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The Influence Of The Direct Instruction Learning Model On Learning Outcomes For Basketball Dribble Skills

Lailatul Muflihah[1], Muchamad Arif Al Ardha[2], Dwi Lorry Juniarisca[3], Moh. Fathur Rohman[4], Sauqi Sawa Bikalawan[5]
[1-5]Surabaya State University

Address: Surabaya State University, Jl. Tongue Wetan, Tongue Wetan, Kec. Lakarsantri, Surabaya city, East Java 60213
Author correspondence:muchamadalardha@unesa.ac.id

Abstract. *Learning models have a role in facilitating the process of transferring knowledge carried out by teachers to students. This study applies the direct instruction learning model with the aim of improving dribble skills in basketball learning. This research uses a quantitative approach with a pseudo-experimental method. The sampling technique used was cluster random sampling involving 115 students at junior high school level 1. The results showed that the direct instruction learning model was effectively applied to basketball dribble learning. The increase in the experimental group occurred by 48.90% for the skill variable, and 25.30% for the assessment variable. These results indicate that the direct instruction learning model is better than the conventional learning model. On the other hand, the direct instruction learning model has the possibility of ineffectiveness if applied to other learning and other levels of education.*

Keywords*: learning outcomes, physical education, motor learning, junior high school students*

INTRODUCTION

Education is a process of transferring knowledge that is carried out systematically in the teaching and learning process(Nurkholis, 2013). According to(Qodri, 2017), there are 3 aspects of assessment in the world of education, namely, cognitive, psychomotor and affective aspects. Assessment of affective aspects is carried out through observation during the learning process. The results of these observations will become material for reflection for a teacher when carrying out teaching and learning activities. Assessment of cognitive and psychomotor aspects is carried out through the subject matter taught. One of the lesson materials that includes cognitive and psychomotor aspects is physical education(Nugroho, 2019).

Physical education is a form of improving students' cognitive and psychomotor skills through movement activities(Iswanto & Widayati, 2021). Hermawan, Sonjaya, and Raswan in(Hadi et al., 2023)stated that in achieving learning objectives in physical education subjects, students need good concentration so that they can easily absorb and digest the learning well..

Physical education has a variety of movement activities that students can learn (Utomo et al., 2021). One of the movement activities taught by teachers to students is the big ball game. Basketball is one of the big ball games that is often taught to students starting from elementary school level(Simanjuntak & H, 2014). Basketball learning is learning that is carried out using basketball as a learning medium. Basketball learning aims to train students' cognitive and

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*Muchamad Arif Al Ardha, muchamadalardha@unesa.ac.id

psychomotor aspects(Awali, 2018). The cognitive aspect obtained when learning basketball is through material in the form of theories or procedures in learning basketball. Such as strategies for playing, or steps for carrying out specific basketball movement activities(Awali, 2018). Psychomotor aspects are obtained through practice carried out on the field related to specific basketball movement activities(Nugroho, 2019).

In basketball lessons, there are three movement activities taught, namely passing, dribbling and shooting(Putra, 2014). Dribbling activity is a basic technique for mastering basketball that students must learn. Dribbling technique is a basic basketball skill by bouncing the ball on the floor. Dribbling technique requires good coordination between hands, feet and eyes to be able to dribble the ball well at different tempos(Park & Jeong, 2023). There are various types of dribble, including low control dribble, crossover dribble, behind the back dribble, between the legs dribble and reverse dribble(Khoeron, 2017).

Learning dribble movement activities can be done using a learning model. The learning model is the main point of learning in which there is a learning design that adapts to teaching and learning needs(Andayani, 2021). The learning design plays a role in achieving learning objectives. A good learning model is able to create effective and efficient learning(Khoerunnisa & Aqwal, 2020). In this way, students are able to understand learning comprehensively. Apart from that, the right learning model will influence students to more easily accept and understand the material presented by the teacher. If there are difficulties experienced by students, a teacher must be able to provide solutions or understanding so that the difficulties can be resolved, so that student learning achievement will also increase.(Setiawan et al., 2021)

The direct instruction learning model is one of the learning models used in physical education. Direct instruction is carried out by teachers by giving direct instructions to students, so that students understand the material provided more quickly(Septiana, 2022).

The direct instruction learning model in basketball learning is carried out with the aim of providing material or instructions to students in a comprehensive manner(Supriatna, 2016). According to(González-Espinosa, García-Rubio, Feu, & Ibáñez, 2021), the direct instruction learning model can be used to teach basic basketball techniques well. Apart from that, learning basketball using direct instruction is also effective in learning the lay up shoot technique in the game of basketball(Sanjaya, 2019). The direct instruction learning model can increase students' motivation and knowledge in studying basketball(Gamero, García-Ceberino, Ibáñez, & Feu, 2021; Rustiawan, Risma, & Nursasih, 2020).

Based on the research gap analysis conducted, research related to dribble learning outcomes in basketball learning using the direct instruction learning model has never been carried out. The basis of this statement is relevant research data on Semantic Scholar. Research on the direct instruction learning model in basketball learning, emphasizing the overall material provided, shooting, and also knowledge. It can be concluded that direct instruction learning model research on basketball dribble learning outcomes is new in this research. In line with this, this research aims to determine the effect of the direct instruction learning model on basketball dribble learning outcomes.

THEORETICAL STUDY

A learning model is a method or strategy used by teachers to convey the material being taught to students. Various learning models are applied in physical education learning, one of which is learning basketball. When learning basketball, you need an appropriate learning model to learn basic basketball techniques. One of the learning models used is the direct instruction learning model. The direct instruction learning model is a learning model with a more emphasized role of the teacher, which is structured and well organized.

Jean Piaget put forward a theory of children's cognitive learning stages, which is divided into 4 stages. The sensory motor stage is for ages 0-2 years, the preoperational stage is for ages 2-7 years, the concrete operational stage is for ages 7-11, and the formal operational stage is for ages 12 years and over. The concrete operational and formal operational stages have relevance to the direct instruction learning model. This relevance is marked by the suitability of the learning stages with the application of the direct instruction learning model. Age 7-11 years, is the stage where a child needs clear and straightforward instructions from an educator. Then, at the next stage at the age of 12 years and above, a child will begin to experience thinking development by understanding abstract concepts given by an educator.

Supporting this theory, research by(Sulistyoningrum et al., 2015)explained that the direct instruction learning model can influence basketball shooting learning outcomes for high school level. In addition, research from(Faozi, Dlis, Samsudin, Hambali, & Riyadi, 2024), proves that the direct instruction learning model is effectively applied for learning basketball.Based on this explanation, the direct instruction learning model is suitable for use in learning basketball dribble.

RESEARCH METHODS

Study Design

A quantitative approach was used in this research, with a quasi-experimental method. Design in this researchis a randomized control group pretest posttest design. This design involves two groups, namely an experimental group and a control group. However, the control group studied did not receive treatment from the independent variable, only the experimental group received treatment from the independent variable. The two groups will compare their improvement based on their pretest and posttest scores. The analysis carried out will be a reference in formulating the results of this research.

Study Participants

Sample studiedare 115 students from class 1 at junior high school level. The sampling technique used is cluster random sampling. The spinner is used to determine the cluster or class to be studied.

Instruments

This research adapts an instrument from John Oliver to test dribble skills(Oliver, 2007).This instrument has assessment norms that are adjusted to the time gained when carrying out the test (Table 1). This dribbling skill test is carried out by dribbling in a zig-zag manner with a field length of 12.5 meters and a field width of 5 meters (Figure 1).

Table 1. Norms for Dribble Skill Test Instruments

Category	Mark
Not enough	13.51 – 15.00
Good	11.51 – 13.00
Very well	10.00 – 11.50

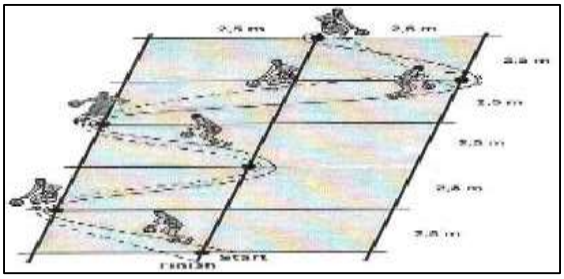

Figure 1. Dribble Skill Test Area

Research Procedures

The research was conducted over five weeks or five meetings, with details of the first meeting for*pretest*, the second to fifth meetings are for treatment, and at the fifth meeting a posttest is also carried out. Pretest and posttest data collection was carried out using adapted instruments. Pretest data was taken before the sample received treatment from this research. In the experimental group, a direct instruction learning model treatment was applied. Meanwhile, in the control group, no treatment was applied, the physical education teacher carried out

conventional learning. After the treatment is carried out, posttest data is collected using the same instrument. Then, the sample provides feedback regarding the learning that has been carried out.

Statistical Analysis

Research data analysis was carried out using IBM SPSS Statistics 26. Normality tests were carried outusing Kolmogorov Smirnov, with normal data distribution indicated by p-value > 0.05. The homogeneity test was carried out using Oneway Anova, with the aim of finding out that samples from both groups had the same abilities before treatment was applied. Homogeneous data is indicated by a p-value > 0.05, while inhomogeneous data is indicated by a p-value < 0.05. The paired sample difference test was carried out to determine the difference between the pretest and posttest scores, which means there is an increase or decrease in the data. The Paired Sample T Test is carried out if the data is normally distributed, while the Wilcoxon test is carried out if the data is not normally distributed. P-value < 0.05 indicates that there is a difference in the data studied, this norm applies to both difference tests. Independent sample difference tests were also carried out to compare the research results of the two groups, experimental and control. The Independent T Test is carried out if the data distribution is normal, while the Man Whiteney test is carried out if the data distribution is not normal. If the p-value is <0.05 for the results of the two tests, it means that there is a difference in the results of the research carried out on the two groups, experimental and control. Independent sample difference test, supported by calculating the percentage of data shown by the two groups for each variable studied. Calculation of the percentage of data uses the following formula.

$$Persentase\ Data = \frac{\text{mean posttest} - \text{mean pretest}}{\text{mean pretest}} \times 100\%$$

RESULTS AND DISCUSSION

Normality test

In this study, a normality test was carried out using One Sample Kolmogorov Smirnov. Testing was carried out with the aim of seeing the nature of the distribution of research data. The normality test carried out involved 8 test variables tested in this study, pretest and posttest for each aspect of the assessment. The test results show that there are 4 test variables that are normal with a p-value > 0.05. Meanwhile, the other 4 variables show an abnormal distribution of data with a p-value < 0.05.

Table 2. Normality Test

Variables		Mean	elementary school	Min.	Max.	p-value
Control Assessment	*Pretest*	15.54	1.52	11.74	18.31	0.20*
	Posttest	15.17	1.27	11.22	17.23	0.29*
Experimental Assessment	*Pretest*	15.65	1.43	13.34	18.77	0.00
	Posttest	11.69	1.43	10.11	15.89	0.05
Control Skills	*Pretest*	41.47	1.,49	27.78	66.67	0.15*
	Posttest	48.75	7.51	38.89	61.11	0.00
Experimentation Skills	*Pretest*	52.10	6.83	41.67	66.67	0.14*
	Posttest	77.58	6.80	69.44	94.44	0.00

* Sig > 0.05

Homogeneity Test

The homogeneity test was carried out using One Way Anova, with the aim of finding out that the data was homogeneous before treatment was applied. This is important to know, because if there is a gap in the improvement between the two groups, it can be immediately identified. The assumption is that the samples studied from each group have equivalent or equal abilities. Testing was carried out on pretest variables only, both assessments and skills of each group. Test results in the pretest assessment, both groups presented homogeneous data with a p-value of 0.98 (sig < 0.05). Meanwhile, in the skills pretest, both groups presented data that was not homogeneous with a p-value of 0.01 (sig < 0.05). In this case, the homogeneity test in this study means that the two groups have the same ability on the assessment variables. However, different abilities were demonstrated by the two groups through the skill variable.

Table 3. Homogeneity Test

Variable	N	Mean	elementary school	Min.	Max.	p-value
*Pretest*Evaluation	58	15.60	1.47	11.74	18.77	0.98
*Pretest*Skills	58	46.79	10.29	27.78	66.67	0.01*

* Sig < 0.05

Paired Sample Difference Test

The paired sample difference test was carried out using the Wolcoxon test, because the research data was not normal. In this test, 4 test variables were tested with the test results for all variables being p-value 0.00 (sig < 0.05). This shows that there are differences or improvements that occur through the treatment given from pretest to posttest. On the other hand, there is something that is of concern in the Wilcoxon test. The control and experimental assessment variables showed a significant negative rank, that is, almost the entire sample experienced a decrease. The decline that occurred was not without reason, but because the assessment variable used time in the data collection process. A time that is faster or lower means that the sample is skilled in carrying out the test given. So, the negative rank on the

assessment variable for the control and experimental groups is an increase that occurs from pretest to posttest.

Table 4. Wilcoxon test

Variable	Ranks	N	p-value
Control Assessment	Negative	21	0.01*
	Positive	7	
	Ties	1	
	Total	29	
Control Skills	Negative	2	0.00*
	Positive	24	
	Ties	3	
	Total	29	
Experimental Assessment	Negative	26	0.00*
	Positive	0	
	Ties	3	
	Total	29	
Experimentation Skills	Negative	0	0.00*
	Positive	29	
	Ties	0	
	Total	29	

* Sig < 0.05

Unpaired Sample Difference Test

The unpaired sample difference test in this study used the Mann Whitney test. This difference test was carried out with the aim of seeing whether there were differences in research results between the control group and the experimental group. The test results showed that there were differences in the results of the treatment given to the two groups. These results are marked with a p-value of 0.00 (sig < 0.05). The results of this different test are also strengthened and supported by the results of data percentage calculations.

Table 5. Mann Whitney test

Variable	N	Mean	elementary school	Min.	Max.	p-value
Posttest Assessment	58	13.43	2.21	10,11	17.23	0.00*
Skills Posttest	58	63.17	16,18	38.90	94.44	0.00*

* Sig < 0.05

Data Percentage Calculation

Data percentage calculations were carried out to determine the magnitude of the increase that occurred in the variables studied. This percentage calculation is based on the mean pretest and posttest value of the variable. The calculation results show that there was a significant increase of 48.90% in the skill variable of the experimental group. Meanwhile, the increase was not very significant, shown by the assessment variable in the control group with a percentage of 2.32%.

Table 6. Calculation of Data Percentages

Variable	N	Mean Pretest	Mean Posttest	Percentage (%)
Control Assessment	29	15.54	15.18	2.32
Control Skills	29	41.48	48.76	17.55
Experimental Assessment	29	15.65	11.69	25.30
Experimentation Skills	29	52.11	77.59	48.90

Physical education is a movement learning process that can be presented in the form of physical activities or games(Siregar et al., 2021). The role of physical education in increasing students' physical literacy is channeled through the learning model provided. Every learning process requires a strategy that includes the use of learning models that will be applied to students(Apriani, 2015). In this application, the teacher requires knowledge of student characteristics. Providing knowledge of the characteristics of each student in the class will make it easier for teachers to select or create the learning model that will be used(Khoirudin, 2016)

The direct instruction learning model in basketball learning aims to convey learning material in detail and provide a comprehensive understanding to students(Supriatna, 2016). This research is motivated by problems in studying dribble activity in basketball. The inappropriate learning model applied by physical education teachers is the basis of this problem. Learning models that are appropriate to students' learning stages can influence students' thinking processes in receiving and understanding learning material(Munawaroh, 2021).

This research obtained significant results shown in the two groups studied, especially in the experimental group. The research results showed that there was an increase of 48.90% in the skill variable of the experimental group. Apart from that, an increase of 25.30% was also shown by the experimental group assessment variable. This shows that the direct instruction model is able to have an influence in learning dribbling skills in basketball. The conventional learning model in the control group also had an influence with a percentage increase of 17.55% for the skills variable and 2.32% for the assessment variable. The percentage results shown by the control group assessment variable indicate that the conventional learning model is less effective than the direct instruction learning model. The same thing was also shown by the skill variable from the control group. This variable shows a lower percentage figure than the percentage figure in the experimental group.

Based on the results of this research, the direct instruction learning model is better and more appropriate in learning basketball dribble skills than the conventional learning model. On the other hand, the direct instruction learning model did not get significant results when compared with other learning models. Apart from that, this idea is also supported by(Supargo, 2021)Where the application of the direct instructions learning method can also improve learning achievement in physical education subjects in class

Research by(Gamero et al., 2021)shows that the Tactical Game Approach (TGA) learning model has a better influence on students who have no experience at all in learning basketball.Apart from that, it is also supported by research results from(Tiyo prayoga, 2017)that using the direct instruction learning model in physical education learning can improve children's skills in playing basketball more effectively. Psychomotor aspects in physical education can be developed effectively through the use of this learning model. Cognitive and affective aspects can also be developed well.

Study(González-Espinosa et al., 2021), which states that Tactical Games are better applied to basketball learning than direct instruction. Learning using the Tactical Game Approach (TGA) is highly recommended in physical education learning because it can improve students' fitness and skills.

The direct instruction learning model provides a comprehensive understanding to students. The explanations and practices carried out directly by the teacher are able to provide a clear picture by providing audio-visual stimulation(Nurfadhillah et al., 2021). This visualization is still needed for students at the junior high school level, especially in class 1 of junior high school. This is based on the stages of cognitive learning proposed by Jean Piaget.The theory of cognitive development proposed by Piaget is a theory that explains how children adapt and interpret objects and events around them. How children can learn the characteristics and functions of objects such as toys, furniture and food as well as social objects such as self, parents and friends. How can children group objects to find out their similarities and differences, to understand the causes of changes in objects and events and to form predictions about these objects and events(Agung, 2019).

In grade 1 of junior high school, it is a transition period from elementary school to middle school, where at elementary school level it is a concrete operational cognitive learning stage.(Marinda, 2020). The concrete operational learning stage means that students need clear instructions to carry out a movement or activity. During this transition period, not all students experience the same and even cognitive development. Therefore, the direct instruction learning model is still appropriate if applied to grade 1 junior high school students.

Yanti is deep(Firdaus, 2022)stated that the application of the direct instruction learning model to junior high school students whose thinking domain is at a simple level is the selection of an appropriate and appropriate model, because the direct instruction learning model can help students to acquire real skills and knowledge based on teacher explanations and combined with practice and discussion. together.

The limitations in this research are of concern to research so that they can be refined in further research. This study has limitations in its research design. The treatment was only given to the experimental group, while the control group only received the normal learning process or that which is usually carried out by physical education teachers at the school. Thus, the learning model applied to the experimental group did not receive suitable comparisons.

CONCLUSIONS AND RECOMMENDATIONS

The application of the direct instruction learning model in learning to dribble basketball obtained significant results. These results were marked by an increase that occurred after treatment in the experimental group. This increase was higher than the control group that used conventional learning models. This proves that the direct instruction learning model is better and more effective in learning basketball dribble skills than the conventional learning model. It is hoped that the limitations that occur in this research can become a reference for further research. Implementing varied and comparing learning models will expand research developments in the field of basketball, especially learning basketball dribble skills.

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