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The Effect of Reciprocal Teaching Styles on the Ability to Hit Drop Shot in Badminton Games for SMA Negeri 1 Tahuna Students

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Abstract: In teaching, every teacher must master the methods and teaching materials that will be taught to their students. The ability to dribble will be better if students carry out the exercises regularly and are taught to use the correct teaching style and this style is adjusted to the objectives and time available. Operationally the objectives of this study are: The influence of reciprocal teaching style on the ability to hit the drop shot in badminton games for students of SMA Negeri 1 Tahuna. The data presented in this study are the results of measuring the ability to drop shoot in badminton before and after being given treatment in the form of reciprocal teaching styles for the experimental group and pre-test and post-test data for the control group that were not given treatment. The average drop shoot ability of the experimental group is greater than the average drop shoot ability of the control group. This means that the increase in drop shoot ability is really the result of the treatment in the form of a reciprocal teaching style given for eight weeks.

Keywords: learning media; counting tree; cognitive ability

I. Introduction

The development of badminton in our area is very rapid, this can be seen in daily activities, especially in the spare time or in the afternoon, many people, both old, young, male and female who play badminton both on the badminton court and in the yard. Apart from that, in terms of increasing performance, many sports clubs provide guidance for badminton through intensive training, especially for junior athletes. Badminton is one of the most popular game sports and is one of the sports included in the physical education curriculum and is a mainstay sport for national athletes in Asian and international championships. However, to be able to excel in badminton, you need to master the basic techniques in the game. The basic techniques in badminton are: 1) How to hold a racket (grip), 2) Stance, 3) Foot work and 4) Strokes techniques. In order to play badminton, the most important and first basic technique to learn is the basic technique of strokes.

As we know the goal of badminton is trying to save the cock from dying in the field itself and as quickly as possible to turn off the cock in the opponent's area so that it is young to get points. One type of shot that makes it difficult for your opponent or has a great chance of getting points is the drop shot.

If you look at the abilities of SMA Negeri 1 Tahuna students, there are still many students who have not been able to hit the drop shot well. This is very evident in the game and in the implementation of learning, most of the students in the drop shot were those who did not cross the net and some were high on the net so that it would make it easier for the opponent to turn off the cock with a smash.

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Even though the sport of badminton is very popular, there are obstacles faced by teachers and coaches in teaching the ability to play badminton so that the expected results are not as expected. For this reason, in teaching a type of ability, it is necessary to applystyle teaching exactly according to the needs of the sport.

In the Physical Education Book, many states how physical education teaching methods, and reciprocal teaching styles. But there is neither method norstyleteaching is the best, because a good method depends on the teacher and lecturer or teaching staff who presents the material and must know the abilities of these students. Are their students able to understand and understand what is being taught, so that a quality learning process occurs.

One of the appropriate teaching styles given to high school students is a reciprocal teaching style, because in this teaching style students are given the opportunity to carry out mobile tasks given by the teacher and are given the opportunity to interact with peers and the teacher provides corrections about the results of the movements made by the teacher. students.

Therefore, in teaching, every teacher must master the methods and teaching materials that will be taught to their students. The ability to dribble will be better if students carry out the exercises regularly and are taught to use the correct teaching style and this style is adjusted to the objectives and time available.

II. Review of Literatures

2.1 The Essence of a Drop Shot in a Badminton Game

The word drop shot consists of two syllables consisting of "drop" and ishot ". James Poole's definition of drop is" a shot that goes beyond the net and falls directly onto the opponent's side of the court ". Another opinion was also conveyed by Pujianto that the drop was: "A soft hit or as if just a touch or flick that drops the ball on the opponent's field near the net or as close to the net". Meanwhile, the definition of the shot is: "The result of a sharp, steep blow and the drop of the shuttle cock near the net on the opposite side of the opponent's field". So the definition of a drop shot is: A shot made by crossing the shuttle cock to the opponent's area by dropping the shuttle cock as close to the net as possible. This shot that is done does not require much energy, but what is important is the way to hit the touch which is a skill that must be possessed by players.

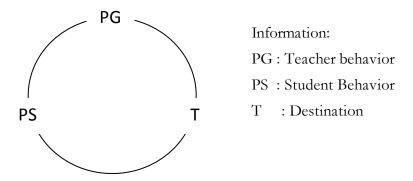
A drop in a game can also be referred to as a netting stroke, which is a shot that must be attempted so that the shuttle cock falls sharply down close to the net across the opponent's field. The way to do this shot is to take the shuttle cock when it reaches the highest point above the net so that the beating is pushed and sliced, and do not let the shuttle cock get under the net. Drop shot can be done from anywhere both from behind and from the front and can be done from above the head or from below and the important thing is this shot is done by forehand or backhand.

2.2 Itself Reciprocal Teaching Style

Sports and Health Physical Education (Penjasorkes) is a means of encouraging the development of motor skills, physical abilities, knowledge, sportsmanship, habituation of healthy lifestyles and character building (mental, emotional, spiritual and social) in order to achieve the goals of the national education system (Birri, 2020). Teaching styles are specific guidelines for the structure of learning and learning episodes. This statement is closely related

to one of the studies put forward by Musca Moston in the book Learning Motion says that: "Teaching is a series of continuous relationships between teachers and students in learning situations." The interaction between teachers and students will reflect certain teaching and learning behaviors.

When planning teaching, various styles are based on the interaction of student behavior and the behavior of a teacher and their relationship to achieving a certain goal. Musca Muston illustrates this teaching style interaction chart::



From the chart above, it can be concluded that the behavior of a teacher must be based on his choice of several indicators, namely student needs, class size, available facilities, equipment owned, objectives achieved and subject matter or subject matter problems. These findings, if we look at them, of course lead to the process of broadening the insights into knowledge and skills themselves.

Rahaktoknam said: In a reciprocal teaching style, the responsibility of providing feedback shifts from teacher to peer. This role shift allows: a) Increased social interaction between peers, b) Direct feedback

a. Objectives of Reciprocal Force

The goal of this reciprocal style relates to the duties and roles of the pupil. The goal of this reciprocal style relates to the duties and roles of the pupil. The role of students is to give and receive feedback, observe the appearance of friends, compare and contrast with existing criteria, convey the results to the perpetrator, foster patience and tolerance for friends, provide feedback. This reciprocal teaching style is implemented in pairs by students, where one of the partners is the actor while the other is the observer, so the teacher has a special role to communicate with the observer and observe both the actor and the observer. When entering the teenage phase or beginner an individual person has started doing sports activities on his own encouragement for his needs (Rizal, 2019).

The role of the observer is to provide feedback to the perpetrator and communicate with the teacher, while the actor demonstrates the performance of the assigned task. In addition to what has been previously described, the role of the teacher is to answer questions from the observer, to allow mutual trust between the actor and the observer.

b. Anatomy of Force

- 1. In the pre-meeting decision toolkit, the feedback provision is shifted directly to an observer.
 - Classes are arranged in pairs with specific roles for each partner.
 - One of the partners is the perpetrator
 - Others become observers
 - Teacher (T) has a special role to communicate with observers.

- The role of the actor as in the training style
- The role of the observer is to provide feedback to the perpetrator and communicate with the teacher
- Teacher observes both'd' and '0' but only communicates with '0'
- The teacher makes all decisions before the meeting
- Perpetrators make decisions during the meeting
- Observers make feedback decisions after the meeting

	A	В	С
Before the Meeting	Т	Т	Т
During the Meeting	Т	L	D
After the meeting T	Т	0	

The reciprocal teaching style in the physical education teaching and learning process is a method or approach that is carried out by a teacher in a systematic and planned manner, where the learning material is transmitted in the form of activities in accordance with existing tasks. This task is taught internally between the teacher and students (observers) and other students (actors). In this style it will also allow for increased social interaction among students accompanied by feedback from students to the teacher about the results of the assignments carried out.

Although this interaction increases, it is not uncommon to find things that are not unreasonable based on the statement from the Musca Muston which Sugiyanto states that: "The goal of reciprocal teaching styles is closely related to the duties and roles of students".

The task of a teacher in promoting this teaching style is to provide students with repeated exercises with an observer freely in carrying out activities. Meanwhile, the role of students is always to give and receive feedback from the results of an observer's observation, which in the end compares it with one of the existing task criteria and conveys the offense of the perpetrator's condition. In this case the responsibility is left to the observer, but the results of his observations have not been able to see and correct the overall appearance that his peers highlight when carrying out the assignment given by the teacher. Therefore, the teacher in question has its own methods of assessment, to determine the extent of student success in the teaching and learning process.

III. Research Methods

Operationally the objectives of this study are: The influence of reciprocal teaching style on the ability to hit the drop shot in badminton games for students of SMA Negeri 1 Tahuna.

The research variables are:,

- 1. Independent variable: Reciprocal teaching style
- 2. Dependent variable: The ability to hit a drop shot in badminton

Operationally, this research variable can be defined as follows:

Reciprocal teaching style is the teaching style practiced by the teacher. Where reciprocal teaching styles provide opportunities for students to make broader decisions to

students. In the teaching style in pairs, students are given the obligation to assess the results of activities / learning although it is still limited. Students receive direct feedback from the teacher during the activity.

The drop shot ability in this study is the student's ability to hit a drop shot to an opposing field which has been given a score according to the predetermined target 10 times from the left and 10 times from the right. The results recorded are the number of points taken from 20 drop shots at the specified target. The total value of 20 times the chance to hit a drop shot is the score of the student. This score is interval data. The method used in this research is the experimental method

The research design used in this study refers to the experimental design using the randomized control groups pre-test and post test design. With the following design:

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Table 1. Randomized Control Groups Pre-Test and Post Test Design

	Group	Pre-Test	Treatment	Post-Test
	 F			_ 333 _ 333
	A	Y1	X	Y2
R				
	В	Y1	-	Y2

Information:

A = Experimental group

B = Control group

Y1 = Initial test for both groups

Y2 = Final test for both groups

X = Treatment

R = Randomized

The population in this study was 20 students of SMA Negeri 1 Tahuna, and then divided into two groups of 10 each in the experimental group and 10 others in the control group. According to Fred N. Kerlinger Translation Landung R. Simatupang that: "Random sampling is a method of drawing part (or the entire sample) from a population or universe in a certain way so that each member of the population or universe has the same chance of being selected / taken".

In taking the sample the following steps are taken:

- 1. Students who took the roll of paper that were given numbers 1 to 10 were included in the experimental group and 11 to 20 entered in the control group.
- 2. Based on the results of the lottery, students are notified of the schedule for carrying out research.

The instrument used in this study was the "Drop shot blow test", the tools used were:

- a. Stopwatch
- b. Meter
- c. Syringe
- d. Running track
- e. Badminton court
- f. Forms and writing tools

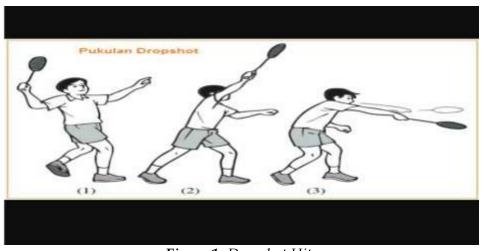


Figure 1. Dropshot Hit

For drop shot data, it is carried out as follows: The position of the student is in the middle of the field by taking a distance of one meter from the center line of the field. The student takes a drop shot, which is fed from a feeder with a service lob. The drop shot taken by students can be directed to the right and left of the field, each of which has a size of one meter wide. The execution of this punch test was carried out 20 times, 10 times from the right side and 10 times from the left. And the result obtained is the number of abilities obtained, when making a drop shot at the right target.

To test the hypothesis used t test based on observations with a real level $\square=0.05$ with the following formula:

$$to = \frac{\overline{X_1} - \overline{X_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

where: S2 =
$$\frac{(n_1 - 1)S_1^2 + (n_1 - 1)S_2^2}{(n_1 + n_2 - 2)}$$

Information

 $\bar{\mathbf{x}}_1$ = Average drop shot ability of the experimental group.

 $\bar{\mathbf{x}}_2$ = The average drop shot ability of the control group.

S = Standard deviation.

 n_1 = The number of samples of the experimental group.

 n_2 = The number of samples of the control group.

The research hypothesis is:

Ho: The experimental group's average drop shot ability was less than the control group's drop shot ability.

Ha: The experimental group's average drop shot ability was greater than the control group's drop shot ability or the symbol's drop shot ability

Thank Ho; $\mu 1 \le \mu 2$ If $\le t \alpha (n1 + n2)$

Thank Ha; μ 1 > μ 2 If> t α (n1 + n2) Reject Ho

Research criteria

Accept Ho if $t0 \le tt$ (α : 0.05; known = n1 + n2 - 2)

Ho if t0> tt (α : 0.05; known = n1 + n2 - 2)

Prior to the t test, the analysis requirements were first tested, namely the homogeneity test.

IV. Discussion

The data presented in this study are the results of measuring the ability to drop shoot in badminton before and after being given treatment in the form of reciprocal teaching styles for the experimental group and pre-test and post-test data for the control group that were not given treatment.

4.1 Presentation of Data

The data in question are as follows:

Table 2. Measurement Result Data Drop Shoot Accuracy

	nent Group	Contro	l Group
Pre-Test	Post-Test	Pre-Test	Post-Test
6	10	11	10
7	9	8	9
10	13	5	4
4	7	4	5
11	16	7	9
5	9	6	8
12	15	9	10
9	12	7	9
5	7	6	6
7	10	10	10
76		73	

Table 3. Gain Score for Both Groups

Experiment Group	Control Group
4	0
2	1
3	-1
3	1
5	2
4	2
3	1
3	2
2	0
3	0
32	8

4.2 Data Processing

To test the ability to drop shoot in badminton and to determine the appropriate statistical analysis techniques in testing the research hypothesis, it is necessary to test the analytical prerequisites that must be met, namely the Homogeneity Test.

a. Calculation of the Standard Deviation of the Pre-Test Data for the Experimental Group and the Control Group for the Pre-Test Data for the Experimental Group

To assist in the homogeneity test, the Standard Deviation calculation is first carried out, which is as follows:

Is known:

$$\sum X1 = 76 \text{ n1} = 10$$

$$\bar{X}_1 = \left(\frac{\sum X}{n}\right)$$

$$= \left(\frac{76}{10}\right)$$

$$\bar{X}_1 = 7,6$$

$$\sum X2 = 73 \text{ n1} = 10$$

$$\bar{X}_2 = \left(\frac{\sum X}{n}\right)$$

$$= \left(\frac{73}{10}\right)$$

$$\bar{X}_2 = 7.3$$

Table 4. Calculation of the Standard Deviation of the Pre-Test Data for the Two Groups

X1	(X-X)2	X2	(X-X)2
6	2.56	11	13.69
7	0.36	8	0.49
10	5.76	5	5.29
4	12.96	4	10.89
11	11.56	7	0.09
5	6.76	6	1.69
12	19.36	9	2.89
9	1.96	7	0.09
5	6.76	6	1.69
7	0.36	10	7.29

$$\sum (X - \bar{X}) 2 = 68.4$$

$$SD2 = \frac{\sum (X - \bar{X})^2}{n - 1}$$

$$= \frac{68,4}{9}$$

$$= 7,6$$

$$SD1 = \sqrt{7,6}$$

$$= 2.75680975041$$

$$Sd1 = 2.76$$

$$\sum (X - \bar{X}) 2 = 44.1$$

$$SD2 = \frac{\sum (X - \bar{X})^2}{n - 1}$$

$$= \frac{44.1}{9}$$

$$= 4.9$$

$$SD = \sqrt{4.9}$$

$$= 2.21359436211$$

$$Sd2 = 2.21$$

b. Homogeneity Testing

To test the variance of the population in the study sample, the formula is used:

$$F = \frac{\text{Greatest Variance}}{\text{Smallest Variance}}$$

The first step: Description of the testing hypothesis

Ho : Homogeneous variance $(S_{12} = S22)$

Ha : The variance is not homogeneous ($S_{12} \neq S22$)

Second Step: Description of the test criteria

Accept Ho if F0 \leq Ft (α : 0.05; dk 9/9)

Reject Ho if F0> Ft (α : 0.05; dk 9/9)

Is known

$$Sd1 = 2.76 Sd2 = 2.21$$

 $Sd12 = 7.6176 Sd22 = 4.8841$

<u>Third step</u>: Calculate F observations through the formula:

$$F = \frac{\text{Greatest Variance}}{\text{Smallest Variance}}$$

$$F = \frac{7,6176}{4,8841}$$

$$= 1.55967322536$$

$$= 1.56$$

The fourth step: Summing up the calculation results.

From the above calculations, it is obtained that the F observation is 1.52 while the F table is the critical critical value of the F distribution α ; 0.05, with the known numerator 10 and denominator 9, the value of Ft = 3.13 is obtained. Based on the test criteria, if Fo \leq Ft then Ho is accepted. The calculation result turns out that F observation is smaller than F table, or if Fo \leq Ft, it can be concluded that the variance of the two populations where the study sample was taken if Fo \leq Ft is homogeneous.

4.3 Research Hoptesa Testing

The hypothesis to be tested in this study is the average drop shoot ability of the experimental group is better than the control group's average drop shoot ability. To test this hypothesis, it means comparing the average drop shoot ability of the experimental group after receiving treatment in the form of a reciprocal teaching style for eight weeks and the average drop shoot ability of the control group, the formula used is as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S\sqrt{\frac{1}{n_1}} + \frac{1}{n_2}}$$
Where S2 =
$$\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

The first step: Determine the testing hypothesis

Hypotheses:

Ho: The experimental group's average drop-shoot ability is less than the control group's drop-shoot average

Ha: The experimental group's average drop-shoot ability is greater than the control group's drop-shoot ability

Or with the symbol:

Ho : μ 1 ≤ μ 2 Ha : μ 1 > μ 2

Second step: Define testing criteria

Testing criteria:

Accept Ho if: $t0 \le tt \ (\alpha : 0.05; dk = n1 + n2 - 2)$

Reject Ho if t0> tt (α : 0.05; dk = n1 + n2 - 2)

<u>Third step</u>: Enter a statistical quantity into the formula.

Before entering into the t test formula, the combined standard deviation (S) is calculated.

To simplify the calculation, the first step is to find the standard deviation of the data on the difference between the pre-test and post-test of the experimental group and the control group.

Table 5. Calculation of the Standard Deviation of the Experimental Group's Gain Score

X1	(X1-X) 2
4	0.64
2	1.44
3	0.04
3	0.04
5	3.24
4	0.64
3	0.04
3	0.04
2	1.44
3	0.04

Is known:

$$\bar{X}_{1} = 3.2 \sum (X - \bar{X}) 2 = 7.6$$

$$SD2 = \frac{\sum (X - \bar{X})^{2}}{n - 1}$$

$$= \frac{7.6}{9}$$

$$= 0.8444444444$$

$$Sd = \sqrt{0.8444444444}$$

$$= 0.95893658347$$

$$Sd = 0.96$$

Table 6. Calculation of the Standard Deviation of the Control Group's Gain Score

X 2	(X1-X) 2
0	0.64
1	0.04
-1	3.24

1	0.04
2	1.44
2	1.44
1	0.04
2	1.44
0	0.64
0	0.64

Is known:

$$\bar{X}_{2} = 0.8 \sum (X - \bar{X}) 2 = 9.6$$

$$SD2 = \frac{\sum (X - \bar{X})^{2}}{n - 1}$$

$$= \frac{9.6}{9}$$

$$= 1.06666666666$$

$$Sd = \sqrt{1,06666666666}$$

$$= 1.03279555898$$

$$Sd = 1.03$$

From the above calculations, the following data are obtained:

$$\bar{X}_1 = 3.2 \ \bar{X}_2 = 0.8$$

 $n1 = 10 \ n2 = 10$
 $Sd1 = 0.96 \ Sd2 = 1.03$
 $Sd12 = 0.9216 \ Sd22 = 1.0609$

$$S2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$= \frac{(10 - 1)0,9216 + (10 - 1)1,0609}{10 + 10 - 2}$$

$$= \frac{(9 \times 0,9216) + (9 \times 1,0609)}{10 + 10 - 2}$$

$$= \frac{8,2944 + 9,5481}{18}$$

$$= \frac{17,8425}{18}$$

$$= 0.99125$$

$$S = \sqrt{0,99125}$$

$$= 0.99561538758$$

$$= 1.00 \text{ (rounded up)}$$

$$t = \frac{X_1 - X_2}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$= \frac{3,2 - 0,8}{1,00\sqrt{\frac{1}{10} + \frac{1}{10}}}$$

$$= \frac{3,2 - 0,8}{1,00\sqrt{0,2}}$$

$$= \frac{2,4}{1,00 \times 0,4472}$$

$$= \frac{2,4}{0,4472}$$

$$= 5,36672629695$$

$$= 5.37 \text{ (rounded)}$$

4.4 Discussion of Research Results

In the analysis of hypothesis testing, the t observation is obtained at 5.37, while the t table is obtained from the degrees of freedom n-1 + n2 - 2, namely 10 + 10 - 2 = 18 and the level of confidence. $\alpha = 0.05$ is 2.101. In accordance with the test criteria, accept Ho if the t observation is smaller than the t table and reject Ho if the t observation is greater than the t table. Because t observation is greater than t table, the analysis results show Ho reject and accept Ha.

Thus the conclusion of the analysis is: The average drop shoot ability of the experimental group is greater than the average drop shoot ability of the control group. This means that the increase in drop shoot ability is really the result of the treatment in the form of a reciprocal teaching style given for eight weeks.

V. Conclusion

The conclusions of the study are as follows: "There is a reciprocal teaching style on the ability to drop shoot in badminton games for SMA Negeri 1 Tahuna students.

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