

# Influence of Reciprocal Teaching Style and Exploration of Elementary Students Motor Ability

Hilmainur Syampurma  
Department of Sport Education  
Faculty of Sports Sciences  
State University of Padang,  
Indonesia  
[hilmainursyam@fik.unp.ac.id](mailto:hilmainursyam@fik.unp.ac.id)

**Abstract**— The problem in this research is low students' sport or physical exercise achievement. Several factors cause this problem; one of them is the teacher way or style in teaching. The purpose of this research was to experimental research. The instrument was a motor ability test that consists of 6 items. The technique of data analysis used statistic inferential by using a t-test. The result o this research :(1). Reciprocal style increases students' motor ability to find out the influence of reciprocal and exploration style toward students' motor ability. This research was quays with  $t_h = 7,96 > t_t = 2,16$ . (2). Exploration style increase students' motor ability with  $t_h = 2,33 > t_t = 2,16$ . (3). Reciprocal style is better than exploration style toward students' motor ability, with  $t_h = 2,04 > t_t = 1,71$ .

**Keywords**— *Reciprocal style, exploration style, motor ability.*

## I. INTRODUCTION

The law No. 20 of 2003 on the National education system, contains the functions and objectives of national education. "National education serves to develop the ability and shape the character and civilization of the nation dignified in order to educate the life of the nation, aims to develop the potential of learners to become human believers and Fear Allah to the Almighty God, noble, healthy, knowledgeable, capable, creative, self-reliant, and be democratic and responsible citizens [1].

So education is a conscious and terencana effort in order to educate, the life of the nation, have a good and resilient personality and a skill that is based on religious spiritual strength, which includes in it the noble morality . Education is not merely trying to achieve learning outcomes, but how to obtain the outcomes or learning process of the child. Thus between the process and learning outcomes should be balanced. For that education that must be implemented is an educational process that leads to the formation of attitudes/behavior and able to develop the potential (intelligence and ability/skills) of children to suit the needs.

Elementary School (SD) is an educational institution that supplies students to continue their higher level of education. When reviewed in the lessons contained in the curriculum (SD) can be grouped into general education, academic education programs and skills education programs. One of the subjects contained in the subjects in the general education program is the

subjects of physical education, exercise and Health (Penjasorkes).

Penjasorkes will automatically enhance the motion experience so that the increasing experience of the movement by the students will improve the motor skills.

The expected end result of the Penjasorkes is that the students obtain maximum learning outcomes and as expected. The purpose of physical education, exercise and health is: a). Implementing a strong foundation of moral character through the internalization of value in the allotment, b). Build a foundation of personality, strong, peaceful love attitude, social attitude and tolerance in Context of the diversity of culture, ethnicity and Religion, c). Cultivate the ability of critical thinking through the execution of the task of the Penjasorkes, D). Develop sportsmanship, honesty, discipline, responsibility, cooperation, self-confident and democratic through physical affectivity, e). Develop the ability of motion (motor) and skill of various games and sports, F). Develop the skills to maintain the safety of oneself and others, h). Know and understand the concept of physical aktivitas as information to achieve healthy health, wellness, and lifestyle, I). Able to fill free time with physical activity as information to achieve health, fitness, and healthy lifestyle, j). Able to fill free time with physical activity that is recreative [2].

The fact found in the field is still the low outcome or learning value of semester study of the Penjasorkes learned by students at SDN 04 Pasar Ambacang subdistrict Kuranji. If the category is only about 14% of students earn value with good categories. While about 86% of students acquire value by sufficient categories. To know one of the students' success in learning the Penjasorkes is to look at the motor skills that are owned by the students.

Ability is kecapakapan, strength, and willingness to do something. In addition, other experts state that the ability to contain the meaning of talent, achievement and capacity in a field or branch that can be measured either directly or indirectly with certain tests while motor has meaning A process that cannot be observed and is the cause of motion [2]. The world of children in elementary school age is the world of play. In playing they are walking, running, jumping, throwing, rolling, climbing,

hanging and so on. Through playing the child will be able to develop his motorcycle skills. The implications of this will make the child richer with the experience and variation of movement, although the movements have not been specifically directed and have not been done perfectly. The richer the experience and variety of physical movements performed by children in elementary school age will make a positive contribution to their motor abilities.

Penjasorkes is the ability of a physical activity that is owned by students in the process of repeated learning and study experiences designed to improve physical fitness, ability and development of the physical realm. In order to achieve a healthy and sportive soul in the process of learning the allotted, affective and Spikomotor. And it will be stored for a long time or not even be lost for ever because the results of learning participate in shaping individuals who always want to achieve better results so that it will change the way of thinking and result in better working behavior [3].

The Penjasorkes lesson is a medium for encouraging the development of students' motor skills. There are many ways and strategies and teaching methods/styles that can be applied by a Penjasorkes teacher in providing learning. Examples of the teaching styles that can be applied are reciprocal teaching styles and exploration teaching styles.

A reciprocal teaching style is a learning strategy through the activities of teaching friends. In this Strategy students act as "teachers" replacing the teacher's role to teach their friends. This reciprocal teaching style often occurs and is applied in pairs formation. Students are arranged in pairs with each member of the partner given the role of actors and observers. The arrangement and style of this teaching aims to establish relationships and social interactions between friends and good conditions for quick feedback. Using a reciprocal style will result in correct and incorrect decisions. The sooner a person learns how he has worked, the greater the opportunity for the student to correct what he has done [4].

While the exploratory teaching style or exploration method expressed In principle, is a teaching style with a straightforward approach of teaching movement and helping to improve knowledge of potential child mobility So that it raises pleasure in learning. In addition it can encourage children to discover concepts and understand their own movements [5]. Teachers use an exploratory teaching style when it will introduce concepts, new ideas, skill experiences, using new equipment, to determine the response of ideas from students. This teaching style can be used to introduce concepts, ideas, and children's responses to the material teachers provide during the learning process. These two styles need a truly maximal work of the Penjasorkes teachers in preparation and implementation. In addition these two styles can form the attitude of each student. A reciprocal teaching style will form a student's attitude to be able to cooperate. Meanwhile, the style of exploration teaching can form students into active, creative and self-motivated students. With both styles expected motor capability owned by students at SDN 04 Pasar Ambacang District Kuranji

previously not good will be better and can be a capital for students SDN 04 Market Ambacang subdistrict Kuranji to obtain Maximum learning outcomes and can realize the objectives of the current curriculum, the 2013 curriculum which aims to form the character and good personality of each student.

The study uses reciprocal teaching styles and exploratory teaching styles. Both styles of teaching are both used to improve students' ability at SDN 04 Pasar Ambacang in Kuranji subdistrict. Using a reciprocal style, able to provide information and clues about the errors and mistakes that students have made. Because the information provided it will be a guideline for the student in question to learn and correct his mistakes. The exploration teaching style allows elementary school children to experiment on his or her behavior and to make decisions about what to do, and when to do it. If there is no definite answer, the child will be creatively searching by doing an interesting activity. Therefore, the research needs to be done with the problems found above. Motor capability is an ability that a person has since birth and develops or increases with its growth and growth. Motor capability is the result of individual motion in motion, both non-sporting movement and motion in sports or the maturity of motor skills [6]. Motor ability is "the individual ability underlying the appearance of various motor skills and motor ability is the quality of the individual motion in conducting a supporting motion of exercise activities [7]. Motor capability is more precisely referred to as the capacity of a person related to the implementation and demonstration of a relative inherent appearance after childhood [8].

Reciprocal style is a style approach that gives students the freedom to make broader decisions [9]. Besides being free to make decisions related to the performance of the task, students are also given the obligation to assess the limited learning outcomes on their fellow group mates. This teaching style is capable of strengthening understanding by seeing, listening, and correcting misunderstandings that may not be obvious otherwise. All members or learners have shared responsibilities to lead and take part in dialogue during the learning experience [10]. The procedure of reciprocal style is as follows: 1). Prepare student worksheets, 2). form the class into a in pairs formation, 3). Switching roles, which was previously the perpetrator will change Be an observer, and vice versa [9].

He said that "exploration style is a teaching style that focuses more on students (childcentered) [4]. In this exploration teaching style the task of motion is designed to allow the child to move freely as they wish, within a security boundary that is always awake. This teaching style is able to explore the motion in a more general way (general) with very few referrals from the teacher. This teaching style can be used to introduce concepts, ideas, and children's responses to the material teachers provide during the learning process. The procedure to use this exploration style is to work on the task of a teacher, namely: 1). Teachers prepare learning, materials, and general instruction, 2). Prepare materials, general instructions, provide tools, and design movement

assignments to be explored by students, 3). Gives the child a stimulating idea of how they can find themselves, 4). Teacher only acts as a facilitator, 5). Teachers provide material direction to the child, for example “try the children’s stand by one foot attitude” that is most important to the teacher is the response of the child’s movement activities that they might be able to find and try to do on their own. Elementary school children can learn through the exploration of natural environments. Through self-testing, objects, places and events. Create’s child contracts his knowledge through the information he gets In general, this study aims to determine the influence of the reciprocal teaching style and style of teaching exploration to the motor skills of students at SDN 04 Pasar Ambacang subdistrict Kuranji and to reveal the effectiveness between the teaching style Reciprocal and style of teaching exploration of students’ motor skills at SDN 04 Pasar Ambacang in Kuranji subdistrict. In accordance with the objectives in this research, the research is expected to be theoretically beneficial, which is expected to enrich the science of knowledge in the classification and increase the knowledge and teaching style that can be applied By the Penjasorkes teacher. And practically as inputs in the framework of making policies or launching new paradigms of learning, so that the quality of learning of the generators, especially in schools are more competitive and can penetrate the global market is increasingly Complex forward.

## II. RESEARCH METHODS

These types of studies include pseudo experiments (quasi experiments). The free variables in this study are the reciprocal teaching style and exploration teaching style. Its variables are the motor capability of students at SDN 04 Market Ambacang Kuranji Subdistrict. The population in this study was a student at SDN 04 Market of Kuranji subdistrict, totalling as much as 189 people. The sampling technique in this research is using the based on sampling techniques, the samples in this study are students of Class V (five) of SDN 04 Pasar Ambacang in Kuranji subdistrict that amounted to 28 people. Of the 28 class V students who sampled, then before treatment is carried out, first given a pretests to the sample. After pretests then the sample is divided into two groups each 14 people by ordinary way matched pair so that both of these samples are classified as homogeneous. It was subsequently drawn to determine which group was given treatment using the reciprocal teaching style and the group given the treatment using the exploration teaching style. How to conduct motor capability test:

### 1) Agility (*Shuttle Run Test*)

- The student is on the trajectory and stands behind the start line.
- The whistle sounds and the starter raises the hand over the participant starting to run as quickly as possible.
- Run back and forth by as soon as possible 2 times with a distance of 10 meters.
- Each time it came to a point as the limit, the runner had to take the beam immediately trying to make a direction to run towards the point of the run.

- The student stops running after the final reversal.

Tools and fixtures include: stopwatch, form and stationery, flat field or jogging track 10 meter, flag, wooden beams or similar materials as many as 2 pieces.

### 2) *Speed (50 Yard Dash)*.

- Siwa is on the track and stands behind the start line.
- The whistle sounds and the starter raises the hand to the top of the participant starting to run as quickly as possible towards the finish line.
- Once at the finish line, the officer will stop the stopwatch and record the time obtained by the students.
- Rating:
  - The result of running speed is determined by the time reached by the students ranging from the start line to the finish line.
  - Time taken when the participant’s chest crosses the start line and is stopped when the student’s chest crosses the finish line. Record the time with 0.1 seconds accuracy.

Tools and equipment include: stopwatch, Pluit, star flag, trajectory must be straight, flat, not slippery, not rocky or not grass.

### 3) *Power (Steanding Long Jump)*

- Testi stands behind the boundary line, parallel legs, bent knees, hands behind the body.
- Swing the hand and jump as far as possible to the front and then land with two feet together.
- Mark the former landing from the nearest body to the start line.
- Testi did a three-time jump.
- Before conducting a test that is the same as Testi can try to do the correct movement.
- The results of the stepping testi are measured from the former agency landings or limbs nearest the start line.
- The value obtained by Testi is the farthest jump distance obtained from the three stepping

Tools and fixtures include: jumping Area, start limiter line (tape/strap), flour, meter and stationery

### 4) *Balance (Stork Stand)*

- Testi stands on one leg dominant, the other foot is diletakana next to the knee, the hand is at the waist...
- With the “YES”, Testi lifts the heel from the floor (targeting the foot of the focus) and maintains this attitude as long as possible without any movement or put the heel to touch the floor.
- The longest time in maintaining balance is the time used to assess the balance of testi.
- The time recorded in seconds, begins when the Testi is in the case of lifting the heel until it begins to lose its balance.

Tools and Equipment: Stopwatch

### 5) *Kinesthetic Perception ( Distance Perception Jump)*

- Students are instructed to feel the distance between the two lines used in this test and given

the opportunity to practice it for the first with open eyes.

- b) Then the student wears the eye cover, and stands behind the start line as well as taking a position to get ready to jump.
- c) The student then jumps and attempts to land with the heel to approach the target line.
- d) Students are allowed to see the landing site on each trial.
- e) Students are given the opportunity to conduct ten attempts.
- f) For each jump measured and recorded is the closest distance from the target line to the farthest heel. The score is a total of ten times jumping.

Tools and fixtures: a meter, an eye and chalk cover

Note: The distance from the jump is not raw: the greatest distance is 24 inches for adults. These distances can be reduced to 18 inches or to 15 inches or 12 inches and so on for children.

#### 6). Reaction Time (Hand Reaction Test)

- a) Testi sits on the chair or bench on his arm relaxed on the table, with the fingertip being roughly 7-10 cm outside the side of the table in a ready-to-“catch” position. The finger position is horizontal.
- b) Tester holds the tip of the stick to scale and hang it between the thumb and index finger testi.
- c) Tester releases a scaled stick and testi catches it with the thumb and index finger.
- d) Testi not. Can see the hand movement tester. When it will release the stick.
- e) Tes performed 20 times.
- f) The test environment must be completely calm in order for Testi to be able to have a trasi
- g) Time lag and one replay to the next loop between 0.5-2 seconds.
- h) Before starting the test, Testi was given the opportunity to try first.
- i) Rating:

- 1) The number you read is above the mother’s end five fastest and late discarded time. Ten other time records are on average.
- 2) To get the reaction time, then used the following formula:

$$Time = \sqrt{\frac{2 \times \text{Numbers captured}}{\text{Pravity acceleration}}}$$

Note: The raw number for the gravity Force acceleration used is 9.81 m/s<sup>2</sup>

Tools and equipment: scale sticks, tables and benches or chairs. To be able to analyze the data, the value used is the average result of Tscore from each item of motor capability test. The data analysis techniques and the one and two hypothesis tests in this study were to wear inferential statistics using the test formula of bound samples (dependent sample). Before conducting T-Test analysis, the data analysis requirements were conducted, namely the normality test and homogeneity test. Because the T test can only be used to test the mean difference (average value) of the two samples taken from the normal

population and a homogeneous group. After the test analysis and data requirements have been fulfilled, the test analyzers were carried out by the team of statistical courses with the following formula:

Data analysis techniques and third hypothesis testing by using inferential statistics by using a sample-dependent T-Test formula. Because in determining the sample group is carried out by matching [11]. With the following formula:

$$th = \frac{[X1 - X2]}{\sqrt{\frac{\sum D^2 - (\sum D)^2}{N(N-1)}}$$

Data analysis techniques and third hypothesis testing by using inferential statistics by using a sample-dependent T-Test formula. Because in determining the sample group is carried out by matching [11].

### III. RESULTS AND DISCUSSION

Based on the normality test calculation result, the research draft group was found that the price of Lobesvasi (Lo) was obtained smaller than the price of Ltabel in a real-level 0.05. It can therefore be concluded that all data groups in this study were taken from a population that was a normal distribution. Then continued based on the results of the calculation of homogeneity test, the results of the above analysis is seen that the value of Fcount is 1.36 whereas F table using degrees of freedom (N1-1), (N2-1) and with the level of significance probability on each The variable is greater than 0.05, so the Ftable = 2.57 has thus meant that the research data is homogeneous, this is due to 1.36 < 2.57. So that it can proceed for hypothesis testing analysis. Based on a summary of the calculation results of normality and homogeneity, hypotheses can be argued that:

1. The first hypothesis, based on the data obtained Thitung (7.96) > this (2.16). This means that the research hypothesis could be acceptable or ha Ho received rejected. Thus it can be interpreted that the reciprocal teaching style has a significant influence on the motor skills of students of SDN 04 Pasar Ambacang subdistrict Kuranji.
2. The second hypothesis, based on the data obtained Thitung (2.33) > this (2.16). This means that the research hypothesis acceptable Ha Ho received was rejected. Thus it can be interpreted that the exploration style of teaching has a significant influence on the motor skills of students of SDN 04 Pasar Ambacang subdistrict Kuranji.
3. The third hypothesis, based on the data obtained Thitung (2.04) < This (1.71). This means that the research hypotheses received Ha accepted Ho rejected. That the reciprocal teaching style is more effective or better improvement to the motor skills of students at SDN 04 market in Kuranji subdistrict in comparison with the style of exploration teaching. This means that these two teaching styles influence the motor skills of

students at SDN 04 Pasar Ambacang subdistrict Kuranji.

The results proved that there were influences of the reciprocal teaching style to the motor skills of students at SDN 04 market in Kuranji subdistrict. Before given the treatment of samples first conducted preliminary tests. Based on the results of the test obtained motor capability with mean (average) at pre test is 18.43, but after treatment with the method of repetition so that there is an increase in motor capability with mean (average) to 22.57. With the results of the study it can be concluded that teaching exploration has a significant influence on the motor skills of students of SDN 04 Pasar Ambacang District Kuranji. It is also amplified after the T-Test, where the result of the calculated T is 7.96 which is larger than t table in the  $\alpha = 0.05$  equivalent of 2.16. One of the teaching styles that can improve the motor skills of students at SDN 04 Market Ambacang Kuranji subdistrict is a resiprocal teaching style. Reciprocal style is a style approach that gives students the freedom to make broader decisions. Based on the research that has been implemented we can conclude that the reciprocal teaching style is a teaching style that can improve motor skills. Therefore, it can be an input for teachers to choose and implement the teaching style as a form of effort in enhancing the students' motor skills [9].

The results proved that the exploration teaching style can significantly improve the motor skills of students of SDN 04 Pasar Ambacang District Kuranji. Before given the treatment of samples first conducted preliminary tests. Based on the results of the test obtained motor capability with mean (average) during pre test IE 18.14 but after given treatment with exploration teaching style so that there is an increase in motor capability with mean (average) To 20.14. With the results of the study can be concluded that the exploration teaching style has a significant influence on the motor skills of students of SDN 04 Pasar Ambacang District Kuranji. It is also amplified after the T-Test, where the result of the calculated T is 2.33 which is larger than t table in the  $\alpha = 0.05$  level of 2.16. As previously described in the increasing motor skills of students at SDN 04 Ambacang Market Kuranji subdistrict can be caused by the results of the learning process performed by students. The learning process can be given with a variety of forms one of them is with the style of exploration teaching. Exploration teaching style is a teaching style that focuses more on students (childcentered)". Based on the research that has been implemented we can conclude that the exploration teaching style is one form of teaching style that can improve motor skills [5]. Therefore, it can be an input for teachers to be able to choose and implement this exploration teaching style as an effort to improve motor skills.

To reveal the effectiveness of the reciprocal teaching style and style of teaching exploration to the motor skills of students of SDN 04 Pasar Ambacang Kuranji District can be known from the acquisition of

Thitung value (2.04) < table (1.71). Based on this score, Ha was accepted and Ho was rejected. Thus it can be concluded that the reciprocal teaching style is more effective compared to the exploration teaching style in improving the motor skills of students of SDN 04 Pasar Ambacang subdistrict Kuranji. Based on the results obtained, it can be Conclusion that teaching style is equally effective to be implemented in the effort to improve the motor skills of students at SDN 04 Market Ambacang Kuranji Subdistrict

#### IV. CONCLUSION

Berdasarkan analisis data dan pembahasan yang telah dipaparkan terdahulu, maka dapat kesimpulannya sebagai berikut: The reciprocal teaching style gives a significant influence on the motor skills of students of SDN 04 market Ambacang Subdistrict Kuranji (Ho rejected and Ha accepted). Exploration teaching style gives a significant influence on the motor skills of students of SDN 04 market Ambacang Subdistrict Kuranji (Ho rejected and Ha accepted). The reciprocal teaching style is more effective than the exploration teaching style towards the improvement of motor skills of students of SDN 04 Pasar Ambacang Subdistrict Kuranji (Ho rejected and Ha accepted).

#### REFERENCES

- [1] Undang-Undang. "Law of the Republic of Indonesia number 20 year 2003 on national education system", Jakarta: CV. Andy. 2003.pp.42-56
- [2] Cholik Mutahir, Toho and Gusril. "Motor development in childhood". Jakarta: Direktorat General Sports Department of National Education. 2008. pp.20-43.
- [3] H. Syampurna. "Kontribusi Status Gizi Terhadap Hasil Belajar Penjasorkes Bagi Siswa-Siswi SMPN 10 Padang". J. Menssana, Vol. 1 No. 2, pp. 71-79. November 2016.
- [4] Mosston, Muska over language by Ilham Surya Falpan's. Teaching Education. 2008.pp. 45-65.
- [5] Schurr L. Evelyn. "Movement Experience for Children". Englewood Cliffe. New York: Prentice Hall, Inc. 1980.pp.10-23
- [6] Sukintaka. "Philosophy, learning and the physical education theory of the future". Bandung: The nuances of Cendekia Foundation. 2004.pp.32-54
- [7] Cholik Mutahir, Toho and Gusril. "Motor development in childhood". Jakarta: Project for development and compatibility of sports policy, Direktoratgeneral of sports, Depdikanas. 2004. pp. 34-54
- [8] Lutan. Rusli. "Learn motor skills, introduction to theories and methods". Jakarta: Depdikbud. The Dirjenti. P2LPTK. 1988.pp. 56-75
- [9] Supadi. "Learning strategies to teach physical and health education". Bandung: Dirjendikti, Depdikbud. 1991.pp.11-31
- [10] Hashey and Connors. "Review of Reciprokal Teacing". Georgia: The University of Georgia Jorrnal. 2003.pp.88-96
- [11] Syllabus and Hand Out courses of advanced statistics. Padang: FIK UNP. 2019. pp.1-15