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The Effects of the Talking Stick Learning Method with Talking Chips on Learning Outcomes

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Abstract: The purpose of this study was to find differences of learning outcomes using the Talking Stick Learning Method with Talking Chips. The information selection procedure uses documentation, perceptions, and questions, while the information testing strategy uses the F-test (One Way Anova). The perception result states that the normal value of the Talking Stick class students' learning exercise is 71.05% with the high size, while the average value of the Talking Chips class students' practice is 79.49% with the high model. Thus, the Talking Stick class has a high active value compared to the Talking Chips class. Based on the results of observations of 89.47% with a good predicate, while the value of student learning outcomes after applying the Talking Chips learning technique was 69.2% with a good predicate. Based on the F (One Way Anova) test, F-count = 6.255 > F-table = 3.968, so it was found that there were differences in learning outcomes using the Talking Stick Learning Method with Talking Chips at SMA Negeri 7 Palembang.

Keyword: Chips, Learning, Method, Stick, Talking

1. Introduction

Education is one of the human needs as a support for daily life that will come in the long term. Schools in Indonesia can educate the country's children, this is the premise that schools as human needs are very useful to encourage the progress of the nation and state.

In achieving the main goals in the educational process, teachers often face problems that become challenges and obstacles in carrying out educational experiences. Educators are expected to be capable and imaginative in creating an interesting and effective educational environment and developing experiences, imaginative educators are educators who can design learning long before doing learning exercises in class, by preparing what requirements will be used in learning. Educators should find success, it can be seen in their ability and capacity in carrying out their obligations and work in school, especially in assignments and creating topics, making educational experiences and developing great things, and assessing student training and learning outcomes at school.

According to Sardiman (2014) learning is knowing behavior or appearance, by observing activities for example by reading carefully, paying attention, listening, and imitating. Lefudin (2017) state that learning can be described as a direction of behavior change, because it connects a person with the surrounding circumstances, at the time of learning there are learning outcomes that are involved by educators as one measure to determine school achievement. Indeed, not all students can get good learning outcomes, there must be some students who cannot achieve good learning outcomes in class. Active and dynamic students so that communication between teachers and students can run well and dynamically. with the aim that the problems experienced by students can be solved together. and students' training in the learning process and developing experiences can be influenced by the activities of educators in choosing what learning models can be used in the learning experience of learning spaces.

According to Sardiman (2014) Learning outcomes are habits that exist in students and their development opportunities play an important role in the educational experience. According to Januardi and Gustiana (2018) learning outcomes are changes from things that have been felt by the poor to be felt due to increased experience seen from the value that has been given by the teacher. From this review, it must be seen from the number of grades that have been carried out by the instructor after giving the material in a particular lesson. According to Lestari (2017) learning outcomes are the last thing in communication in introductions that are carried out more than once. Play a role in preparing one's character and influence a better perspective and work (Idrus and Cici, 2013). Learning outcomes are achievements achieved after the following created meetings (Haeruddin, 2017). Learning outcomes are the quality obtained after being included in a straightforward/effective manner all their abilities as far as

possible in terms of mental, success, and psychomotor that arise as a result of student learning.

The learning model is the development of the introduction of teaching materials that includes all perspectives carried out by educators in teaching and educational experiences in the study room so that learning targets can be carried out properly and precisely with what is generally expected (Ali 2021). Cooperative learning is a learning method that is completed with collaboration between students so that later students will not only advance alone or exceed each other students. Learning can improve student learning outcomes because students study with friends who are diligent or actively studying problems such as according to Isjoni (2019) the first thing when implementing the Cooperative Learning model is that students can learn and gather with their friends and see each other's perspectives and interact with others to communicate their points of view in meetings.

In this experiment, we used the cooperative learning model using the Talking Stick and Talking Chips learning methods. According to Marjuki (2020) the method which means a way or path related to the way someone does in a systematic activity. According to Aqib (2020) Talking Stick is a learning technique using a stick to answer questions from educators. Meanwhile, according to Darmadi (2017) Talking Chips learning is a learning technique that is carried out at meetings consisting of 4-5 students, each party can know when they express opinions.

Some of the reasons that cause researchers to use learning methods are because these methods are centered on student actions in educating and developing experiences. The two learning strategies open the door for students to imagine and ask teachers and peers so that boredom in learning can be happier.

Based on the initial field results conducted by us with the economics subject teacher at SMA Negeri 7 Palembang, Mrs. Marlinda S.Pd., M.Si, it was found that the learning methods commonly used during the economics subject were the lecture method, practice method, and question and answer method. . But the learning outcomes achieved by students have not been maximized and students are still not active in the educational process, this is evidenced by the percentage of the minimum completeness criteria for economics 4 subjects at SMA Negeri 7 Palembang is 70, 70% of students who pass while 30% who do not pass, but students who have not completed will follow remedially. Therefore, researchers want to examine student learning outcomes using the talking stick method with

talking chips, with the hope that student learning activities can be better and more active, finally, the learning outcomes obtained will be even better. Based on this explanation, we intend to carry out a study with the title "The Effects of the Talking Stick Learning Method with Talking Chips on Learning Outcomes".

2. Methods

According to Ramdhan (2021) the research method is characterized by logistical methods that produce information with a specific mission and use. This research method is quantitative research (comparative descriptive) which is analyzed using statistical formulas and the results are in the form of numbers. (Ridha 2017) The research variable is a feature, price/nature of the article, and people/sports that have certain variations between one another. The variables of this research are (X1) Economic learning outcomes using the Talking Stick Learning method, and (X2) Economic learning outcomes using the Talking Chips Learning method. (Nurrahnah et al. 2021) The population is the whole object of research, in this experiment are all students of class XI IPS SMA Negeri 7 Palembang, namely 117 students. Arikunto (2013) states that the sample is the result of the population being experimented with, this sample is students of class XI IPS 1 and XI IPS 2 taking samples by using a lottery system, the design of this research is Quasi-Experimental Design type Posttest-Only Control (Sugiyono 2016). The following is the design of this research.

Table 1. Research design

Group	Treatment	Posttest
A	X_1	O_1
B	X_2	O_2

Definition of operational variables Siyoto (2015) namely information on how one factor is measured, so the results of learning economics using the Talking Stick and Talking Chips learning methods are the numbers obtained from the experimental results in the form of Multi-Voice in the economics folder using the Talking Stick learning method with Talking Chips. Data collection technique (Mamik 2015) is an appropriate and standard strategy for generating the requested explanation. How to get data to use, namely the documentation used to obtain photos of research activities, school conditions, structure, vision, and mission, as well as data on the number of students and teachers at SMA Negeri 7 Palembang.

Sumardi (2020) states that an international test of one asset or question that is expected with the expected goal of the end of the estimate of individual progress (students) or revealing how from the setting of the individual being judged, namely a question consisting of 20 questions with material on economic cooperation to see the results. Arifin (2017) argues that observation is the process of paying attention and recording methodically, legally, and impartially in real or fake circumstances to achieve certain goals, observations are used to obtain data on student activities by preparing observation grids, namely visual, written, and oral. Ngabidin (2021) states the rules of activity criteria, namely.

Table 2. Student Activity Criteria Guidelines

Achievements %	Criteria
75-100	High
51-74	Medium
25-50	Low
0-24	Very Low

Before the test was carried out, the researcher conducted a validity and reliability test to see the validity and validity of the question. This study uses the Product Moment formula for testing, we also uses the IBM SPSS Statistics 22 application (Ngabidin 2021). Observation and test data analysis techniques are calculated using the formula:

$$P = \frac{f}{N} \; x \; 100\%$$

We conducted a homogeneity test using the standard deviation and variance formulas and normality tests using the Chi-Square formula, for hypothesis testing criteria using the F-test formula (One Way Anova).

3. Results and Discussion

This research was conducted face-to-face which consisted of three activities such as initial (opening), core, and closing activities with students during the learning process, for information on observation data and broken down into four stages, to be more specific: first by separating the agenda on the perception sheet to any descriptors that appear if they are not separated from the agenda. The second award scores on the consequences of the current agenda. third, adding up the numbers that have been obtained as action numbers. Fourth, change the number of actions obtained as high, medium, low, or very low. understanding of student perception assessment is as follows:

Checklist 3 = score 4
Checklist 2 = score 3
Checklist 1 = score 2
Checklist 0 = score 1

Data Analysis of Observation Results of Talking Stick Class Students

Table 3. Frequency Distribution of Observations XI IPS 1

No	Value Interval	Frequency	Presentation (%)	Criteria
1	75-100	27	71,05	High
2	51-74	11	28,95	Medium
3	25-50	0	0,0	Low
4	0-24	0	0,0	Very Low
Amount		38	100	

Data Analysis of Talking Chips Class Student Observations

Table 4. Frequency Distribution of Observation Results XI IPS 2

No	Value Interval	Frequency	Presentation (%)	Criteria
1	75-100	8	21	High
2	51-74	31	79,49	Medium
3	25-50	0	0	Low
4	0-24	0	0	Very Low
Amount		39	100	

The implementation of the test to students before being given a final test, the researchers checked the readiness of students and developed students further about the material that had been previously concentrated on. Students take the final test for international economic cooperation material which consists of 20 different decision test questions that have been tested for validity.

Data Analysis of Talking Stick Class Student Test Results

Table 5. Frequency Distribution of Class XI Social Studies Learning Outcomes

No	Value Interval	Frequency	Presentation (%)	Criteria
1	86-100	1	2,63	High
2	71-85	34	89,47	Medium
3	61-70	3	7,9	Low
4	<60	0	0	Very Low
Amount		38	100	

Data Analysis of Talking Chips Class Student Test Results

Table 6. Frequency Distribution of Class XI IPS 2 Learning Outcomes

No	Value Interval	Frequency	Presentation (%)	Criteria
1	86-100	3	7,69	High
2	71-85	27	69,2	Medium
3	61-70	3	7,69	Low
4	<60	6	15,4	Very Low
Amount		39	100	

Data Normality Class Talking Stick

Table 7. Data Normality Class Talking Stick

Value Interval	f_o	f_h	$f_o - f_h$	$(f_o - f_h)^2$	$\frac{(f_o - fh)^2}{fh}$
70 – 73	3	1,0	2	4,0	4
74 – 77	4	5,0	-1	1,0	0
78 – 81	13	13	0	0,0	0
82 – 85	17	13	4	16,0	1
86 – 89	0	5	-5	25,0	5
90 – 93	1	1,0	0	0,0	0
Amount	38	38,0	0	46,0	10,4

Compare the sum of (xh2) and (xt2). In the calculation in the table above, (xh2) = 10.4 and xt2 with a degree of freedom (DK) 6 – 1 = 5. Based on X2 if DK = 5 and an error rate of 5% xt2 = 11,070. From the estimation table above, it tends to be said that xh2 < xh2. (10.4 < 11.070), then that's when the dissemination of information on student learning outcomes in the Talking Stick class can be stated to be usually adjusted.

Talking Chips Class Data Normality

Table 8. Talking Chips Class Data Normality

Value Interval	f_o	f_h	$f_o - f_h$	$(f_o - f_h)^2$	$\frac{(f_0 - fh)^2}{fh}$
50 – 58	1	1	0	0	0
59 – 67	5	5	-0,2	0,0	0,0
68 – 76	10	13	-3,2	10,5	0,8
77 – 85	20	13	6,8	45,6	3,4
86 – 94	2	5	-3,2	10,3	2,0
95 – 103	1	1	0	0	0,0
Amount	39	39	0,2	66,5	6,2

Compare the sum of xh2 and xt2. In calculations. in the table above, we get (xh2) = 6.2 and xt2 the degree of freedom (DK) 6 – 1 = 5. The equation of the table (x2) if DK = 5 and the error rate = 5% , xt2 = 11,070. From the estimation of the table above, it tends to be said that xh2 < xt2 (6.2 < 11.070), so that's when the spread of information in the speaking stick class can be stated to be usually adjusted.

Homogeneity Data

1) $S = \sqrt{\frac{\sum x_1^2}{n_1 - 1}} = \sqrt{\frac{251325}{38-1}} = \sqrt{\frac{251325}{37}}$ (Riduwan 2016)

$= \sqrt{6792,56} = 82,41$

2) $S = \sqrt{\frac{\sum x_1^2}{n_1 - 1}} = \sqrt{\frac{233575}{39-1}} = \sqrt{\frac{233575}{38}}$ (Sugiyono 2016)

$= \sqrt{6146,71}$ = 78,40

Calculate the value of F= (Largest variance) / (Least variance) = 82.41/78.40=1.05

Comparing the value of F-count with F-table With the equation: db numerator = n-1 = 38-1 = 37 (for the largest difference) db denominator = n-1 = 39-1 = 38 (for the smallest difference) level of importance (α) = 0.05. So, at that time, F-table is obtained = 1.72

Based on the above calculation, it can be said that fh is smaller than ft (1.05 < 1.72). then that's when the dissemination of information on student learning outcomes in the talking stick class can be stated to be adjusted.

Hypothesis test

Hypothesis testing criteria in using this. = 0.05 with test size according to Wardani (2020) Ho is recognized if F count is F table and Ha is recognized if F-count > F-table. So, the specified Fh value = 6.255. These costs are then contrasted and the value of F-table with DK in the numerator m – 1 and the denominator N – m. Furthermore, the DK of the numerator = 2 - 1 = 1 and the DK of the denominator = 77 - 2 = 75. By looking at the two dark, that F-table for 5% = 3.968. From the above calculation, it can be concluded that F-count = 6.255 > Ftable = 3.968. And finally, it can be said that Ha is recognized and Ho is rejected and this indicates that "here is a difference in learning outcomes using the talking stick learning method with talking chips at SMA Negeri 7 Palembang.

Table 9. Summary of ANOVA Calculation Results

Source Variant	Degrees of Freedom	Sum Of Squares t	MK	F-count	F-table	Decision
Total	77 - 1 = 76	4816,8831	-	6,255	5% = 3,968	Fh > Ft (6,255 > 3,968) So Ha is accepted and Ho is rejected
Between Groups	2 - 1 = 1	370,8109	370,8109			
In Group	77-2 = 75	4446,0722	59,28			

Differences in Learning Outcomes Using the Talking Stick Learning Method with Talking Chips at SMA Negeri 7 Palembang

This experiment is useful for obtaining economic learning outcomes for students by using the Talking Stick and Talking Chips learning methods. Data collection is used in the form of observation and tests. Observations in this study are expected to determine the movement of students when using the Talking Stick learning method (XI IPS 1) and the Talking Chips learning method (XI IPS 2) as supporting data in this study. collecting data on student learning outcomes, researchers used a test conducted at the end of the meeting, a multiple-choice test of 20 questions with material on international economic cooperation.

Based on the number of observations on the activities of students in the Talking Stick class (XI IPS 1), a percentage of 71.05% was obtained with high criteria. As for the Talking Chips class (XI IPS 2) obtained a percentage of 79.49% with high criteria. Student activities between students who are educated with learning methods. Talking Stick and students who are educated with. Talking Chips learning method, it can be said that the Talking Stick class with Talking Chips has students who are equally active which can be seen from the criteria and have differences in terms of the percentage of observations.

Based on the student results in data attached to the graph of the frequency data distribution results, the Talking Stick class (XI IPS 1) got a standard score of 89.47% with a good predicate and the Talking Chips class (XI IPS 2) got the highest standard score of 69.2% with a predicate. good. The value of student learning is approximately students who are taught using the Talking Stick learning method and students who are taught using the Talking Chips learning method, then students can open a Talking Stick class with the Talking Chips class having the same good learning outcomes as can be seen from the outcome criteria. learn and have differences in terms of the proportion of test result data.

Based on the data on the sum of the hypotheses about can. Fh = 6.255. The following costs are compared and the costs of F-table with DK in the numerator m - 1 and the denominator N - m. Thus, the dk of the numerator = 2 - 1 = 1 and the DK of the denominator = 77 - 2 = 75. Based on the two dk, it can be seen that the F-table for 5% = 3.968. From the above calculation, F-count = 6.255 > Ftable = 3.968. Furthermore, it can be said that Ha is recognized and Ho is rejected, and that means that there are differences in learning outcomes using the talking stick learning method with talk chips. However, the difference between the normal learning outcomes and the overestimation is not true, because the difference in

normal results between the two methods is rather close and the contrast between F-count and F-table is quite close.

Judging from the results of research at SMA Negeri 7 Palembang in 2022, it provides information about differences in learning outcomes using learning methods. Talking stick with Talking Chips, this difference is caused by the treatment and way of learning activities. In the experiment of the Talking Stick learning method, it was better to get further progress in student learning outcomes from the Talking Chips learning method. According to (Melani 2017:38–39) The Talking Stick method is a learning method that is carried out by allowing students to move and act openly and avoid order and regularity as long as they do not bother students to develop and create self-confidence.

4. Conclusions

The conclusion of this comparative study is the application of a method that has never been used, namely the talking stick learning method with a speech chip which is used to determine student learning outcomes at SMA Negeri 7 Palembang in economics. In the second lesson of the method, students responded well. based on the results of the calculations carried out by us obtained student learning outcomes between talking sticks and talking chips. It can be said as a talking stick class with talking chips that has students whose learning outcomes are equally good which can be seen from the criteria for learning outcomes and have differences in terms of value presentation. This means that there are differences in learning outcomes using the talking stick learning method with talk chips at SMA Negeri 7 Palembang. This research is limited to the material of international economic cooperation institutions. It is necessary to develop the material for class XI IPS international economic cooperation

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