3	Linking to previous lessons	10,7
4	Delivering material/steps/strategies	13,3
5	Explaining difficult material	10,0
6	Guiding and observing students in discovering concepts	22,6
7	Ask students to present and discuss the results of the activity	10,0
8	Providing feedback	11,7
9	Guiding students to summarize the lesson	10,0
No.	**Observed student activity**	**Percentage**
1	Listen/ pay attention to the teacher's explanation	20,8
2	Studying material from books	13,1
3	Work with fellow group members	22,1
4	Discussion between students / between students and teachers	15,0
5	Presenting learning outcomes	2,9
6	Present/respond to questions/ideas	4,2
7	Writing that is relevant to the KBM	6,1
8	Summarize the learning	7,3
9	Take an evaluation test	8,5

Based on the table, it can be seen that the most dominant teacher activity in cycle III was guiding and observing students in finding concepts, namely 22.6%, while the activities of explaining difficult material and giving feedback/evaluation/question and answer decreased by (10%), and (11.7%) respectively. Other activities that experienced an increase were linking with previous lessons (10%), providing material/strategy/steps (13.3%), asking students to present and discuss the results of activities (10%), and guiding students to summarize the lesson (10%). The activities that did not change were conveying objectives (6.7%) and motivating (6.7%).

Meanwhile, the most dominant student activities in cycle III were working with fellow group members (22.1%) and listening to / paying attention to the teacher's explanation (20.8%), activities that experienced an increase were studying material from the student book (13.1%) and discussions between students / between students and teachers (15.0%), while other activities decreased.

Table 13 Test scores in Cycle III

NO	STUDENT NAME	L/P	VALUE	ACHIEVEMENT	
				T	TT
1	ADELLA ICHA ARDHANI	P	75	√	
2	ADINDA AYU PUSPITA K.	P	75	√	
3	ALFIAN NAUFAL RIZKY U.	L	72	√	
...					

NO	STUDENT NAME	L/P	VALUE	ACHIEVEMENT	
				T	TT
36	YASIR ALIF ABDULLAH	L	80	√	
Total Score			**2.880**	**34**	**2**
Maximum Score			**3.600**	**94,4%**	**5,6%**
Average Score			**80,0**		
Completeness					

Table 14 Recapitulation of Student Test Results in Cycle III

No.	Description	Cycle II Results
1	Average UH test score	80,0
2	Number of students who completed learning	34
3	Percentage of learning completeness	94,4%

If the table is made into a graph, it will look like the following graph.

Graph 2 Student Test Results in Cycle III

Based on the table, the average test score was 80.0 and out of 36 students who had completed 34 students and 2 students had not achieved learning completeness. Thus, classically the learning completeness that has been achieved is 94.4% (including the complete category).

The results in cycle III have improved better than cycle II. The increase in learning outcomes in cycle III was influenced by an increase in the teacher's ability to apply the cooperative learning method of the *Think Pair Share* model so that students became more accustomed to learning like this so that students were easier to understand the material that had been given.

d. Reflection

(1) During the learning process the teacher has implemented all the lessons well. Although there were some aspects that were not perfect, the percentage of implementation for each aspect was quite large.
(2) Based on the observation data, it is known that students are active during the learning process.
(3) Shortcomings in previous cycles have been improved and improved so that they become better.
(4) Student learning outcomes in cycle III reached completeness.

In cycle III, the teacher has applied the cooperative learning method of *Think Pair Share* model well and seen from the students' activities and students' learning

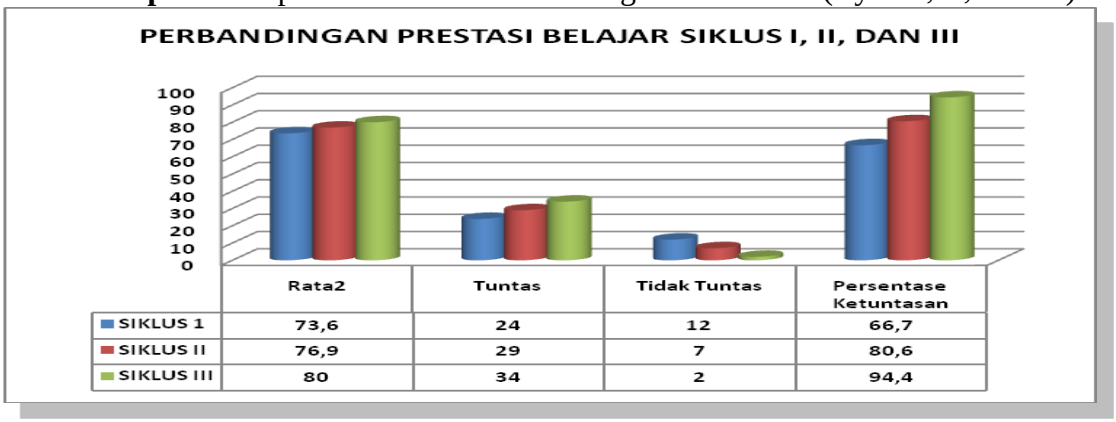
outcomes, the implementation of the learning process has gone well. So there is no need for too much revision, but what needs to be considered for further action is to maximize and maintain what is already there with the aim that in the implementation of the next learning process the application of the *Think Pair Share* model cooperative learning method can improve the learning process so that learning objectives can be achieved.

DISCUSSION OF RESEARCH RESULTS

1. Student Learning Outcome Completeness

Through the results of this research, it shows that the cooperative learning method of *Think Pair Share* model has a positive impact in improving students' learning quality. This can be seen from the students' increasingly solid understanding of the material presented by the teacher (learning completeness increased from cycle I, II, and III), namely 66.7%, 80.6%, and 94.4% respectively. In cycle III, classical student learning completeness was achieved. When viewed in the form of a graph, students' learning achievement in Cycle III showed an increase compared to the previous cycles, as shown in the following graph.

Graph 3 Comparison of Student Learning Achievement (Cycle I, II, and III)



2. Teacher's Ability to Manage Learning

Based on data analysis, it is obtained that student activity in the process of cooperative learning method of *Think Pair Share* model in each cycle has increased. This has a positive impact on the quality of student learning, which can be shown by the increase in the average score of students in each cycle which continues to increase.

3. Teacher and Student Activities in Learning

Based on data analysis, it is obtained that the most dominant student activities in the Biology learning process on the subject of Cells with the *Think Pair Share* model cooperative learning method are working with tools/media, listening/attending to the teacher's explanation, and discussion among students/between students and teachers. So it can be said that student activities can be categorized as active.

Meanwhile, the teacher's activities during learning have carried out the steps of the *Think Pair Share* model cooperative learning method well. This can be seen from the teacher's activities that appear, including activities to guide and observe students in working on LKS activities/finding concepts, explaining difficult material, giving feedback/evaluation/question and answer where the percentage for these activities is quite large.

CONCLUSIONS

From the results of learning activities that have been carried out for three cycles, and based on all the discussion and analysis that has been done, it can be concluded as follows:

(1) Learning with the *Think Pair Share* cooperative model has a positive impact in improving the quality of student learning which is marked by an increase in student learning completeness in each cycle, namely in cycle I of 66.7%, cycle II of 80.6%, and cycle III of 94.4%. The evaluation results also showed an increase. In Cycle I it was 66.7, Cycle II 76.9, and in Cycle III it was 80.0.

(2) The application of the *Think Pair Share* model cooperative learning method has a positive influence, which can increase students' learning motivation as shown by the average student answers stating that students are interested and interested in the *Think Pair Share* model cooperative learning method so that they become motivated to learn.

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