Implementation Of The Talking Stick Learning Model Used By Koper Sebeni Media

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Abstrak. The use of media can increase clarity and interest in the learning process, increase learning motivation, and make it easier to understand the material. The aim of this research is to determine the talking stick learning model that can improve student learning outcomes in comparative material in class VII Pagak Islamic Middle School with the help of the Koper Sebeni media. This classroom action research was carried out using qualitative methodology. The steps in the process are preparation, action, observation, and reflection. The flow model is used to analyze the data obtained, which includes data reduction, data presentation, and drawing conclusions. The research results showed that from cycle 1 to cycle 2 student learning outcomes increased. The percentage of completion of the final exams for cycles 1 and 2 was 83.33% and 91.67% respectively, which shows an increase in the proportion of students by 8.33%. Thus it can be said that the use of the Koper Sebeni media combined with the talk stick learning strategy can improve student learning outcomes. So that most students have the opportunity to answer questions, future researchers must spend sufficient time on the talking stick learning model.

Kata Kunci: *Talking Stick Learning Model; Instructional Media; Learning Outcomes*

Introduction

Mathematics is a very important science for humans because it helps students learn to think logically, critically, systematically, and solve everyday problems (Yunitasari, et al, 2019). Furthermore, Isnaeni, et al (2019) emphasized that mathematics subjects in schools are very important because mathematics is a science that depends on thinking processes.

Mathematics is very important for education, as shown by the fact that mathematics is a required subject at all levels of education, from elementary school to college. Despite its importance, mathematics learning outcomes in Indonesia are still low. This can be seen from Indonesia's ranking in the Program For International Student Assessment (PISA) research. Renaldie, et al (2024) explain the decline in Indonesia's mathematics ability score in 2022, Indonesia will be in 69th position out of 81 countries. This shows that Indonesia is ranked in the bottom 12. According to Amallia & Unaenah (2018: 124), many students believe that mathematics is a difficult subject to understand, so they easily give up before learning it. These difficulties are also felt by Pagak Islamic Middle School students.

Pagak Islamic Middle School has designated class VII as an observation class. One of the statements given by the principal was that students must change their perception of difficult

mathematics. Mathematics teachers also said that students were not very active during learning. As a result, they have low mathematics learning outcomes on comparative material. Observations also show that there are no resources that can help in learning mathematics, so resources are needed that can help in learning mathematics.

Table 1 Daily Test Results Comparative Material

No	Nama	Nilai
1	MT	65
2	AF	80
3	MSG	70
4	AR	80
5	MD	76
6	AM	76
7	BPS	68
8	ROP	77
9	MR	85
10	SW	63
11	IA	50
12	ILQ	78

From the table, it is known that 7 out of 12 students completed the comparison material, because this school sets the valid KKTP (Criteria for Achievement of Learning Objectives) score of 75. According to Supriyanto & Miftahudin (2017: 177), comparison is a number used to compare the size or value of two things. Comparison has many benefits in everyday life, so it is very important to learn. Nuraida, Patmaningrum, and Suharto (2023: 33) say that comparison is a topic that must be studied because it has benefits, such as building buildings, making house location plans, calculating distances, and making maps. There are two types of comparisons, according to Nurjanah (2009: 40), namely value comparisons and inverse value comparisons. A value comparison is a comparison where the initial value increases as the final value also increases, whereas a reverse value comparison is a comparison where the initial value increases as the final value decreases.

The teacher is the most important person in the class, the teacher has a very important role in ensuring quality educational processes and results. According to Wahyudy (2019: 228), many teachers use conventional approaches when teaching mathematics, making the subject seem rigid and making students think mathematics is a difficult subject. Therefore, teachers must use approaches that can make the atmosphere of learning mathematics enjoyable. The talking stick learning model relies on sticks as the main component and music as a support. This model makes students not bored following lessons (Habibati, 2017). The approach of using learning media can also make learning fun. Learning media is an innovative tool used to explain subject matter to students so that the teaching and learning process becomes more effective, efficient and enjoyable (Wibawanto 2017: 6). The talking stick learning model and the use of learning media can also have an impact on student learning outcomes.

The learning media that will be used is the Koper Sebeni, which is made of wood and is called "Koper Sebeni" because it stands for value and reverse value comparison box. Wooden board media has several advantages: easy to carry, practical in making and using, attracts attention so it is easy to remember, and supports learning activities because it has an attractive physical shape and color (Ulfa, 2019: 6).

Figure 2 Koper Sebeni Media

Research that shows the *talking stick* learning model influences student learning outcomes is research conducted by Baid, et al (2022). This study focuses on the topic of social arithmetic. The results of the research showed that the percentage of completion of mathematics scores in cycle I was 52.20% and cycle II was 82.60%, showing an increase of 30.40%. Based on these results, it can be concluded that the application of the *talking stick* learning model with two learning cycles improves student learning outcomes in social mathematics material.

Other related studies, such as those conducted by Sartika (2021), In this research, researchers created comic media on comparative material for class VII middle school. Researchers also evaluate the quality of comic media from the perspective of validity, effectiveness and practicality. The research results show that the assessment of the quality of comic media by experts in the media being developed is valid with an average score of 4.28 and recorded in the very valid category. Based on the results of the learning test, the media developed was considered effective with a complete learning outcome test of 95%, with an average class score of 84.5, and was recorded in the very effective category. Based on the student response questionnaire, the media developed was considered practical with a total average percentage of 97.2% which was included in the very practical category.

Table 2 Research Differences

No	Name of Researcher	Title	Research result	Equality	Difference
1.	Sartika (2021)	Development of Comparative Material Comic Media for Class VII Middle School Students	The comic media developed is stated in the category of very valid, effective and practical.	Comparative material	Media used
2.	Baid, dkk (2022)	Application of the *Talking Stick* Learning Model to Improve Student Mathematics Learning Outcomes in Social Arithmetic Material	The percentage of completion of mathematics learning scores in cycle 1 was 52.20% and in cycle 2 82.60%. Based on this data, it is known that there was an increase of 30.40%.	*Talking Stick* Learning Model	Researched material

The aim of this research is to describe the steps of the *talking stick* learning model assisted by Koper Sebeni media which can improve student learning outcomes in comparative material in class VII Pagak Islamic Middle School.

Research methods

The research approach used is a qualitative approach with the type of Classroom Action Research. This is because researchers act as planners, implementers, data collectors, data analyzers, and report compilers. This research focuses on class VII students of Pagak Islamic Middle School. Data collection procedures are tests, observation and documentation. Data sources in this research consist of end-of-cycle tests, researcher and student observations, field notes and documentation. The researcher's observation sheet was observed and filled in by the mathematics teacher, while the student observation sheet was observed and filled in by 2 colleagues (students). The data obtained was analyzed using the Milles and Hubermann flow model, including data reduction, presenting data and drawing conclusions.

According to Eksak (2019: 245) the classical calculation of student learning completeness is as follows:

$$\text{Mastery learning} = \frac{\text{Number of students who have completed their studies}}{\text{Jumlah peserta didik seluruhnya}} \times 100\%$$

Students are said to have completed classical learning if the comparison of the final tests of cycle I and cycle II has increased above the applicable KKTP, namely 75%. If there has not been an increase above the KKTP, then they continue to the next cycle.

The results of the success of the learning process are obtained when teaching and learning activities take place. According to Kulsum (2023: 76), the results of observations of researchers' and students' activities in learning are sought using the percentage of average scores using the formula:

$$\text{Percentage of average value} = \frac{\text{Score obtained}}{\text{Maximum score}} \times 100\%$$

The criteria for the level of success of the learning process are explained in the following table:

Table 3 Criteria for Action Success Levels

Percentage (100%)	Criteria
$85\% < NR \leq 100\%$	Very good
$75\% < NR \leq 85\%$	Good
$50\% < NR \leq 75\%$	Enough
$25\% < NR \leq 50\%$	Not enough
$0\% < NR \leq 25\%$	Very less

According to Rajab & Rahman (2023: 64) to ensure the validity of the data, there are seven techniques for achieving data credibility, namely extended participation, observer diligence, triangulation, peer examination, discussion of negative case analysis, referential adequacy, and member checks. In this research, the techniques used were persistent observation, triangulation, and peer examination.

Results and Discussion

The findings obtained from students at the pre-action stage are: a) Students tend to be busy and play around. This is because students are less interested in studying mathematics and there is a negative perception that mathematics subjects are difficult. b) Students are still passive, just listening to the material explained by the teacher, some are not even paying attention and some are sleeping. c) Students do not dare to answer questions given by the teacher in front of their classmates. d) Students tend to be shy and do not dare to ask about parts of the material that they do not understand. This is because students lack self-confidence.

The findings obtained from teachers are: a) learning is still teacher-centered, namely the teacher explains the material from beginning to end, then continues by giving questions to students. b) The teacher has never encouraged students to group together. As a result, students only choose friends they like.

According to Choyriyyah (2014: 266), an unpleasant learning atmosphere results in students not understanding the material taught by the teacher. Learning that is still teacher-centered makes students passive, only listening and recording the information conveyed. Lack of student involvement during learning makes it difficult for students to understand the material presented by the teacher, so that many students do not achieve the specified KKTP score. This is in line with the opinion of Lestari & Irawati (2020: 52) that low student cognitive learning outcomes can be influenced by the learning process which is still teacher-centered, so that teachers dominate learning activities more. Based on this, using varied learning models by involving students in the learning process is one way to achieve learning objectives.

Based on observations, using the *talking stick* learning model assisted by Koper Sebeni media is one solution to overcome this problem. This is in accordance with the opinion of Fajrin (2018: 87) that the *talking stick* learning model requires students to be active, dare to speak and express opinions so that students can easily remember the lessons taught. Anditiasari, Pujiastuti, & Susilo (2021: 240) stated that the use of learning media makes students more enthusiastic in facing and solving problems in mathematics lessons, so that they get satisfactory learning results.

a. **Cycle 1**

The planning carried out in cycle 1 is: making teaching modules, making Koper Sebeni media and *talking sticks*, preparing reading materials, making group quiz questions, making assessment test questions, making observation sheets and field note sheets.

The results of the observation sheet in cycle 1 are: Observations of researcher activities were carried out by the mathematics teacher as observer 1. The percentage score obtained was 94.57%. This shows that the level of success of research activities is included in the very good category.

Table 4 Analysis Results of Cycle I Researcher Activity Observation Sheets

Information	Results
Score acquisition	87
Maximum score	92
Percentage of action success	94,57%

Observations of student activities were carried out by two colleagues as observers 2 and 3. The average percentage score obtained was 78.64%. This shows that the level of success of research activities is included in the good category.

Table 5 Analysis Results of Cycle I Student Activity Observation Sheets

Observer	Score Acquisition	Maximum Score	Percentage	Average
2	74	96	77,08%	78,64%
3	77	96	80,21%	

The results of the cycle 1 test analysis showed that 10 out of 12 students had completed their studies, so the percentage of students who had completed their studies was 83.33%, and the percentage of students who had not completed their studies was 16.67% with an average class score of 87.86. .

Table 6 Results of Cycle 1 Student Test Score Analysis

Information	Result	Percentage
Jumlah siswa yang tuntas	10	83,33%
Jumlah siswa yang tidak tuntas	2	16,67%
Rata-rata nilai	87,86	

The results of the field notes show that there are still deficiencies in student activities, namely: 1) Students lack confidence when answering the questions in front of them. 2) Students are less accepting when forming groups.

The reflection results obtained from the presentation of cycle 1 are: 1) The activities carried out by the researcher went very well and have achieved the specified success criteria, so the researcher needs to maintain it for further action. 2) The activities carried out by students are going well and have achieved the specified success criteria, so student activities need to be maintained for further action. 3) Researchers do not condition students enough when dividing groups, students do not accept the group divisions that have been determined, so that students look noisy and busy when group members are rejected and look for members of their group. In the next cycle, the researcher will instruct them to follow the group determined by the teacher and only move when the teacher says their name. For students whose names have not been called, continue to wait in their respective seats. 4) When conducting the final test, the teacher takes the students' answer sheets to their respective seats, to avoid crowds due to matching answers after collecting the answer sheets. 5) Provide motivation and enthusiasm for students who hold sticks, so that they are more confident when working on questions in front of other friends. 6) If during the end-of-cycle test there is a child who imitates, the teacher will act decisively by taking the child's question sheet. 7) Researchers must condition the class according to improvements in the field note format. 8) The next cycle needs to be carried out to determine whether there has been an improvement or not in terms of student learning outcomes and the success of the learning process.

The findings obtained from cycle 1 for students were: a) Students seemed enthusiastic about studying comparative material after knowing its benefits in everyday life. b) When dividing groups, some students refused to join the groups that had been determined. This is because students want to choose their own groups. c) When the music stopped, the child holding the stick was less confident when working on the questions given by the researcher. d) When carrying out the test, students lack confidence. This can be seen because

students try to glance at their classmates' answers. e) When collecting answer sheets, the class becomes noisy because children match their answers with other friends.

The findings obtained from cycle 1 for researchers: a) Researchers used the *talking stick* learning model as a learning innovation. b) Researchers used Koper Sebeni media. c) Researchers give rewards to the winning group.

According to Agustin, et al (2021: 14) providing good apperception every time you start learning is very closely related to students' learning readiness, and can make learning synchronous and integrated. Interrelated and sustainable learning is expected to be able to improve student grades which have not been optimal. This is in accordance with the opinion of Siagian (2015: 123) that one of the efforts to make someone achieve is carrying out sustainable activities.

After conducting an apperception, then convey the learning objectives to be achieved and motivate students by telling them the benefits of studying comparative material in everyday life. In this activity, students looked enthusiastic and eager to take part in the learning. This is in accordance with the opinion of Emda (2017: 179) that clear goals can foster students' interest in learning. The clearer the goals to be achieved, the stronger the students' interest in learning will be. Lutfi & Fathani (2013: 67) explain that the more students know about the benefits of something, the greater the students' enthusiasm for learning.

The core learning begins by presenting a *talking stick* model scenario with the help of Koper Sebeni media. Students looked enthusiastic when the teacher explained the learning model used and couldn't wait to play. This is in accordance with the opinion of Isnaeni, Muhaemin, & Hasri (2017: 140) who stated that almost all students like learning using the *talking stick* model on the grounds that this learning model is challenging, entertaining, cheerful, and the majority say it can increase students' enthusiasm and interest in learning. learn math.

The next learning activity is to divide students heterogeneously into three groups as recommended by the mathematics teacher. According to Suharti (2023: 87), with the formation of heterogeneous groups, it is hoped that students with high abilities and students with low abilities will collaborate to understand something. When delivering the material, the researcher used Koper Sebeni media and the students seemed interested and enthusiastic. This is in line with the opinion of Kustandi & Darmawan (2020: 202) that presenting a lesson using media will be more interesting for students and the level of understanding and memory of the material will be higher compared to not using media.

At the end of the learning activity, the researcher and students conclude the material that has been studied. According to Rafiuddin (2018: 93) conclusions are presented to provide a general overview of the material studied and then reflect. This is in line with the opinion of Kusumaningtyas, et al (2018: 157) that the aim of reflecting on students' learning is to achieve student self-satisfaction and obtain the right forum for establishing positive communication with educators.

b. **Cycle 2**

The results of observations in cycle 2 showed that: The researcher's activities in cycle 2 went well and were in accordance with the teaching module created. This can be seen from the results of the analysis of teacher activity observation sheets which show that the percentage of success in teacher activities is 97.83%, which means that the level of success of researchers' activities in implementing learning is very good. 2) Student activities in cycle 2 went well and were in accordance with the teaching module created. This can be seen from the results of the analysis of student activity observation sheets which show that the average percentage of success in student activities is 91.67%, which means that the level of success of student activities in carrying out learning is very good. 3) Students were able to accept that the researcher formed groups based on the results of the final test of cycle 1. 4) Class conditions were calm during the final test of cycle 2 because the researcher took the answer sheets to their respective places. 5) Students who hold the stick when the music stops are more confident when working on the questions in front of them because they have support

from the researcher and their group friends. 6) At the end of the cycle test, no students tried to imitate their classmates' answers, because they were afraid of the sanctions they would receive. 7) The results of the cycle 2 test analysis show that 11 out of 12 students completed their studies, so the percentage of students who completed their studies was 91.67%, and the percentage of students who did not complete their studies was 8.33% with an average class score of 88 .33.

The next cycle is not carried out, because the criteria for success in student learning outcomes and the learning process have been achieved with an increase above the applicable KKTP, namely 75. The following is the explanation: a. In cycle 1, the success of student learning outcomes was 83.33%, while in cycle 2 it was 91.67%. This shows that there has been an increase above the KKTP, namely 8.34%. b. In cycle 1 teacher activity got a percentage of 94.57% while cycle 2 got a percentage of 97.83%, this shows an increase of 3.26%. c. In cycle 1, student activities got an average percentage of 78.64%, while in cycle 2 they got an average percentage of 91.67%. This shows an increase of 13.03%.

The findings obtained from cycle 2 for students are: a) Students can accept group formation. This can be seen from the attitude of students who are not busy and remain seated before being called by name to join the group. b) Students are able to answer questions confidently after receiving motivation from the teacher and their group friends. c) Students are able to take the final test of cycle 2 with confidence. This is proven by not following the example of one's classmates, because there will be sanctions for copying. d) The class becomes quiet because the teacher takes the answer sheets to each student's seat so that no student matches the answers with another friend.

The findings obtained from cycle 1 for the researcher: a) The researcher was able to create a conducive atmosphere for students during group formation and the final test of cycle 2. b) The researcher motivated students to be brave and confident when working in front of the class. c) Researchers carry out learning very well.

The results of the observation sheet in cycle 1 are: Observations of researcher activities were carried out by the mathematics teacher as observer 1. The percentage score obtained was 97.83%. This shows that the level of success of research activities is included in the very good category

Table 6 Analysis Results of Cycle 2 Researcher Activity Observation Sheets

Information	Result
Score acquisition	90
Maximum score	92
Percentage of action success	97,83%

Observations of student activities were carried out by two colleagues as observers 2 and 3. The average percentage score obtained was 91.67%. This shows that the level of success of research activities is included in the very good category.

Table 7 Analysis Results of Cycle 2 Student Activity Observation Sheets

Observer	Score Acquisition	Maximum Score	Percentage	Average
2	87	96	90,63%	91,67%
3	89	96	92,71%	

The results of the cycle 2 test analysis showed that 11 out of 12 students had completed their studies, so the percentage of students who had completed their studies was 91.67%, and the percentage of students who had not completed their studies was 8.33% with an average class score of 88.33.

Table 8 Results of Cycle 2 Student Test Score Analysis

Information	Result	Percentage
Number of students who completed	11	91,67%
Number of students who did not complete	1	8,33%
Average value	88,33	

The results of the field notes show that the deficiencies in cycle I have been corrected so that notes for cycle 2 are obtained, namely: 1. Students can be confident when answering the questions in front of them. 2. Students are willing to accept when forming groups.

Conclusion

The steps for the *talking stick* learning model assisted by Koper Sebeni media that can improve student learning outcomes in comparative material are:

1) Initial activity

Learning begins with greetings, praying, checking attendance and giving students an apperception. Convey learning objectives, and motivate students by explaining the benefits of comparative material in everyday life.

2) Core activities

Explain the *talking stick* learning model scenario, then divide students into several groups. Explaining comparative material using Koper Sebeni media. Invite students to read the comparative material in the worksheet and ask questions if there are things they don't understand. Instruct students to close their reading books and stand up. Take a stick and give it to one of the students to roll accompanied by music. When the music stops, the student holding the stick must answer the questions using the Koper Sebeni media. The teacher strengthens the results of students' work and corrects answers that are still inaccurate. The teacher and students calculate the scores produced by each group and determine the winners who are entitled to receive rewards. The teacher gives students the opportunity to ask questions that they do not understand.

3) Final activities

The teacher and students conclude the material they have studied and reflect. The teacher closes the learning activity by giving encouragement and saying hello.

After implementing the learning model with the steps above, learning outcomes increased, namely the percentage of the final test in cycle 1 was 83.33% and in cycle 2 it was 91.67%. This shows that the percentage of students has increased by 8.33%, so it can be concluded that the use of the *talking stick* model assisted by Koper Sebeni media can improve student learning outcomes.

Suggestions for future researchers, it is best to provide enough time for the *talking stick* so that most students have a turn answering the questions.

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