Increasing The Activeness and Achievement of Learning Science (IPA) Students of Class VII B SMPN 3 Sewon Using the Think Pair Share Model for the 2021/2022 Academic Year

Sarjito
Sewon State Junior High School 3, Bantul Regency, Province of Daerah Istimewa Yogyakarta, Indonesia
Email: sarjito387@gamail.com

Abstract
This study aims to increase the activity and learning achievement of natural sciences (IPA) using the Think Pair Share learning model. This research is a class action research carried out in two (2) cycles. Each cycle consists of three (3) meetings consisting of two (2) meetings for the learning process and one (1) meeting for achievement tests which are done independently. Each cycle follows the stages of the Kemmis and Taggart models which include four components, namely planning, action, observation and reflection. The data collected in this study is the result of research related to the implementation of learning using the Think Pair Share model on natural science material (IPA). Data collection techniques using test and non-test techniques with descriptive and qualitative approaches. The results of the study show that the use of the Think Pair Share model in natural science learning activities can increase student activity and achievement. In other words, the teaching and learning activities of teachers and students increase as well as student achievement increases. Indicators of the success of this study can be seen from the results of observations and achievement test results after learning is carried out using the "Thik Pair Share" model.
Keywords: Think Pair Share, Increase Activeness and Achievement, Middle School Students

INTRODUCTION

In general, there are not a few junior high school students who often experience boredom or boredom in learning, which results in learning difficulties, especially natural sciences. As a result of boredom, it causes the activity and learning achievement not as expected by a teacher. The success of learning achievement is not only influenced by the factors of students who are learning but also influenced by the learning model used by the teacher. The habit of students listening to the teacher's lectures, then being asked to do questions in the form of written tests is a monotonous habit that can make students experience boredom. Therefore, to increase the activity and learning achievement, a change in the learning process is needed. The purpose of this change is so that students do not experience or minimize boredom so that they can improve learning achievement. One of the changes in the learning process is the Think Pair Share model.

According to Sumadi Suryabrata (2002:25): "Learning achievement is the result achieved from an exercise, an experience that must be supported by awareness". According to Saefudin Azwar (1987: 58): "Learning achievement is a change in behavior covering three domains, namely cognitive, affective and psychomotor." Meanwhile, according to Poerwadar Minta WJ.S (1995:649): "Learning achievement is the knowledge and skills developed by subjects usually indicated by test scores or numerical scores given by the teacher".

Active learning is a process of teaching and learning activities whose subjects are educated intellectually and emotionally so that students are able to participate actively in carrying out learning activities (Sudjana, 2010). According to Sardiman (2011), activeness is an activity that is both physical and mental, namely acting and thinking as a series that cannot be

separated. According to Surtikanti and Santoso (2007), quality learning is the active involvement of students in learning. The involvement in question is listening activity, commitment to task, encouraging participation, appreciating contributions/opinions, accepting responsibility, asking teachers or friends and responding to questions.

To support students to increase their learning activity and achievement, the researchers tried to use the Think Pair Share learning model which is expected to be able to change the learning situation and reduce student boredom. Think Pair Share (TPS) or thinking in pairs is a type of cooperative learning designed to influence student interaction patterns. First developed by Frang Lyman and colleagues at the University of Maryland as quoted by Arends (1997), states that Think Pair Share is an effective way to vary the atmosphere of class discussion patterns. Assuming that all recitations or discussions require settings to control the class as a whole, the procedure used in Think Pair Share gives students more time to think, to respond and help each other. The teacher estimates that only completing a short presentation or students reading assignments, or situations that are question marks. Now the teacher wants students to consider more of what has been described and experienced. The teacher uses the Think-Pair-Share model to compare at least two questions and answers from the whole group.

The teacher uses the following steps (phases):
1. Step 1: Thinking: The teacher asks a question or problem related to the lesson, and asks students to take a few minutes to think of their own answer or problem
2. Step 2: Pairing: Next the teacher asks students to pair up and discuss what they have obtained. Interaction during the time provided can unify the answers to a question put together, unify ideas when a specific problem is identified. Normally the teacher gives no more than 4 or 5 minutes to pair up.
3. Step 3: Sharing: In the final step, the teacher asks pairs to share with the whole class what they have been talking about. It is effective to go around the room from partner to partner and continue until about half of the pairs have had a chance to report. Arends, (1997) adapted by Tjokrodihardjo, (2003).

Permendikbud Number 103 of 2014 concerning learning in elementary and secondary education, article 2 states that learning models are conceptual and operational learning that have names, characteristics, logical sequences, arrangements and culture. If the approaches, strategies, methods and tactics of Think Pair Share learning are applied so that they can improve learning achievement, then all of them form a series and become a unified whole, then what is called a learning model is formed.

Experts develop learning models based on educational principles, psychological, sociological, psychiatric theories and systems analysis. The Think Pair Share learning model has the same principles as inquiry. The Think Pair Share model places more emphasis on the attitude of thinking, pairing and sharing with peers and gives a little freedom to work with other friends, which makes it possible not to get bored easily with the activities students are doing.

Students not only learn the material provided, but they must also be prepared and responsible for giving and teaching the material to other group members (Nurhadi and Senduk, 2003). Therefore, students are interdependent with one another and must work cooperatively to learn the assigned material. The Think Pair Share learning model is commonly used in all subjects and for all age levels of students (Lie, 2008). The think pair share cooperative learning model provides opportunities for students to work alone (thinking) so as to foster a more independent nature in working on the questions given and also creates the nature of working together with others in small groups (pairing) so as to arouse students' self-confidence. In this case the optimization of student participation can be seen so that spontaneous answers appear that can contribute to the group they are dealing with. So here the teacher acts as a guide,

facilitator, and motivator. Students who have difficulties will be helped and material that is difficult will be easier for students to understand so that completeness in the learning process can be achieved. The indicators of the success of this study can be seen from the results of observations and achievement test results after learning is carried out using the Think Pair Share model.

RESEARCH METHODS

This research is a classroom action research that is carried out collaboratively and participatively, meaning that it is not carried out alone but in collaboration with other teachers and colleagues as observers at school. This study emphasizes increasing student activity in the learning process which is expected to have an impact on increasing learning achievement, especially in the field of natural sciences. The learning material is the structure of the earth using the Think Pair Share model.

Data collection techniques using written test and non-test techniques. The non-test technique is by observing colleagues and conducting interviews with students. While the test is used to find out the results of learning achievement using learning achievement test questions which are carried out at the end of the cycle. The data analysis technique used is descriptive with a quantitative approach. and qualitative. Quantitative descriptive is used to see the number of students who have achieved minimal mastery while descriptive qualitative is used to see the number of students who have succeeded in increasing their learning achievement based on the average value achieved. The following is a table of observation score categories.

Table 1. Observation Results Score Category

Score of Learning Observation Results	Rank
80% ≤ X ≤ 100%	Excellent
75% ≤ X ≤ 79,99%	Good
55% ≤ X ≤ 74,99%	Enough
40% ≤ X ≤ 54,99%	Less
0% ≤ X ≤ 39,99%	Very less

Success Indicators

The indicators for the success of this classroom action research are as follows: The results of observing class VIIB SMP N 3 Sewon learning using the Think Pair Share model for the 2021/2022 academic year have a minimum rating of good, and learning achievement in natural sciences (IPA) class VII SMP N 3 Sewon in lessons 2021/2022 have an average grade of ≥ 70 (KKM) and a minimum of ≥ 80% of the total number of students.

RESEARCH RESULTS AND DISCUSSION
Cycle I Discussion
Meeting 1

The learning process was carried out for the first time in class VII SMP with material on the structure of the earth and involved an observer. Based on the results of observations made by observer 1 in the learning process, the student learning activity score was 77.50 with good criteria and the teacher's activeness score was 79.41. The results of this observation have met the success indicators of this study, namely (≥ Good) very good. This is the result of the teaching and learning process between teachers and students which is expected to increase the activeness of students learning and also their educators. The daily learning process is more monotonous and teacher centered and causes student boredom. The teacher-centered learning process is still needed, but only on certain materials and not all of the material in one semester.

This Think Pair Share model is very useful for overcoming boredom or boredom of students so that learning achievement is maintained well.

Meeting 2

The learning process of the Think Pair Share model in cycle I was continued at meeting 2 by still involving a friend as an observer. The results of observations made by observer 2 in the learning process obtained a score of 80.00 student activeness and 85.29 of teacher activeness with very good criteria. The results of this observation have met the success indicators of this study (≥ Very good). This is the result of observations by observer 2 in which in this 2nd process the learning activity of students and teachers increases better. The learning process of the Think Pair Share model is indeed very useful and good for overcoming student boredom, as evidenced in the learning process of Cycle I at meetings 1 and 2 resulting in the activity of students and teachers with good and very good criteria. Thus the table can be made as follows.

Table 2. Data from Observations on Student and Teacher Active Learning

Meeting	Observation of Student Activity	Observation of Teacher Activity	Criterion
Cycle I	(1) 77,50	(1) 79,41	Good
	(2) 80,00	(2) 85,29	Excellent

Meeting 3

After the learning process in cycle I, meetings 1 and 2 were completed, the third meeting was continued by carrying out a learning achievement test. The number of questions is 20 items with multiple choice type followed by 32 students. The results of the learning achievement test obtained the highest score of 70 and the lowest score of 50 with an average value of 65.31. Students who achieved KKM scores totaled 20 students (62.75%) with KKM 70. Meanwhile, students who had not succeeded in achieving KKM scores totaled 12 students. This means that the indicators of research success have not been achieved. Things like this are used to it, that in the results of each daily test there are always students who cannot reach the KKM score. The results of this achievement certainly cannot be used as a benchmark because this is the first time a new learning model has been implemented. For subsequent learning, of course, efforts will be made with a better process after seeing any deficiencies at the meeting in cycle I. The following data on the results of the cycle I achievement test are presented in table 3.

Table 3. Data on Cycle I Achievement Test Results with 32 Student Participants

No	Test Results	Preliminary Data
1	The highest score	70
2	Lowest Value	50
3	Average value	65,31
4	Completeness Percentage	62,75%

Discussion of cycle II
Meeting 1

The learning process using the Think Pair Share model was continued in cycle II as meeting 1 while still involving fellow teachers as the 3rd observer. Based on the results of observations made by Observer 3, the student learning activity score was 82.50 and the teacher was 86.76 with very good criteria. The results of this observation have met the success indicators of this study (≥ Very good). This result is an improvement from the results of the learning process in cycle I. The learning process in cycle II is running better because the deficiencies in the process of implementing cycle I have been corrected.

Meeting 2

The learning process using the Think Pair Share model was continued in cycle II as the 2nd meeting while still involving fellow teachers as the 4th observer. Based on the results of observations made by observer 4 in the learning process, the student learning activity score was 85.00 and the teacher was 88.23 with very good criteria. The results of this observation have met the success indicators of this study (≥ Very good). At meeting 2 there was an increase in the value of both student learning activity and teacher activity. The learning process in cycle II went better because the deficiencies in the previous learning implementation had been corrected. Thus, from meetings 1 and 2 in cycle II, the results of observations of the activeness of students and teachers were obtained as shown in table 4 below.

Table 4. Data on Observation Results of Student and Teacher Active Learning

Meeteng	Observation of Student Activity	Observation of Teacher Activity	Criterion
Cycle II	(1) 82,50	(1) 86,76	Excellent
	(2) 85,00	(2) 88,23	Excellent

Meeting 3

The learning process of cycle II meeting 3 is used for student achievement tests. The number of questions is 20 items with multiple choice type followed by 32 students. From the results of the learning achievement test, the highest score was 100 and the lowest score was 60 with an average score of 87.81. There is an increase in the average value and the total percentage of students who complete the study. For students who achieved the KKM score, there were 29 students (90.62%) with a KKM of 70 and who had not succeeded in achieving the KKM score, there were 3 students. This means that the indicator of the success of this research has been achieved. The results of this achievement can certainly be used as an example of the success of a learning process with the Think Pair Share model. The following are the results of student achievement in the implementation of Cycle II presented in the following table:

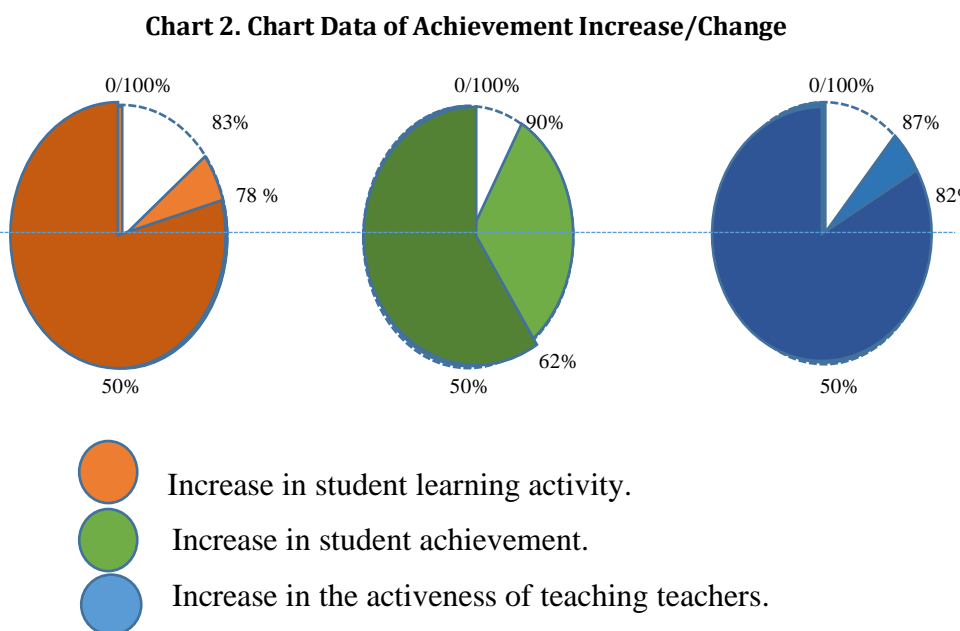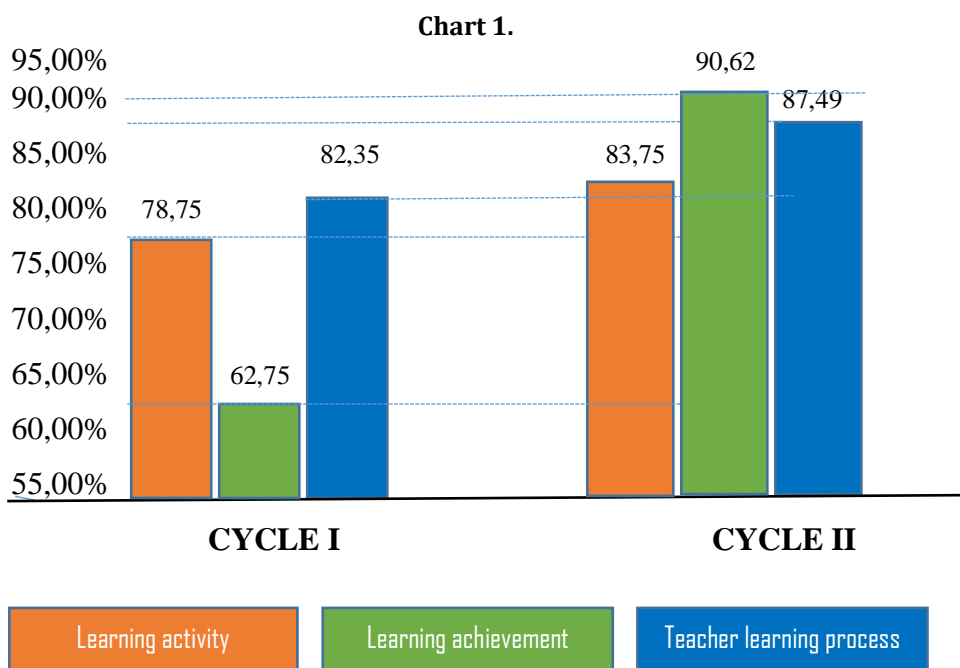Table 5. Data on Cycle II Achievement Test results with a total of 32 students

No	Test Results	Preliminary Data
1	The highest score	100
2	Lowest Value	60
3	Average value	87,81
4	Completeness Percentage	90,62%

And if the learning achievement results in Cycle I and Cycle II are made tables based on the number of students who can achieve Minimum Mastery (KKM) are presented in Table 5 below.

Table 6. Data on Student Achievement Results who Reach KKM

Meeting	Average value	Number of students who reach KKM	Number of students who reach KKM (%)
Cycle 1	65,31	20 anak	62,75%
Cycle 2	87,81	29 anak	90,62%

If the teaching and learning activities of teachers and students are measured using observation sheets and the results of student learning achievements are measured using achievement tests made graphs, then the learning process using the Think Pair Share model in Cycle I and Cycle II can be presented in graphs 1 and 2 as follows:

Chart 1.

Chart 2. Chart Data of Achievement Increase/Change

- Increase in student learning activity.
- Increase in student achievement.
- Increase in the activeness of teaching teachers.

From the graph of student learning activity, it shows that there is an increase of 5%, from 78% to 83%. For teacher activity there was an increase of 5%, from 82% to 87%, while student achievement also increased from an average score of 65.31 to 87.81. In addition, the number of students who managed to achieve KKM scores also increased from 62.75% to 90.62%.

CONCLUSION

The application of the Think Pair Share learning model can increase the activity and learning achievement scores of students in natural sciences (IPA) at junior high school level. The application of the Think Pair Share learning model can also increase the activeness of teacher innovation in teaching students. The advantage of the Think Pair Share model can provide a wider space for students in terms of independence in expressing opinions, movement, collaborating and discussing with friends and educating students to have the courage to appear

in front of the class. With the application of the Think Pair Share model students can learn happily, the atmosphere is not monotonous, enthusiastic and enthusiastic. Another advantage is that the teacher spends less energy on lecturing but beforehand the teacher must prepare the right and correct scenarios so that the learning process of the Think Pair Share model can run well and smoothly. The application of the Think Pair Share learning model must be prepared in advance with steps such as how to stimulate students, collect data and process data so that learning outcomes can be as expected.

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