(Widagdo)

DIFFERENCES OF APPROACH INFLUENCE ON LEARNING AND MOTORIC SKILLS TOWARDS TOP SPIN SERVICE LEARNING OUTCOMES OF VOLLEY BALL

Widagdo

Graduate Student of the Physical Education Department Faculty of Teacher Training and Education Universitas Tunas Pembangunan Surakarta

ABSTRACT

Widagdo, NIM: E 0117019, 2019, **DIFFERENCES OF APPROACH INFLUENCE ON LEARNING AND MOTORIC SKILLS TOWARDS TOP SPIN SERVICE LEARNING OUTCOMES OF VOLLEY BALL**. Thesis: The Major of Pendidikan Jasmani, Post Graduate Tunas Pembangunan University Of Surakarta. (Study Experiment About Teaching Approach With Dirrect Approach and Indirrect Approach At College Student Sport Training Program, Faculty Teacher Training And Education. Tunas Pembangunan University). Thesis: Study Program of Sports Education, Postgraduate Program, Tunas PembangunanUniversity of Surakarta

The aims research of the are to investigated: (1) The different effect of teaching approach with direct approach and indirect approach to learning result volleyball stop spin service. (2) The different the learning result volleyball top spin service skill between college student group having high motoric ability and motoric ability lower. (3) Interaction effect of usage of teaching approach and motoric ability to learning result volleyball top spin service skill

Experiment method with 2 X 2 factorial design was used in this research. The Research Population is the male college student of Sport Training Program, Faculty Teacher Training And Education, Tunas Pembangunan University Surakarta, Central Java Academic Year 2018/2019 i.e. 60 college students. Sampling technique was used *purposive random sampling*, the amount of sample taken are 40 college students. Sample consists of 20 college student represent owning high hand-eye coordination and 20 college students owning low hand-eye coordination. The variable that researched is independent variable consist of two factor that were manipulative variable, attributive variable, and also one (1) dependent variable. Manipulative variable consist of the teaching approach with the direct approach and indirect approach. Attributive Variable consists of groups with high motoric ability and low motoric ability. (2) Dependent variable in this research is volleyball top spin service. Data collecting technique are test and measurement. The data collecting of volleyball games skill is using underhand service and under hand passing test. Data of motoric ability done using throw and catch tennis ball. Data analysis Technique in this research use analysis of variance test and span Newman Keuls, at 5% level of significance.

Conclusion: (1) There is a significant different of effect which between teaching approach with direct approach and indirect approach to learning result volleyball top spin service. The effect teaching approach with the direct approach is better than with the indirect approach. (2) There is learning result volleyball top spin service different a significant

(Widagdo)

between college student group owning high motoric ability and motoric ability lower to. Uplifting of volleyball top spin service at college student owning high motoric ability is better than those who owning low motoric ability. (3) There is a significant of interaction effect between usage of teaching approach and motoric ability to learning result volleyball top spin service. (a) College student having high motoric ability more compatible if given by teaching with the direct approach. (b) College student motoric ability lower more compatible if given by teaching with the indirect approach

Keyword: Teaching Direct Approach, Teaching Indirect Approach, motoric Ability, Skills of Volleyball Top Spin Service.

INTRODUCTION

Physical education is an integral part of the overall education aims to develop organically, neuromuscular, intellectual dan emotional, through physical activity (Joseph Hadisasmita & Aip Syarifuddin, 1996: 3). Thus, physical education means: 1) an integral part of efforts education as a whole, 2) programs that pay attention to the development of the individual student, 3) centred on the student and not on the lesson material, 4) target physical education directed at student progress in overall, both with regard to organic growth, neuromuscular, intellectual, and emotional terms.

The focus of physical education programs in schools, according to Samsudin (2008: 7) are: 1) physical education program should provide the opportunity to have fun, learn new skills, and learn a variety of sports, 2) student also needs exercise to improve physical fitness, 3) at all ages is almost certain that physical education is seen as a to form new friendships, 4) stressed that physical education program provides for the "action" (*Show off*) and students are also able to eliminate the tension.

Aunurrahman (2008: 143), confirms five human ability is the result study that requires a model and learning strategies to achieve them, namely:

- 1) intellectual skills, the amount of knowledge ranging from the ability to read, write, count to the complex thought. Capacity is dependent on the intellectual capacity, social intelligence of a person and the opportunities available,
- 2) cognitive strategies, the ability to learn and think one's way broadest, including how to solve the problem,.
- 3) verbal information, i.e. knowledge in the sense information and facts.
- 4) motoric skills, the ability to use something skills, motoric skills,
- 5) Attitudes and values, namely learning outcomes associated with attitudes, emotional intensity.

Indirect learning is a way of learning students through step by step, while direct instruction is to shift the control task of learning in students who do study (Samsudin. 2008: 30-31). Direct learning is a learning model in which the activities focused on academic activities (Aunurrahman, 2009: 169). Implementation of learning in which teachers perform strict control on the progress of students in learning, empowerment and classroom climate has become a barometer of success interactions learn. Thus the objectives to be achieved in direct learning is to maximize our learning time, while achieving completeness impact of teaching academic content and skills, increased motivation, as well as increasing the ability of students, while the attendant impact is the increased confidence of students.

(Widagdo)

Learning basic technique skills on a topspin service begun in the form of other movements that resemble and leads the movement of basic techniques on topspin actual service may be called indirect learning approach. Rusli Lutan (1988: 418) states that "the indirect approach, the teacher or trainer workout plan carefully dalam a series of logical order before the actual techniques taught".

In general, teachers directly teach the basic techniques on topspin serve with the basic techniques of movement patterns on topspin serve. Learning the basic techniques of servicing over topspin which students are directly given material movement with actual movement pattern that can be called by direct methods. According to Rusli Lutan (1988: 419) that, "Learning the direct method is learning where the teacher or trainer to teach direct-actual techniques".

The learning of basic technique skills on a topspin serve in a game of volleyball with the indirect approach is something quite interesting to study. This is because that school teachers often face the problems of the ability of students who do not understand the concept of motion in basic engineering skills on a topspin serve on a volleyball game well and properly, making it difficult if only applying direct approach. The method is not direct and is still rarely carried out in schools.

Teacher of physical education and sports in general only use hands-on learning approach, in universities, rarely attempted on an indirect approach to learning this to students. Before applying indirect approach learning, teachers need to do a study concerning the effect of indirect learning and comparing them with hands-on learning approach.

Motoric skills (motoric ability) is an internal condition that distinguish each individual in developing motoric skills can be seen as signs that provide direction to the movement skill learning success in the future. The differences capacity of motoric contribute to the speed and mastery of learned skills sports movement. In this context, the level of motoric skills possessed by students determine learning outcomes serve basic engineering skills on topspin on the game of volleyball.

The differences in motoric skills owned by students (high motoric ability and low motoric skills), will affect the election servicing approach to learning basic techniques on topspin on the volley ball used. With hands-on learning approach to teaching and learning approaches or indirectly. With the selection of appropriate learning approach be expected each student will be able to be served in accordance learning activities owned character study results serve basic engineering skills the volleyball games will be optimized in accordance with the expected goals.

The motoric skills of those reasons is one of the dominant elements of movement and very effect on student success in learning the techniques deasar on topspin serve on a volleyball game. motoric skills basic techniques of top service

High-poor motoric skills possessed by students can influence the fast or slow mastery of basic techniques on topspin serve as a form of learning outcomes.

BASIS THEORY AND HYPOTHESES

Relevant Research

Sugiyono (2007) states that differences Influence of motoric Learning Strategies and Capabilities Against result *Jump Shot* of basketball. The results of these studies is no effect of

JISEAPE (Progam Studi Pascasarjana Pendidikan Olahraga), Vol.1 No.1 Februari 2019

(Widagdo)

learning strategies directly and indirectly, motoric skills the results *jump shot* basketball.

Asep Suharta (1997) investigated the effect of teaching approach and ability early on learning outcomes volleyball serve. From these results that the students who have the ability to use high initial approach is more appropriate direct teaching. As for students who have a lower initial ability to more appropriately used indirect teaching approaches in learning volleyball serve.

Through the study it can be concluded that, research has I carried out a significant relationship, crimped both studies above. It can be seen from the Learning Effect of motoric Ability And Effect Level.

Theoretical framework volleyball game

Volleyball game is one Sports game devoted children at the elementary school level up to the University level. Volleyball game including the type of sports games are done in team Sports team or in team games would be able to run well, if on each individual has an adequate level of motoric skills, a good level of ability in terms of technique and tactics in terms of skill level.

Given the circumstances of physical education of sports and health in schools today, and the amount of time allocation in the curriculum is very limited and the amount of material that must be given to the students, it is not possible all sports teams or team games will be taught intensively. With a view to achieving educational goals that are more useful exercise, the better in terms of sport and in terms of education.

The most beneficial step to achieve the purpose of physical education and sports health to be more beneficial in terms of education and in terms of sports is to give priority to one or two sports team or a team within one school educational institutions. With the scale of priorities, Then it could lead to a positive motivation to achieve the level of mastery of skills quality capabilities and affect the growth and development of the movement of learners as optimally as possible. Thus the effects can be felt by each learner individually and by teams as a group alternately.

Basic Techniques volleyball

The basic technique game of volleyball is one of the important and fundamental components that must be controlled by a volleyball player, to be able to do the skill game of volleyball is good and right. According to M. Yunus (1992: 68) that, "The technique is a way of doing or carrying out something to achieve certain goals effectively and efficiently. The basic technique Natural volleyball game can be interpreted as a way to play the ball effectively and efficiently in accordance with the applicable rules of the game to achieve optimal results. "The basic technique volleyball game is physical activity regarding by playing the ball effectively and efficiently in accordance with the applicable rules of the game in order to achieve an optimal result. The techniques developed in the game of volleyball should be a movement technique that effectively and efficiently by law motion (biomechanics) and should refer to the volleyball game rules.

Basically the movement elements necessary basic engineering skills in the game of volleyball at the same level of school education institutions with basic engineering skills volleyball for adults. The basic technique developed volleyball games in the school educational institutions should also refer to the rules of the actual game of volleyball Yanga. According Suharno HP. (1986: 16) basic techniques of playing volleyball:

- Technique without the ball consists of:
- Attitude is ready for normal

(Widagdo)

- Intake of proper and correct position
 - Technique with the ball consists of:
- Service
- Pass under
- Pass on
- Feed / set-up
- Smash
- Dams / block (block)

Direct Learning Approach

The approach is defined as the point of departure or our view of the learning process (Vienna Sanjaya, 2008: 127). Teaching effectiveness is determined by the selected teacher teaching approach based on the teacher's knowledge of the nature of the skill or task to be learned student movement.

Direct approach is learning the skills to provide materials directly techniques learned. Rusli Lutan (1988: 419) argues that "learning with a direct approach to learning where the teacher or trainer teaches direct-actual techniques. "Direct Learning is a model approach to learning can help students to learn or master the basic skills (Samsudin, 2009: 30-32). By using the model approach is a way of provision approach of training materials is done from the beginning, players are directed to practice the entire movement is learned (Sugiyanto & Sudjarwo, 1993: 368). In this case it takes skill, liveliness, creativity of teachers and students to be more enthusiastic, discipline, and sincere.

The implementation of service learning on top spin with the direct approach that students were given materials on engineering services top spin the actual movement pattern. Students are given the material movement on direct servicing techniques as the actual movement repeatedly. Learning service on top spin with this direct approach, since the beginning familiarize the student to perform the movements servicing at a top spins with the actual movement pattern. With this habituation then students will be able to perform basic engineering services movement on top spin with the correct movement patterns automatically.

Learning service on top spin with the direct approach is the direct learning the basic techniques of movement gives the material a service on top spin the effectively, in accordance with the rules of the game of volleyball truth. That gives the material a service above the basic techniques top spin conducted from behind the line of nine meters in directly to a serve on top spin, In the early stages of learning, the nervous students often make mistakes in the technique and less coordinated movement patterns. Basic engineering services gradually over top spin will be controlled well and right after participating in learning activities repeatedly.

Teacher using direct instruction teaching approach is more effective, if it aims to make students learn special material, for direct learning involves:

- * Task-oriented environment that motion, but not too heavy, and situated on academic goals.
 - Selection of the clear teaching objectives, teaching materials and observations about the progress of the students actively should really be considered.
 - structured learning activities.
 - Academic-oriented feedback.

The approach in the teaching can be interpreted as a starting point or a certain perspective to the learning process. This term refers to the view of the process that are still common, and therefore strategies and methods used to be a resource at a particular approach

(Widagdo)

by Roy Killen (in Vienna Sanjaya, 2008: 127). there are two approaches to learning:

• A teacher-centred approach (*Teacher-centred approaches*),

A teacher-centred approach generates driving direct learning strategies (*Direct instruction*), deductive learning or expository.

• Student-centered approach (Student-centered approaches)

Approach to student-centered learning strategies menghasilhan

learning is not directly (*Discovery*) inquiry, inductive learning.

Each method has strengths and weaknesses of learning, however, only as a comparison between the methods with each other method. There are some pros and cons ofdirect instructional approach towards learning outcomes of the service on the volleyball game when the learning approach carefully analyzed.

Strengths and weaknesses of direct learning approach is as follows:

- 1. Strengths of direct learning approach:
 - structured learning activities.
 - Teachers can observe and control student progress.
 - Students carry out duties in accordance with instructions from the teacher.
 - Aims at studying specific materials
 - mastery faster technical skills possessed, as techniques and direct its movement pattern carried out with the truth.
 - For students who already have a basic movement skills, coordination, and physical well this method is more suitable.
 - 2. weakness hands-on learning approach:
 - Material bound so unpopular with students
 - Students conduct only at the behest of teachers.
 - Students are not free to develop its potential.
 - Students are not free to determine choices.
 - For beginners, this direct approach is less suitable, because the components of the technique is not yet possessed.
 - If the basic components supporting the physical and motion inadequate basic skills, then this learning cannot be undertaken well.

Indirect Learning Approach

Learning with the indirect approach is learning skills that is preceded by providing technical matter rather than an actual movement. According to Rusli Lutan (1988: 418) that,"Learning with the indirect approach is an approach to teaching where the teacher or trainer workout plan carefully in a series of logical order before the actual techniques taught". At the initial stage the students are given with movement resembles the movement of the techniques practiced repeatedly.

Indirect learning approach is a way of learning the student through a step by step with the learning process in different forms, meaning that learn basic movement starts from a simple movement to the movement difficult, the low of movement to the movement of high and of a simple movement to the complex movement. In this case it takes diligence, discipline, skill, and creativity teachers to motivate students to do the movements.

The material provided in the early stages are basic movements that are relevant to the movement of the top service. Movement started from a simple motion that resemble the service movement above, then head movements on the actual servicing techniques. Basic movements given in service learning on the indirect approach is to throw the ball with one hand on the top, banging the ball, service movement without the ball and so on. Basic

(Widagdo)

movements that are taught to improve the mastery of basic techniques of movement on services.

During the lesson, students learn techniques, from basic movement in the direction of the actual movement in gradually, from easy movement increases towards the movement difficult and from simple movement patterns that are rising to the movement patterns are complex. Learning with the indirect approach provides a learning experience yang strong for the formation of motoric skills, especially in the movement of services on the basic techniques of volleyball games. Rusli Lutan & Adang Suherman (2000: 29) argues that "the learning experience must have the potential to improve the skills of dan appearances student movement. "The learning approach is not directly on the basic engineering services on a volleyball game is unique. This uniqueness can attract students so that all students can actively participate dalam learning process.

The learning approach indirectly by Samsudin (2009: 30-32) is to shift the control task of learning in students who do the learning, where the teacher is no longer in full control of learning but give it entirely to the students to get together to do it. Teaching does not directly involve one or more of the following picture:

- The material is presented whole, not fragmented into parts, because of the unity of matter would be more meaningful for students.
- Student assignment is developed so that thoughts, feelings, or student interaction skills can be developed.
- The properties of the individual abilities, interests and needs of students get a terse self-consideration.

From the above direct teaching more appropriate for the subject matter is structured, hierarchical and oriented on basic skills, and learning more complex when will involve cognitive and affective domain, because the direct teaching for efficiency. While not directly involve teaching the relevance and significance of what students learn.

The pros and cons of indirect learning approach

- Advantages
- The freedom of students to perform right without strict control of

teacher.

- Awakening the creativity of students, as well as having independence.
- Competition will be apparent from the students
- The emergence of self-confidence of students.
- Students can master components of the basic techniques of movement service on in more depth.
- For students who are not at all have the skills, the learning is suitable.

weakness

- Implementation of this learning can be boring, because the stage-by-stage lasts long.
- Mastery of technique skills becomes longer because of having to go through the basic movements.
- The lack of discipline of students
- Learning materials hampered if the tools provided are inadequate.
- Students who are weak will be left behind and lack of confidence.

Table. 1. Difference Learning Approach Direct and Indirect

(Widagdo)

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No.	Learning approaches Directly	Indirect Learning approaches
1	Overall training methods and materials are supplied from the beginning, and practice the entire movement is learned.	How To teach students through step by step with the learning process Learning basic motion, starting from the movement easy to difficult movement, from movement to movement low height, and from simple movement to a complex movement
2	It takes skill, liveliness, creativity of teachers and students.	Given learning tasks in full by the student's movement.
3	More effective, if the purpose of teaching to learn the specialty materials.	Less effective, if the goal learning for special materials
4	Teachers full control of the students who are learning to process.	Teachers to motivate students to do the movements.
5	Results-oriented skills	Noting process with provide a strong basis for the formation of motion skills

Motor Ability (Motor Ability)

Motion skills are important skills in physical education. One purpose of the physical education program tostudents is that students become skilled in physical activity. Physical motion skills obtained through physical education is not only useful for the control of certain sports or be accomplished sportsman, but the empathizes are more to tasks that require physical movement in everyday life.

Motoric skills (*Motor Ability*) briefly defined as the general ability of people to move (Nurhasan, 2000: 63). Edwin Fleishman is quoting Richard A. Magill (1993: 8) the speed of movement can be seen as an important component in a variety of skills such as soccer, baseball, tennis and athletics. Therefore, a range of movement is the capacity or common trait of individuals associated with the achievements of the various skills of motion. While Rusli Lutan (1988: 96), describes motoric skills as the capacity of a person related to the implementation and demonstration of a skill that is relatively after childhood. Further explained that the influence of biological factors as the main forces that affect the basic motoric skills of a person. motoric skills(*Motor abilities*) base as a foundation for the development of skills. Besides skill depends a lot on the basis of ability. Basic capabilities include: balance, reaction speed, flexibility, coordination, explosive power, agility accuracy, endurance and stamina.

(Widagdo)

Singer (1981: 36), said a large part we strongly believe that there are several factors that contribute to produce a high performance motoric skills are (1) the learning process, (2) students, and (3) the learning situation. Further, he said, that the two among the three factors mentioned above the students and the learning process factors contributed greatly to the appearance of a person's motoric skills. In his description of the factors of students (people) are influential in the visible movement skills of a person, one of them mentioned factors the motoric ability. Differences capabilities that exist in the student movement, should be considered as a decisive factor in the learning skills of public sports movements as the motoric skills and in learning the basic techniques of volleyball particular service. Differences of students in terms of mobility will be a very important consideration when selecting teachers learning approach that suits the character of each student. With this distinction, then basically every student requires a different treatment in the learning process so that each can achieve optimum results in accordance with the potential and the character it has.

In the potential each individual has a different range of movement. Differences in the ability of the motion will have implications for learning outcomes. In general movement abilities influenced heredity and environment variables. These variables will have an effect to potential students in the achievement of a variety of businesses. motoric *abilities* significant potential in nature, since it is a potential that can be used to predict a person's ability. In predicting a person's range of movement required measurement the ability of motion (*measurement of motoric abilities*). "Motor Ability Test has been developed by experts like Cozens, Scott's and Barrow's (Singer, 1981: 216), and many other test form. Further described by Singer that the motoric ability test has usefulness in remedying and predicting someone in the success of physical activity.

Motor skills is the basis for the formation of all motoric skills, including basic engineering skills of volleyball serve. Good movement to support speed of learning motoric skills. Learn motoric skills is a process that consists of activities and events to study in an attempt to master a kind of movement skills. motoric skills is a quality of the movement shown that the result of a process of motoric learning or study motion. Schmidt cited Rusli Lutan (1988: 102) argues that "motor learning is a set of processes related to the training or experience that refreshes toward skilled permanent change in behavior".

In studying the motion of the skills required of a certain period of time. The length of time needed to learn a skill that influenced the complexity of movement taught and children have the basic ability.

The ability of motion (*Motor abilities*) the elements forming the movement skills. Motion capability is important to learn a fundamental movement skills. The ability of the underlying movement of skills, in which is inferred from the response capability or a specific response to a particular type of task as well. So it is clear that the ability to have affinities with the skills motion.

Good basic motoric skills, will be proved positive of the mastery of the material in learning motoric skills. Applications in learning basic engineering services the volleyball game, that children who have a basic ability good motoric has a relatively faster tendency to dominate basic technical skills servicing of the children basic motoric skills are low, this was due to a common basic motoric skills are strongly associated with motoric skills, so that the optimization of success learn skills basic engineering services will be created if supported by a good motoric skills. motoric skills is also a physical element of support for the implementation of the basic techniques of motion servicing. In the opinion of Solomon (2008: 73) sports volleyball necessities various physical

(Widagdo)

components mainly; strength, speed, flexibility, explosive power (power), anticipation, acceleration, balance so that each player is required to have excellent physical condition.

Children who have poor motoric skills have a tendency a lazy to move, so that experience low motion for it is in need guidance and encouragement to move continuously, it will be more suitable if given indirect learning approach.

This research is expected to provide answer whether there are differences in the effect High motoric skills and motoric skills Low owned by the child on learning outcomes basic engineering services on at a volleyball game using two different learning approaches that direct and indirect approach.

To classify the movement to high and low motoric skills performed statistical data collection, namely through tests and measurements on customized motoric skills children motor capacity is based on the specifications of a volleyball game. Test have been because of advantages, among others: the specifications of movement to the game of volleyball, the number of test eyes a little, easy to implement, has validity and high reliability, accuracy and timeliness quite convincing means that these tests really measure what should be measured. This type of test item consists of:(1) sprint 30 meters, (2) lying sit (sit-ups) 30 seconds, (3) run alternating 4 x 5 meters, (4) duduk get (sit and reach), (5) jump upright (vertical jump) t, (6) run 1000 meters (Solomon, 2008: 78-84)

Framework

Differences Influence Learning Approach To Direct And Indirect Learning Outcomes Service Above.

learning motoric skills basic engineering services on the direct and indirect approaches have advantages and disadvantages. Learning with a more direct approach allows students to master the technical skills more quickly, because since the beginning of the movement undertaken by students is to demonstrate the basic techniques on actual service. The weakness of the service learning movement skills on the direct approach is for beginners mastery at each component of the movements basic techniques on less profound service. Hands-on learning approach is also less can be implemented coherently if basic motoric skills possessed inadequate student.

Differences Learning Outcomes Top Services SupremeMotor Ability student Who Have High and Low

Students who have a high motoric skills to be able to perform a variety of movements with efficient, smooth and harmonious. motoric skills declare the harmonious relationship of various factors which occurs in a motion. Basic motoric skills is the ability of a person in integrating a wide range of other capabilities effectively. Because motoric skills is one of the basic capabilities required to achieve to Success in learning skills of the service on volleyball game.

Interaction influence and ability of motoric Learning Approach Toward Learning Outcomes Top Services Games Volleyball

Election learning approach based on the level of Capacity of motoric students. Students who have a high motoric skills means that the student has the ability to do a better motoric skills than students who have poor motoric skills, so it can be assumed that students

(Widagdo)

who have a high motoric skills in the learning process will be quicker to master motoric skills and will have the better performance.

filing hypothesis

based on study of theory and frame of mind can be arranged hypothesis as follows:

- 1. There is a difference in the effect of direct learning approach and not immediately on learning outcomes Serviced top topspin of volleyball,
- 2. There are differences in learning outcomes Serviced on volleyball Among the students who have the motoric skills of high and low motoric skills.
- 3. There is an interaction effect between learning and motoric skills approach towards learning outcomes Serviced topspin volleyball,

RESEARCH METHODOLOGY

Methods and Designan Research

Research methods

The method used in this research is experimental method with factorial design 2 x 2. According Sudjana (1995: 148) that, "factorial experiment is an experiment that is almost the same or to the same extent, a factor combined or crossed with all the existing level of each factor in the experiment ". "In a factorial design two or more variables simultaneously manipulated to determine the effect of each of the dependent variable, in addition to the influence-pebeen influenced caused by the interaction between the variables "(Furchan, 1982: 362).

Research Design

The design of research that will be used in this research is the 2 x 2 factorial design, based on variables, namely: (1) Variain dependent bell; learning approach, (2) variable attribute; motoric skills, (3) The dependent variable; Serviced on learning outcomes in a game of volleyball

The study design used is a 2x2 factorial design (Glass and Hopskins, 1984: 272-301). Table 1. Study Design 2x2 factorial

Motor ability	High motoric	Ability
Basic (B)	Ability (b ₁)	Low motoric (b ₂)
Learning Approach (A)		
direct approach		
(a_1)	$a_1 b_1$	$a_1 b_2$
Indirect approach		
(a ₂)	$a_2 b_1$	$a_2 b_2$

Information:

(Widagdo)

a_1b_1	:	Group college student which has a high motoric skills are taught using the direct approach.
a_2b_1	:	Group college student which has a high motoric skills are taught using an indirect approach.
a_1b_2	:	Group college student which has a low motoric skills taught by the direct approach.
a ₂ b ₂	:	Group college student which has a low motoric skills taught by an indirect approach.

This factorial design involving two factors as variables *independent*, namely learning approach (a) and motoric function (b). The learning approach can be divided into two types, namely direct learning approach (a_1) , And indirect learning approach (a_2) And motoric capabilities are divided into two levels: high motoric skills (b_1) And poor motoric skills (b_2) . as *dependent* variable is the basic engineering skills service on volleyball game.

Conclusion

Based on the results of research and results of data analysis has been done, it can be concluded as follows:

- There is a significant difference between the approach of direct and indirect learning on learning outcomes service skills top spin. influence of indirect learning approach is better than immediately to improve the service skills of top spin.
- There are differences in learning outcomes skills top spin significant service between students who have the hand-eye coordination high and low, Improved top spin service skills in students who have a high motoric skills higher than those having low motoric abilities.
- There is a significant interaction effect between learning approach and ability hatchedk on learning outcomes service skills of top spin.
 - Students who have a high motoric skills is more suitable if it gets the learning with direct approach
 - Students which have a low motoric skills better suited if it gets the learning with an indirect approach.

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JISEAPE (Progam Studi Pascasarjana Pendidikan Olahraga), Vol.1 No.1 Februari 2019

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