Improving Motivation and Learning Outcomes of MTsN 2 the Great Aceh Students in Vocational Processing Subject Through the Cooperative Learning Model Think Pair and Share

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Abstract. One learning strategy that can be used to increase motivation and learning outcomes is by using cooperative pair think and share models. This research was carried out on the material of vocational processing with the subject matter "Processing healthy food from fresh vegetables" in class VII (2) MTsN 2 The Great Aceh aimed at seeing the improvement of students' motivation and learning outcomes by using this learning model. The research subjects were students of class VII (2) MTsN 2 The Great Aceh, amounting to 32 people, consisting of 14 men and 18 women. The approach taken in this study was a quantitative descriptive approach and the type of research used was Classroom Action Research (CAR). Research data collection instruments are learning implementation plans (RPP), observation sheets of teacher and student activities, student worksheets, student motivation sheets for processing vocational subject matter by applying think pair and share cooperative learning models where learning outcomes are analyzed using percentage test and student motivation by referring to the criteria of analysis results of learning motivation level. Based on the results of the data analysis, it can be concluded that: (1) There is an increase in motivation and learning outcomes in class VII (2) MTsN 2 The Great Aceh, as seen from (1) the results of classical learning completeness of 37.5% in cycle I became 87.5% in cycle II with an increase of 50%, (2) Student motivation scores also increased from "high" to "very high" categories. The average motivation score obtained when filling out the questionnaire in cycle I was followed by 32 students, namely 65.625% classified as "High", while the average score of motivation in cycle II was 81.25%, which was classified as "Very High" with an increase 15.62%.

1. Introduction
Education reform in Indonesia needs to be done to create a world of education that is adaptive to changes and developments in times. In improving the quality of learning, various efforts have been taken, such as updating the curriculum, developing learning models, changing the assessment system and others. There are many ways that can be done, one of which is by changing the educational paradigm, from educators who become the center of learning to be educators who become mentors, motivators, and facilitators so that learning can run effectively. In addition, the problems that arise when the learning process takes place are that students do not participate in giving opinions or answering problems raised by the teacher. As a result, many students prefer passively not to express their opinions regarding to the problems found.
The use of the right learning model plays an important role in achieving the learning objectives desired by educators. Think Pair and Share is one type of cooperative learning model that can encourage students to play an active role in the group discussion process and can help each other in mastering the learning material taught by educators. In the cooperative learning model type Think Pair and Share, educators propose a problem or question that relates to the lesson to students to think about, then the educator asks students to find a partner in solving the problems proposed and finally the educator asks each pair to share with all classes related to the answers questions asked.

Theory Foundation

1. Learning
Learning is essentially a process of interaction between teachers and students, both direct interactions such as face-to-face activities and indirectly, namely by using various learning media [1].

1.1. Think Pair Share Cooperative Learning Model
[2] explains that, "Cooperative learning is a learning model using a group or small team system (four to six students) with different (heterogeneous) backgrounds in academic abilities, gender, race, or tribe". According to [3], Think Pair and Share is a strategy designed to provide students with "food to think" by being given topics that allow them to formulate individual ideas and share these ideas with other students. According to [4], The Think Pair Share (TPS) cooperative learning model is a type of cooperative learning designed to influence student interaction patterns. Steps in cooperative learning type think and share, namely as follows: (1) Thinking, where the teacher asks a question or problem associated with the lesson and asks students to use a few minutes to think for themselves answers or problems. Students need an explanation that talking or doing is not part of thinking. (2) Pairing, then the teacher asks students to pair up and discuss what they have gained. Interaction for some time provided can unify the answer if a question is asked or unify the idea when a specific problem is identified. Normally the teacher gives no more than 4 or 5 minutes to pair up, and (3) Sharing, in the final step, the teacher asks couples to share with the whole class they have talked about. It is effective to get around the room from a partner to a partner and continue until around a couple of couples have the opportunity to report. The advantage of this learning model is that it is able to optimize student participation so that students are active when the learning process takes place [5] [6].

2. Learning Motivation
Motivation comes from the word motive which is defined as the effort that drives someone to do something. Motives can be said to be the driving force from within and within the subject to carry out certain activities in order to achieve a goal [7]. Motivation is the basic drive that moves a person to behave. [8] According to SumadiSuryabrata, as quoted by Djaali, motivation is defined as a state that exists in a person who encourages him to carry out certain activities in order to achieve a goal [9]. Motivation to learn can arise because of two types of factors that influence it, namely: (1) Intrinsic motivation, namely in the form of desire and successful desire and encouragement of learning needs, hopes for ideals, and (2) Extrinsic motivation are awards, conducive learning environments and interesting learning activities [8].

3. Learning outcomes
[10] argues that, "Learning outcomes are abilities that students have after receiving their learning experiences, students obtain results from an interaction of learning actions on learning material". Beginning with students experiencing the learning process, achieving learning outcomes, and using learning outcomes, all of which cover three domains, namely cognitive, affective and psychomotor domains. In this study to assess student learning outcomes, namely by conducting tests and non-test assessments. Measurement in the cognitive domain, can be written in writing to students. In assessing the affective domain, it can be done by observing aspects of responding, which is observed from students' critical thinking skills during the learning process. In assessing the psychomotor domain, it can be done by assessing the accuracy of students in answering the questions that have been given.

2. Methodology
This research approach is quantitative descriptive, where data is obtained and processed using statistical methods and explained using narrative. This type of research is Classroom Action Research (CAR). The design of this study consisted of two cycles which included four steps, namely: (1) Planning, (2) Action, (3) Observation, and (4) Reflection [11]. The CAR model used in this study is the Kemis and Mc. Taggart model. The research subjects were students of class VII (2) MTsN 2 The Great Aceh in the odd semester of 2016/2017 academic year totaling 32 people, consisting of 14 men and 18 women. This research was carried out on the subject matter "Processing healthy food from fresh vegetables". Objects used in this study include: a) Learning activities that use cooperative learning models of the type of Think Pair Share, b) Measurement of motivation and learning outcomes of students by applying cooperative learning models type Think Pair and Share.

Data sources are a source used to obtain the data needed, in selecting data, researchers must really think about the completeness of the information to be collected and also the validity of the data taken. Sources of data in this study are informants, places or locations of research, events, and documents or archives. Whereas, data collection techniques were carried out using observation methods, interview methods, documentation, and tests and questionnaires. Based on the research procedure described as follows:

1. Planning. At the planning stage of the activities carried out, namely: (a) Prepare learning implementation plans; (b) Prepare facilities and learning media used, such as student worksheets; and (c) Arrange and prepare observation sheets.
2. Action. The implementation of the action is the application of the plan that has been prepared. The teacher in carrying out the learning must be in accordance with the learning implementation plan that the researcher arranges. In the implementation of the situation and conditions students will receive learning using Think Pair Share learning model.
3. Observing. Observations carried out during the implementation of the action as an effort to find out the implementation of learning. In carrying out observations, researchers as observers to observe the implementation of learning based on observation guidelines that have been prepared.
4. Reflecting. Reflection is based on observations and documentation at the end of each meeting. Reflection is done by way of discussion by researchers and processing master teachers regarding the achievements, constraints, and lack of learning that has been carried out. The results of reflection are used as a consideration for the next cycle learning planning.

Data analysis techniques are assessed from observations of student learning motivation, evaluation test evaluation, and learning completeness.

| Percentage (%) | Criteria |
|----------------|----------|
| 75-100         | Very High|
| 50-74,99      | High     |
| 25-49,99      | Medium   |
| 0-24,99       | Low      |

Source: [11]

Data analysis for the success rate of students' success after the learning process in each cycle is done by giving an evaluation in the form of a written test at the end of each cycle. This analysis is calculated with simple statistics with the formula:

$$\bar{X} = \frac{\Sigma x}{N}$$

Information:

\(\bar{X}\) = mean value
\(\Sigma x\) = Total value of all students
\(N\) = Number of students taking the test
Data for improving student learning outcomes are analyzed using percentages, namely:

\[ P = \frac{f}{N} \times 100\% \]

Information:
- \( P \) = Percentage sought
- \( f \) = Frequency of students who complete individually
- \( N \) = Total students
(Source: Sudjiono, 2009: 43)

| Score  | Criteria       |
|--------|----------------|
| 80-100 | Very Good      |
| 66-79  | Good           |
| 56-65  | Enough         |
| 40-55  | Less           |
| 0-39   | Failed         |

(Source: Arikunto, 2005: 245)

Of all cycles that have been carried out can be said to be complete if students' learning motivation is high, which has a motivation score of between 50-74.99%, while student learning outcomes have reached the level of completeness if it reaches a minimum of 75.

3. Results and Discussion
Cooperative learning model type think pair and share is Classroom Action Research (CAR) which aims to increase student motivation and learning outcomes. This research was conducted by applying two learning cycles with the same learning model in each cycle. Each cycle that is applied to the learning process can improve student motivation and learning outcomes. Students' ability enhancement can be seen from the implementation of teacher and student activities through the Think Pair and Share cooperative learning model as follows:

![Graphic 1. Implementation Diagram of Cooperative Learning Models Type Think Pair and Share](image_url)

4.1 Student learning motivation during the learning process
Learning motivation data for class VII (2) MTsN 2 The Great Aceh students in cycle I and cycle II which are taken using motivation questionnaire can be seen in the following table.

| Score  | Criteria       |
|--------|----------------|
| 80-100 | Very Good      |
| 66-79  | Good           |
| 56-65  | Enough         |
| 40-55  | Less           |
| 0-39   | Failed         |

(Source: Arikunto, 2005: 245)

Table 3. Descriptive of Learning Motivation for Class VII (2) MTsN 2 The Great Aceh Students in Cycle I and Cycle II through Application of TPS-type Cooperative Learning Models
In the descriptive statistics table above, it can be seen that the average motivation of students' vocational processing learning increased from cycle I to cycle II, from 73.33 to 86.75. The lowest value of learning motivation in cycle I is 65 and the highest value is 90 with a range of 25. While in cycle II, the value of student motivation increases with the lowest value of 75 and the highest value of 96 with a range of 21. The distribution of learning motivation of class VII (2) MTsN 2 The Great Aceh students after grouping into four classes can be seen in the following table.

| Value | Criteria   | Frequency Cycle I | Percentage Cycle I | Frequency Cycle II | Percentage Cycle II |
|-------|------------|-------------------|--------------------|-------------------|--------------------|
| 75-100| Very High  | 11                | 34.375             | 26                | 81.25              |
| 50-74.99| High      | 21                | 65.625             | 6                 | 18.75              |
| 25-49.99| Medium    | 0                 | 0                  | 0                 | 0                  |
| 0-24.99| Low        | 0                 | 0                  | 0                 | 0                  |
| Total |            | 32                | 100                | 32                | 100                |

The table above shows that the learning motivation of class VII (2) MTsN 2 The Great Aceh is basically quite high. In the first cycle, the percentage of students who received high category was 65.625% and very high category was 34.375%. Whereas in the second cycle, the percentage of students in very high category increased to 81.75%.

4.2 Student Learning Outcomes

Data on learning outcomes of the Vocational Processing subject for class VII (2) MTsN 2 The Great Aceh students in the first cycle and second cycle obtained from the learning outcomes test at the end of each cycle can be seen in the following table.

| Statistics   | Cycle I | Cycle II |
|--------------|---------|----------|
| Subject      | 32      | 32       |
| Mean         | 73.33   | 86.75    |
| Median       | 73.83   | 86.67    |
| Mode         | 70      | 85       |
| Standard Deviation | 6.29 | 4.82    |
| Variance     | 39.61   | 23.35    |
| Range        | 25      | 20       |
| Lowest Value | 65      | 75       |
| Top Rated    | 90      | 96       |

In table 6, it can be seen that the average score of students' processing learning outcomes increased from cycle I to cycle II, from 52.33 to 71.25. Increasing the value of student learning outcomes is also
seen from the highest score of students in cycle I is 70 and the lowest value in cycle I is 25 with a range of 45. While in cycle II, the highest value obtained by students is 95 and the lowest value of students is 68 with a range of 27. The distribution of grades of learning outcomes for students of class VII (2) of MTsN 2 The Great Aceh grouped into five classes can be seen in the following table.

**Table 6. Frequency Distribution and Categorization of Learning Outcomes for Vocational Processing Subject of Class VII (2) MTsN 2 The Great Aceh Students through the Application of TPS-type Cooperative Learning Models**

| Value Criteria | Frequency | Percentage (%) |
|----------------|-----------|----------------|
|                | Cycle I   | Cycle II       | Cycle I   | Cycle II       |
| 80-100 Very Good | 5 11 | 15.625 34.375 |             |               |
| 66-79 Good | 17 21 | 53.125 65.625 |             |               |
| 56-65 Enough | 7 0 | 21.875 0 |             |               |
| 40-55 Less | 3 0 | 9.375 0 |             |               |
| 0-39 Failed | 0 0 | 0 0 |             |               |
| Total | 32 32 | 100 100 |             |               |

If the distribution of learning outcomes for students of class VII (2) MTsN 2 The Great Aceh is grouped into minimum completeness criteria, it can be seen in the following table.

**Table 7. Frequency Distribution and Categorization of Learning Completeness of Class VII (2) MTsN 2 The Great Aceh Students through Application of TPS-type Cooperative Learning Models**

| Value Criteria | Frequency | Percentage (%) |
|----------------|-----------|----------------|
|                | Cycle I   | Cycle II       | Cycle I   | Cycle II       |
| >75 Completed | 12 28 | 37.5 87.5 |             |               |
| >75 Not Completed | 20 4 | 62.5 12.5 |             |               |
| Total | 32 32 | 100 100 |             |               |

Based on table 8, it can be seen that the written value before the implementation of cooperative learning model type think pair and share with the percentage of learning outcomes completeness is 37.5%. This shows that the learning outcomes of class VII (2) MTsN 2 The Great Aceh students are still low because there are still many students who have score below the minimum completeness criteria, which is 75. The low learning outcomes are caused by students who are less participating in the learning process. Learning system by applying cooperative learning model type think pair share is proven to improve learning outcomes. This is evident from the increase in students' written test scores with written test results in cycle II having increased compared to cycle I, namely the percentage of completeness of learning outcomes is 87.5%.

4.3 Reflection

Based on the data of cycle I and cycle II, the data obtained shows that student learning outcomes always increase. This is evident in the improvement of students' learning outcomes encountered during the learning process by using a cooperative learning model type think pair share, there are:

a. Students are more active in the learning process both in asking questions, issuing opinions, group discussions, solving problems, listening to material, and presenting the results of group discussions.

b. Learning atmosphere in class becomes more fun and not monotonous so students are more enthusiastic in following the learning process.

c. The existence of group discussions can train students to be responsible for learning material with the group, so that students' knowledge increases and it will be easier to understand the material being studied.

d. The application of cooperative learning model type think pair share can increase student motivation and learning outcomes.
Before the implementation of the cooperative model type think pair share, the percentage of completeness of learning outcomes was only 37.5%. Based on the results of the study it can be seen that the application of the cooperative learning model type think pair share can increase student motivation and learning outcomes. This can be used as a consideration for teachers to apply the learning model in the classroom learning process. Students are able to focus the problem or problem given by the teacher by using various sources or theories to answer the question. Various sources that are used can add knowledge to students so that they are able to identify problems, solve problems, and explain alternative solutions to selected problems. In addition, students are also able to explain the answers well and are able to make simple conclusions.

4. Conclusion

There is an increase in motivation and learning outcomes in class VII (2) MTsN 2 The Great Aceh academic year 2016/2017, as seen from (1) the results of classical learning completeness from 37.5% in cycle I to 87.5% in cycle II with an increase of 50%, (2) Student motivation scores also increased from "high" to "very high" categories. The average motivation score obtained when filling out the questionnaire in cycle I was followed by 32 students, namely 65.625% classified as "high", while the average score of motivation in cycle II was 81.25%, which was classified as "Very High" with an increase 15.62%. Based on the analysis and discussion of the study, it can be concluded that the application of the cooperative learning model type think pair share (TPS) can improve students' skills in the learning process. Students become more active in focusing on problems, considering sources or theories, able to identify problems, are able to provide alternative solutions to selected problems, and are able to make simple conclusions. This is indicated by the students' behavior that is more active in expressing opinions, asking questions, and being able to cooperate with group members. The application of this model can also improve student learning outcomes.

Based on the conclusions above, the researcher can submit suggestions as follows:

1. For Students
   a. Students no longer become objects in learning, but as subjects of learning. Students do not make the teacher the only information center so students can get information about learning materials from various sources such as textbooks, the internet, worksheets, and others.
   b. Students are more active in the learning process through discussion and question and answer during the presentation.
   c. TPS type cooperative learning can be used to develop students' social skills, such as collaboration, cohesiveness, problem solving, and exchanging opinions with other group members.
   d. Students train themselves to communicate in public or with other friends, for example explaining the results of the discussion with their own ideas.

2. For Teachers
   a. The teacher can create a student-centered learning model so that students are more active in expressing their opinions and the classroom atmosphere becomes fun.
   b. Teachers can apply innovative learning models such as: cooperative learning models in the learning process in the classroom.
   c. The teacher can provide motivation for students who are less active in learning by explaining that assessment is not only based on the test results but also the activeness of students in the learning process.

3. For Schools
   a. Schools can provide training to teachers regarding the application of innovative learning models in the classroom.
   b. Schools improve facilities and infrastructure to make it easier for students to obtain information about subject matter such as: improving hotspot free facilities and providing various books in the library related to the lesson.
   c. Schools can provide motivation and facilitate teachers to attend training or seminars related to innovative learning models outside the school environment.

4. For Further Research
Subsequent research is expected to be able to improve the deficiencies contained in this study to be more varied and innovative, it is recommended to use the same theme by applying different materials.

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