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The Effect of a Reciprocal Teaching Style and Eyes Hands Feet Coordination toward the Results of Groundstrokes Field Tennis

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***Abstract*-This study aimed to know: (i) the effect of a reciprocal teaching style with eyes, hands, and foot coordination overall towards field tennis groundstroke capabilities; (ii) the effect of a reciprocal with high of eye, hand and foot coordination towards tennis groundstroke capabilities; (iii) the effect of a reciprocal teaching style with low of eyes, hands, and foot coordination overall towards tennis groundstroke capabilities. This study was conducted by quantitative research methods in the form of experiments, sampling by purposive sampling, i.e. with the criteria of the foot hand-eye coordination group. To analyze the data, it was used analysis of variance (anava) with a significance level of α = 0.05. Before doing variance analysis, as a condition to meet the requirements for data analysis, the sample normality test was first performed with Liliferos, while to find the level of homogeneity of the variance of the population using the Barlett test. The conclusion of this study was: (i) student reciprocal style learning model without eye, hand and foot coordination have groundstroke abilities in a good category; (ii) student reciprocal style learning model with high eye, hand and foot coordination have groundstroke abilities in a good category; (iii) student reciprocal style learning model with low eye, hand and foot coordination have groundstroke abilities in a good category. It is recommended for instructors and lecturers in field tennis to use a reciprocal style of teaching in applying for field tennis courses.**

Keywords-Reciprocal, Eyes Hand Foot Coordination, Groundstrokes

I. INTRODUCTION

The coaching and development of educational sports conducting through a learning process carried out by sports teachers or lecturers qualified and have a competency certificate and supported by adequate sports facilities and infrastructure. The Universitas Negeri Medan is as one of the universities which will produce superior, professional graduates, skilled in their fields and produce, develop, disseminate science, art technology, innovative and productive works in answering all challenges and changes that occur in the midst of society. Universitas Negeri Medan is Managing seven Faculties and thirty-two Study Programs, one of which is in the Faculty of Sports Science (FIK).

The 2004 National Curriculum changes to the 2008 Competency-Based Curriculum with Block System (KBK) and of Indonesian National Qualification Framework Curriculum (KKNI) field tennis courses turn into one semester until students complete the study, which is only sixteen (16) meetings, so the name of the course turns into a field tennis course. With the number of meetings described above, students are expected to be able to change behaviour one of which is having the skills to play tennis in the field, understand about the history of tennis, and the field tennis skills possessed by students are expected to lead to changes in movement skills. These skills are a change from those who have not been able to play tennis to be able to play tennis.

Field tennis is classified into a type of skill game that is an open skill. It means that environmental conditions playing tennis ball the arrival of the opponent is difficult to control or difficult to predict by the tennis player before. Another difficulty with playing tennis, because the equipment used is a ball, racket, and lines and net limit the full game field. Tennis balls are relatively small and springy so that when hit it will be able to go fast and bounce in the field. As an illustration, in tennis courses the level of mastery of skills that must be achieved by students in lectures.

Level of mastery of field tennis skills students of Sports Science Faculty, Department of Physical Education And Sports, Universitas Negeri Medan can be seen from the last year of field tennis courses. The results of the practice scores of the students' tennis field courses they obtained as in table 1 the value recapitulation shows unsatisfactory results because there are still many students getting C and there are still students who get an E.

TABLE I. RECAPITULATION OF THE VALUE OF FIELD TENNIS IN THE LAST YEAR OF THE DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

No	Class	Year	Score								∑ %	The number of students
			A	%	B	%	C	%	E	%		
1	A	2016	0	*0*	12	*55*	10	*45*	0	*0*	100	24
2	B	2016	4	29	4	29	5	36	1	7.1	100	14
3	C	2016	5	21	8	33	9	38	2	8.3	100	24
4	D	2016	6	27	6	27	8	36	2	9.1	100	22
5	E	2016	1	8.3	1	8.3	9	75	1	8.3	100	12
Total			16	22	29	40	41	*43*	6	*8*	100	96

Based on the observations of researchers supported by other lecturers in field tennis courses in the department

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most of the students get C even E tennis court courses can be influenced by several factors: *First,* the level of difficulty in performing basic forehand groundstrokes techniques and *backhand groundstrokes*, so the value obtained is not satisfactory because it is obstructed does not master the forehand groundstrokes technique and backhand groundstrokes. *Second,* learning models that do not vary so the teaching and learning process in field tennis lectures make students bored, not active in carrying out the tasks assigned. *Third,* student interest was very lacking to add insight and knowledge of sports (specifical tennis) and not following the development of sports in the mass media; it was indicated by the low level of visits to faculty libraries and universities. *Fourth,* low coordination between eyes, hands and feet when hitting the ball. *Fifth,* low appreciation of students for field tennis courses which is characterised by a high percentage of students who do not meet the number of meetings. *Sixth*, lack of time allocation in lectures. *Seventh,* lack of percentage of students to study independently outside face-to-face lectures.

The drive is groundstrokes which are hit hard and fall in the opponent's backcourt [1]. So, a forehand drive and a backhand drive can be interpreted as a punch for groundstrokes what is done by the right-hand player is pulled to the right side for the forehand and for backhand with arms crossed in front of the body to the left or left-handed players with arms crossed in front of the body to the right with all their might and sharp and falling ball in the area behind the opponent's field. The handle that can be used is the eastern handle with one hand or two hands. This blow begins with the position ready and requires a change of grip when the racket is brought back, with the thumb holding the other side of the racket, step adjustments, contact, and long follow-up movements [2].

In the study, this study was about to be revealed about how to use an excellent teaching style and right for success learning the basic techniques of backhand groundstrokes which of course requires concrete data about the level of success about the teaching style. The teaching style that will be tested is the reciprocal teaching style which is one style that raises socialisation among students with other students as stated by [3] is social learning theory, what is related to the function of the approach and emphasises the importance of observation and social approach to one another. Next, Sandra said that social theory, the models influence learning outcomes in principle through their information.

Also, information about how the level of coordination of the eyes, hands and feet of students in moving because it is very necessary, to find out how much the students have a desire, the urge to do business in achieving the goals of tennis learning. In general coordination is needed in every physical education activity, thus the importance of this coordination if someone in coordinating eyes, hands and feet becomes a whole and complete movement with the rhythm of a smooth and well-controlled movement in accordance with the opinion of Sukadiyanto without having motion coordination ability good, individuals will have difficulty in learning the basic skills of tennis punch techniques [3]. Based on the background of the problem stated above, the author conducted a study that was the influence of reciprocal style and the high coordination of students' eyes, hands and feet towards the results of learning tennis court groundstrokes the students of Department of Physical Education And Sports, Sports Science Faculty, Universitas Negeri Medan.

II. RESEARCH METHOD

Quantitative research methods with experimental forms conducted this study. The variables listed in this study are independent variables namely reciprocal teaching style, and the dependent variable is the learning result of tennis groundstrokes and is associated with attribute variables, namely hand-eye coordination. The population is a region of generalisation consisting of object or subject that has certain qualities and characteristics determined by researchers to be studied and then draw conclusions [4]. The target populations in this study were all students of the Department of Physical Education And Sports, Universitas Negeri Medan, while the reachable population is assigned to students of 4th-semester batches of 2015 consisting of six classes, namely PJKR A, B, C, D, E and F.

The sample is part of the number and characteristics of the population. The research sample was taken using purposive sampling technique with criteria the category of the high leg hand-eye coordination group was students who fall into the 27% highest score and The category of low leg hand-eye coordination group was students who were included in the lowest 27% score [5].

By the research design, then two types of data must be collected: (i) data on learning outcomes for groundstrokes and (ii) data on eye, hand and foot coordination. To obtain data about learning outcomes for forehand groundstrokes and backhand and data about foot hand-eye coordination using tests and measurement. The measure the learning outcomes of forehand and backhand groundstrokes with instruments made by researchers.

To analyse the data in this study used analysis of variance *(Anava)* with a significance level $\alpha = 0.05$. Before doing variance analysis, as a condition to meet the requirements for data analysis, the sample normality test was first performed with Liliefors, while to find the level of homogeneity of the variance of the population using the Barlett test. Furthermore, if there was an interaction (the results of anava calculations) followed by the Tukey test which aims to determine the significance level of F count with a significance level of $\alpha = 0.05$.

III. FINDINGS AND DISCUSSION

The results of groundstroke learning in playing tennis in each group are explained as follows.

1. *Results of Groundstroke, Student Groups Given the Overall Reciprocal Teaching Style. (Group A1).*

From the Groundstroke results data, student groups treated with reciprocal teaching styles, overall. Obtained a range between 30 and 36, there was an average price of 32.50 and a standard deviation of 1.606. Distribution of frequency distributions resulting from Groundstroke, student groups treated with the overall reciprocal teaching style, presented in the histogram as follows. See below:

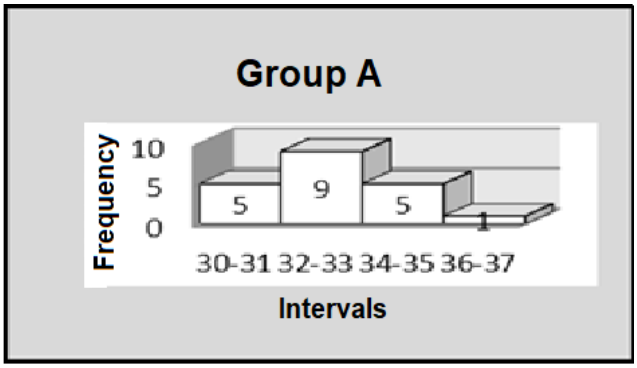

Fig. 1. Groundstroke results histogram, a group of students treated with reciprocal teaching styles, as a whole.

Based on the data summarized, there were five students or 25% get a Groundstroke below the average, nine students or 45% on average, and there were six students or 30% above the average. This provides an overview of the achievement of Groundstroke results in the student group who were treated with reciprocal teaching styles, in a good category, presented in the form of a pastel diagram in Figure 2. See below.

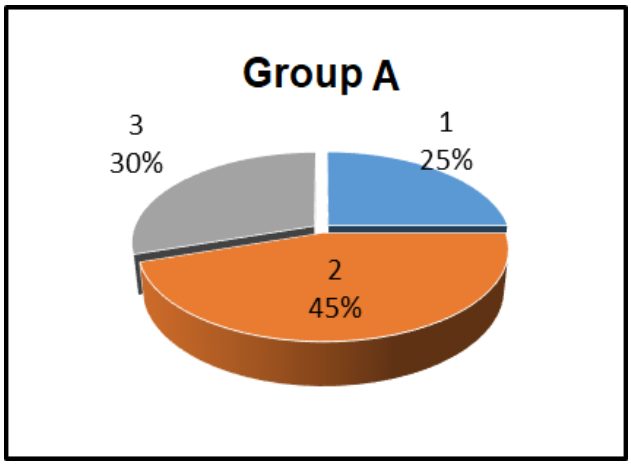

Fig. 2. The percentage of groundstroke results in the group of students treated with reciprocal teaching styles.

2. *Results of groundstrokes given the reciprocal teaching style in student groups that have a high eye, hand and foot coordination (Group A1B1).*

From the results of the data, Groundstroke treated with reciprocal teaching style in a group of students who had a high eye, hand and foot coordination. Given a range between 31 and 36, there was an average price of 33.30 and standard deviation of 1.567. Distribution of frequency distribution results from Groundstroke, which was treated by reciprocal teaching styles in groups of students who had a high eye, hand and foot coordination, presented in the following histogram.

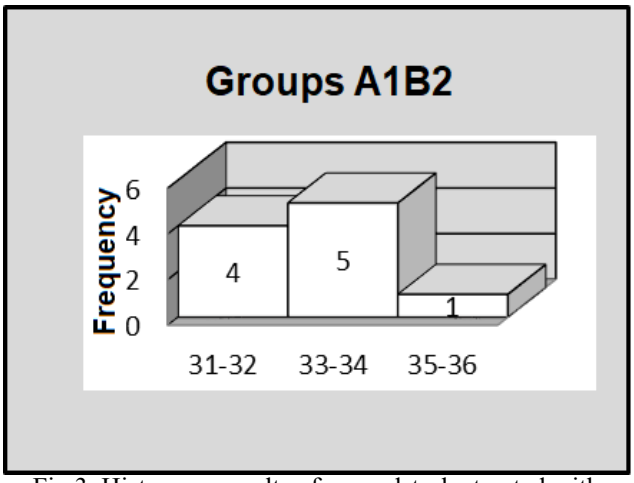

Fig.3. Histogram results of groundstroke treated with reciprocal teaching styles in groups of students who had a high eye, hand and foot coordination.

Based on the data summarised, there were four students or 40% obtaining results below the average groundstroke, four students or 40% on average, and there were two students or 20% above the average. This illustrates the achievement of results Groundstroke treated with reciprocal teaching styles in groups of students who have an eye, hand and foot height coordination was in a good category, presented in the form of a pastel diagram in Figure 3. See below.

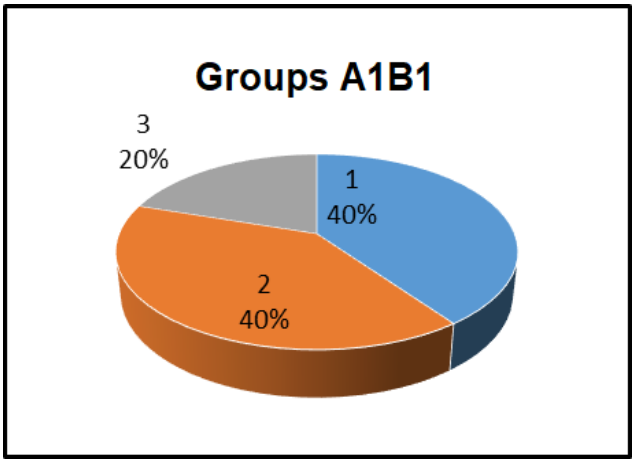

Fig. 4. The percentage of results of groundstroke treated with reciprocal teaching styles in groups of students who had a high eye, hand and foot coordination.

3. *The results of the groundstroke treated by reciprocal teaching styles in student groups that have a low eye, hand and foot coordination (Group A1B2).*

From the results of the data, Groundstroke treated with reciprocal teaching style in a group of students who had a low eye, hand and foot coordination. Given a range between 30 and 34, there were average prices of 31.70 and standard deviation of 1,252. Distribution of frequency distributions resulting from Groundstroke, who were treated by reciprocal teaching styles in groups of students who had a low eye, hand and foot coordination, presented in the following histogram. See below:

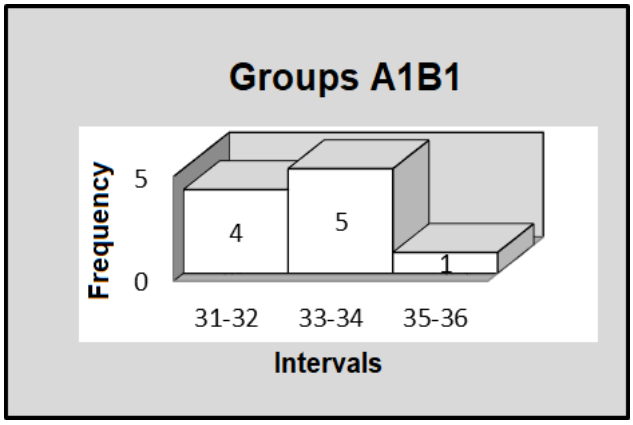

Fig. 5. Histogram results of groundstroke treated with reciprocal teaching styles in groups of students who had a low eye, hand and foot coordination.

Based on the data summarised, there were four students or 40% obtaining the results of the groundstroke below the average, five students or 50% on average, and there was one student or 10% above the average. This illustrates the achievement of results. Groundstroke treated with reciprocal teaching styles in groups of students who have eye, hand and foot coordination is in a good category, presented in the form of a pastel diagram in Figure 6. See below:

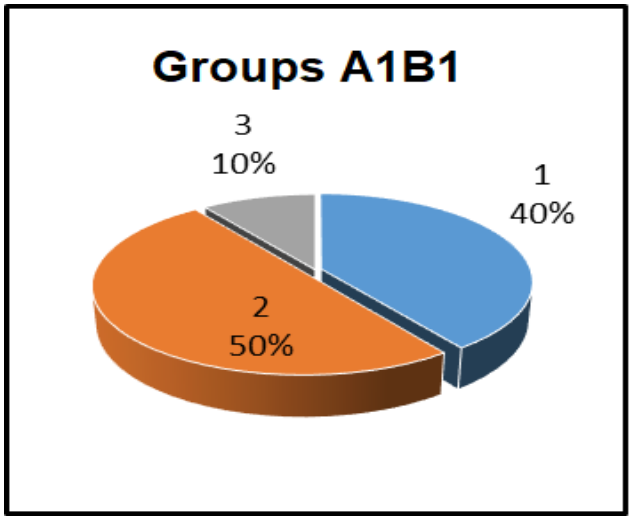

Fig.6. The percentage of groundstroke results that were treated by reciprocal teaching styles in groups of students who had a low eye, hand and foot coordination.

IV. CONCLUSION

The conclusions in this study were: (i) the reciprocal learning style model of students with overall eye, hand and foot coordination has an influence on the ability of the groundstroke to be in a good category; (ii) the reciprocal style learning model of students with high eye, hand and foot coordination influences the ability of the groundstroke in a good category; (iii) the reciprocal learning model of students with low eye, hand and foot coordination influences the ability of the groundstroke to be in a good category. It is recommended for instructors and field tennis lecturers to use reciprocal teaching styles in applying field tennis courses.

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