LOB STROKE MODEL IN LEARNING BADMINTON GAME FOR ELEMENTARY SCHOOL STUDENTS CLASS V

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The purpose of this study was to obtain information about the process of implementing badminton game learning, practice the learning process with the badminton lob model for elementary school students in grade V, and obtain empirical data about the effectiveness, efficiency, and student interest in the learning process of badminton lob stroke for elementary school students. grade 5. This research was conducted at SDN Makasar 05 Pagi, East Jakarta, with 31 students as the research object. This study uses the ADDIE learning development model, which starts at the Analysis, Design, Development, Implementation, and Evaluation stages. From the results obtained, this badminton lob learning model turned out to be very effective when applied to learning. This can be seen from the increase in the results of the skills assessment of students at SDN Makasar 05 Pagi Class VA.

Keywords: lob stroke; badminton; sport learning

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INTRODUCTION

Physical education is the process of learning to move and learning through motion. The contribution made by physical education is to provide overall development because what is developed is not only aspects of movement skills and physical fitness (physical and psychomotor domains), but cognitive development is also developed through physical education. Physical education is a vehicle for educating children.

Physical education is a process of physical activity within an institution to achieve educational goals. Physical Education is an educational process that utilizes physical activity to produce holistic changes in individual quality, both physically, mentally and emotionally (Samsudin & Subandi, 2022). This intelligence is very visible when a student in his teens really likes this physical education lesson. Not only do their skills and personalities develop, but physical education can also prepare students to be able to prepare for the challenges of life in the future (Opstoel et al., 2020).

Through physical education experiences, students are able to gain life skills such as focusing on aspects of physical fitness, developing skills, emotional stability, cooperation, intelligence, reasoning, attention, moral action, and appreciation of values. This encourages students to carry out individual abilities both from the psychomotor domain (movement skills), where psychomotor abilities have basic motor skills such as balance and coordination (Peñeñory et al., 2018), cognitive (knowledge/intellectual) and effective (feeling/emotion/attitude) movements, language, and communication, in accordance with the uniqueness and developmental stages passed by the child himself.

Elementary school-age children are in a period of growth and development where they have enormous potential to optimize all aspects of their development; therefore, special guidance and attention are needed, especially from physical education teachers who are empowered to foster students movement abilities. base. If a person doesn't get the opportunity from an early age to develop his movement abilities, then at the next age stage, even into adulthood, he will fail more in carrying out his movement tasks.

In elementary school, movement skills are very important. All must be trained according to the age of the student. Movement or motor skills are limb movements (physical) that are directed at achieving certain goals. While basic movement and motor skills are basic skills that are usually given or carried out through games, Skills are a description of a person's motor movements; a person is considered skilled if he has coordination, good motion control, and motion efficiency (Pelana et al.,

2021). If these basic movement skills are studied thoroughly, they can be adapted or perfected to form all or part of a specific sport skill.

According to Samsudin, the development of movement skills is the core of the physical education program. The development of movement skills for elementary school children is defined as the development and refinement of various basic movement skills and skills related to sports. The curriculum in Indonesia is a practical learning activity carried out on the basis of a syllabus and student studies (Samsudin & Subandi, 2022). Therefore, the process is based on the development of things that affect one of the students.

In the education curriculum in Indonesia, badminton is one of the sports that become material in learning. Badminton is a game sport that is practiced in elementary schools. This is a sport that elementary school children really like. This is because badminton is a popular sport for people in Indonesia and even around the world. Indonesia's badminton achievements have reached the world level, and every match is broadcast on television, making this sport known throughout Indonesia. Therefore, badminton was introduced in elementary schools and is part of the learning and education program as a small ball game. It is at school that you can find outstanding athletes. Athletes are people who are trained, have talent, and have privileges in sports.

To learn this sport, students usually learn through demonstrations and explanations from the teacher and then practice it through group exercises (Lin et al., 2021). The types of punches that are learned are basic strokes such as service, lobs, drop shots, and smashes. One of the basic strokes learned in elementary school is the lob.

The criteria for assessing the badminton lob shot begin with making a grid for assessing the skills obtained from the teaching materials, varying the abilities of the students of the school concerned. The lob shot learned in Physical Education for fifth grade students has several stages or criteria for assessing skills. However, the teacher is less able to provide material that is in accordance with the criteria. So, based on the results found in the field based on skills assessment, the student's ability to lob badminton is not as expected and not optimal. The average score of grade 5 students in Basic Competency 4.2 is still on the KKM-PJOK boundary line, which is 75. For this reason, it is necessary to find the cause of the students' less than optimal scores.

Learning badminton at Grade V Elementary School is a combination of basic movements between stepping, swinging arms, and hitting (Sutrisno et al., 2021). In textbooks, learning is only based on a combination of stepping and then hitting the

ball, so the provision of learning material is only arbitrary to students. Based on interviews conducted with 10 PJOK teachers in the kecamatan Makasar, in providing lob badminton material, the teacher only served and the students hit without knowing the stages of lob hitting., in giving lob badminton material, the teacher only served and students hit without knowing the stages of lob hitting. Whereas in a lob shot, there are 4 stages of how to do the lob movement, namely starting from the racket grip, hand swing, hitting the ball, and following through, where in each phase there are several assessment criteria. By giving monotonous material like that, it is what makes students get unsatisfactory skill scores.

It is with this background that the researcher is interested in making a badminton lob learning model for fifth grade elementary school students according to the stages of lob hitting. It is hoped that with this interactive, interesting, and game-based learning model, students can be more able to lob strokes in accordance with the skills assessment grid, so that the learning objectives in badminton learning can be even better.

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METHODS

The approach and research method for this badminton lob learning model use the ADDIE research and development model (Analysis, Design, Development, Implementation, and Evaluation). The ADDIE model is schematically designed as a learning system as follows:
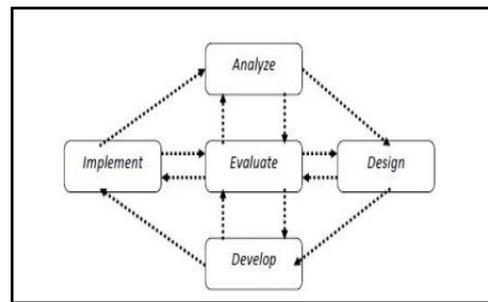

Figure 1 : ADDIE Model Stages (Puspasari, 2019)

The ADDIE model is often chosen for the learning development model. This was stated by Molenda. "I am satisfied at this point to conclude that the ADDIE model is merely a colloquial term used to describe a systematic approach to instructional development, virtually synonymous with instructional systems development (ISD)" (Puspasari, 2019). Approach this system by dividing the learning design process into several sequential stages and then utilizing the output as input for the next step.

In this study, it is hoped that it will create a learning model for lob badminton that will be used in Physical Education subjects, especially in badminton game material for elementary school students. This design is a new model development design that improves existing ones so that it can be used as a learning resource in badminton game learning activities.

For sampling procedures, starting from a needs analysis to obtain data by making initial observations This initial observation method involved interviewing fifth grade elementary school students at SDN Makasar 05 Pagi, East Jakarta. The results of the interviews obtained showed that there was a problem with the lack of variations in the lob learning model, so that the learning method was carried out in just that way and was monotonous. That is what makes children's interest in learning badminton skills decrease.

To make it easier to design learning models, we need to do research and development.

a) The previous research stage
   The specified product is the product resulting from the identification obtained by means of interviews and observations.

b) Library Studies
   By collecting supporting materials in the concept of developing a learning model for badminton lob skills for fifth grade elementary school students.

c) Field Study
   By conducting direct survey activities in the field, preparing technically, and understanding the existing findings. The results of these findings are descriptive and lead to learning objectives.

The research data in this study used data collection tools in the form of interviews and skills assessment rubrics. For interviews, the researcher gave questions via Google Form (GF) to 10 sports teachers in the Makassar sub-district. Meanwhile, the pretest data uses the students' skill scores obtained at Basic Competency 3.2 in the first semester

Procedures

To facilitate the preparation of the research, the stages of the research based on the ADDIE research model will be described.

1. Analysis Phase
   This is the stage of gathering information, which becomes a reference chart in making a learning model. The collection of this information is in the form of:
   a) Analysis of the needs of the goal is to identify learning models that are designed according to the target.
   b) Analysis of learning materials, which includes the determination of material based on the basic competencies of the applicable curriculum.
   c) Environmental analysis, namely by collecting data on the existing learning environment and the learning strategies that will be delivered.

2. Design Stage
   At this stage, we create an effective and efficient learning design model. This design is based on the analysis in the previous stage. The design of this program must be in accordance with the characteristics and competencies

of fifth-grade elementary school students.

3. Development or development stage
   This is the stage where the supporting material for the learning model is created. In this stage, we transform the learning model into a product that is ready to be put into practice at the implementation stage. In this stage, there are teaching materials that have been revised and tested by experts in the form of a learning model for lob skills for Elementary School Class V students in accordance with the learning objectives of the Physical Education subject.

   The learning model that has been made is then validated by three experts for an assessment and revision. So then we will get the results of an assessment of whether the learning model is good or appropriate for students. From the results of expert tests conducted by researchers on three experts, there are several suggestions given to researchers. These suggestions are useful for improving the learning model for lob badminton for fifth grade elementary school students, including:
   a. We need additional variations based on different levels of difficulty in several learning models.
   b. Models and tools are colored to make them more attractive.

c. Made into a competition game for students, so that students are more enthusiastic about carrying out the learning model created.
d. The technical presentation of the learning model is sorted from easy to difficult.

   After validation, there are 15 learning models that are considered applicable to learning badminton games. 1 learning model is considered inappropriate because it does not meet the safety criteria during the implementation of the learning model.

4. Implementation StageThis stage is the implementation stage of the learning model. According to Robert Maribe Branch, implementation is an activity using a product. Teaching materials prepared and developed in the previous stages are implemented in real-life situations for students. After implementation, an initial evaluation is carried out as a benchmark in the next stage (Sugiyono, 2017).

5. Evaluation StageThe final stage of the ADDIE development model allows us to determine whether each action taken and the final product conform to the specified requirements. Each stage includes this assessment. At this point, it can be determined whether the product model developed is able to achieve the learning objectives.

RESULT AND DISCUSSION

This test was made by carrying out a pre-test and post-test using a badminton lob skill motion instrument. The results are analyzed; the point is to find out whether

there is a percentage increase in skills through the learning model given to students. This effectiveness value will emerge from a significant, visible increase using the two average test calculations. Paired sample test program SPSS25.0 is used to calculate the results of this effectiveness value, with a significance level of 0.05.If the design of the study is complex or the stimuli require if detailed description, additional subsections. or subheadings to divide the subsections may be warranted to help readers find specific information.

By using the paired sample test to find out the average difference in the ability of students' skills in lob shots from the pre-test and post-test. The criteria set for testing the hypothesis by testing the two averages in SPSS with $\alpha = 0.05$ determined the resulting p-value (Sig.). If the p-value (Sig) is $\geq \alpha$, then H_0 is rejected and H_1 is accepted. However, if the p-value (Sig) is $\leq \alpha$, then H_0 is accepted and H_1 is rejected.

The following is a hypothesis according to the formulation of the problem in the study:

H_0: There is no significant increase in students' ability as a learning model for lob badminton skills.

H_1: There is an increase in students' abilities as a learning model for badminton lob skills, which are developed significantly.

1. Results of the Needs
   Analysis Based on the results of the needs analysis obtained, it can be concluded that learning badminton is very attractive to students, even though there are still many deficiencies in the learning model. The lack of variation in the learning model for lob badminton makes students less enthusiastic about participating in the learning; learning becomes passive, which affects the skill scores acquired by fifth grade elementary school students.

2. Created Product Draft
   Materials and parts that have been prepared in the previous stage are then arranged and given an explanation in the concept that was created. The design of the model is based on the stages of lobbing. Each product is designed based on the principle of going from the easiest to the most difficult and from the simplest to the most complex movements. The lob learning model for elementary school students consists of four stages of motion contained in a badminton lob. For each stage of motion, four types of game models are created that are oriented towards learning lobs in badminton games. The following are the types of learning models based on the stages:

Tabel 1.
Learning Model of Badminton Lob Shot

Stages	Name of Learning Model
Hand Grip	1 Bermain Bertukar Tongkat Reaksi 2 Estafet Timang-timang 3 Segitiga Bermuda 4 Hand Grip Circuit Training
Hand Swing	1. Melempar Target 2. Lemparan 3 Titik 3. Estafet Shuttlecock 4. *Beautiful Swing*
Ball Hit	1. Pukulan Terbaik 1

	2. Pukulan Terbaik 2
	3. Pukulan Terbaik 3
	4. Target dan Poin
	1. Pukulan Angin
Follow	2. Rangkaian Estafet Raket
Through	3. Reaksi Bayangan
	4. Permainan Siaga

3. Stage development

    Learning models and aids are developed during this stage. This stage involves converting the learning model into a finished product that is prepared for use during the implementation phase. At this stage, a learning model for lob skills is available for fifth grade elementary school students in accordance with the learning objectives of the Physical Education subject. It was revised and tested by experts.The learning model created was then approved by three experts for evaluation and revision. After that, we will study whether the learning model is effective or suitable for students.

    a. After being evaluated by experts, the researchers conducted a small group test at SDN Makasar 05 Pagi East Jakarta, class V B, and received a stage 1 revision. The data obtained became a benchmark for the second phase of the trial, namely the large group. 15 out of 16 learning models are feasible and can be used as learning models.

    b. In the large group trial (field group tryout), the learning model was tried out in 3 schools in the kecamatan Makasar, Kebon Pa 02 Pagi, Kebon Pala 12 Pagi, and Kebon Pala 03 Pagi. The sample used was 92 students. Based on the results of the large-scale test, the researchers concluded that all models could be applied to the effectiveness test.

4. Implementation Results

    The Implementation Stage is a concrete step towards implementing the learning model development system that has been created. This means that at this point, everything that has been designed and manufactured in a way that is suitable for its function will be operational. At this stage, the researcher also implemented the product design of the badminton lob learning model, which was designed from stage one to stage three. The results of the validation and expert tests on fifth grade elementary school students showed results as shown in the following table:

Tabel 2: Expert Validation Results

Stages	Name of Learning Model	Marking Yes	Marking No	Information
Hand Grip	Bermain Bertukar Tongkat	Yes		Valid
	Reaksi Estafet Timang-timang	Yes		Valid
	Segitiga Bermuda	Yes		Valid
	Hand Grip Circuit Training	Yes		Valid
	Melempar Target	Yes		Valid

Hand Swing	Lemparan 3 Titik	Yes	Valid
	Estafet *Shuttlecock*	Yes	Valid
	Beautiful Swing	Yes	Valid
Ball Hit	Pukulan Terbaik 1	Yes	Valid
	Pukulan Terbaik 2	Yes	Valid
	Pukulan Terbaik 3	Yes	Valid
	Target dan Poin	Yes	Valid
	Pukulan Angin	Yes	Valid
Follow Through	Rangkaian Estafet Raket	No	Invalid
	Reaksi Bayangan	Yes	Valid
	Permainan Siaga	Yes	Valid

5. Evaluation results

    The evaluation process is a process to determine whether the model built is successful according to initial expectations and whether it is effectively used for fifth grade elementary school students. Each evaluation stage can be carried out separately. The badminton lob learning model is designed to be used during the training of elementary school children, especially children in grade V of elementary school. The aim of this model is to improve children's abilities in lob badminton, which is carried out at this stage of their fastest motor development based on the previous implementation stages as follows:

    a. The subjects in this study have different badminton lob skills, so the results of this mode are still hard to imagine.
    b. The characteristics of the research subjects come from the zoning of their residence and their family upbringing. They have freedom to move from their previous play activities, which can be seen when activities make them able to easily adapt to these activities.
    c. Due to the mobilization of research sites, researchers must bring a number of media, which hinders the implementation process in terms of cost, time, and effort.
    d. The badminton lob learning model that was developed starts at an easy level so that participants show their curiosity several times in this lesson.
    e. Experts in this field have validated this badminton lob learning model.

Normality Test

The normality test is a way to get data from each variable that is included in the normal distribution category or not by using the Liliefors test. With conditions, if the highest Lcount (Lo) price of the group of variables studied is smaller than the Label (Lt) in the Liliefors table, then the data is normally distributed data

a. X Normality Test (Pretest)

    According to the results of the calculation of the liliefors normality test, the Lo value is 0.130, while the critical value of the sample size (57) in the liliefors table is 0.224 with α=0.05. The value obtained is 0.130 <0.224, when compared with Lo count, the results obtained are smaller than Lo table, so we can conclude that the X normality test (pretest) is normally distributed.

Tabel 3.
X Normality Test (Pre Test)

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Nilai		Statistic	df	Sig.	Statistic	Df	Sig.
Pretest X	Pretest	,300		,000	,763	31	,000

b. Y Normality Test (Post test)

According to the results of the calculation of the normality test for liliefors, the Lo price is 0.198, while the critical value of sample size (57) in the liliefors table is 0.224 with α= 0.05. The value obtained is 0.198 < 0.224; when compared with Lo count, the results obtained are smaller than Lo table, so we can conclude that the Y normality test (posttest) is normally distributed.

Tabel 4.
Y Normality Test (Post Test)

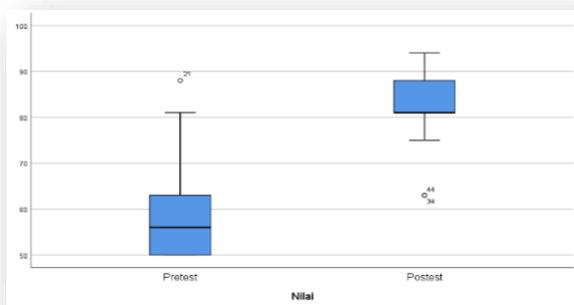|		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Nilai		Statistic	Df	Sig.	Statistic	df	Sig.
Postest Y	Postest	,291	31	,000	,828		31

Figure 2. Pre-Test and Post-Test Normality Test Diagram

DISCUSSION

In physical education learning, teachers are expected to be able to apply this badminton lob learning model to badminton material effectively and efficiently when practicing it. Because of this learning model, it is proven that there is a significant increase in the results of the pretest and posttest scores, namely 79.49%.

This shows that the badminton lob learning model is based on a strong theoretical basis and can be easily applied to physical education learning. It also shows that this model can improve the ability of fifth-grade elementary school students to play badminton.

With the aim of improving the psychomotor abilities of elementary school students, the badminton lob stroke is an effective movement lesson. Factors from within the child as well as stimuli that encourage physical education teachers to be able to maximize teaching support students' abilities to lob this badminton This is as quoted (Hoorweg, 2019): "Movement ability is a general capacity or characteristic of an individual that is associated with the achievement of various movement skills." It is hoped that the physical education teacher will be able to help students develop other movement skills by guiding them to practice movements that are considered difficult into easier movements.

One of the basic skills that must be learned by elementary school students in learning the game of badminton is a lob shot. A lob shot is a lob shot, namely a shot that flies the shuttlecock high and the shuttlecock falls on the opponent's back court" (Awira et al., 2022). The concept of the game used in this study really helps students' comprehension and absorption in learning lob movements in badminton. The concept of the game also makes students forget about skills that may be difficult to master.

Students will feel more comfortable and have greater opportunities to channel their abilities by playing; this also applies to other forms of learning. By using the method created by the researcher to help students learn the lob technique in badminton game material, the teacher uses it as a guide for using other movement material. "The development of the physical aspects of students can be supported through several basic movement activities, one of which is the basic throwing movement activity"(Hutama et al., 2019).

The basic movement activity of throwing is a basic skill in lob skills in hitting badminton games. The journal also found that students in elementary schools were more active because they had a large playing area where they could play as they pleased and learn their moves directly or indirectly.

It is hoped that children will participate in activities as often as possible, and because it will help cognitive and affective development and improve mental conditions, they will be as effective as possible. Children are expected to engage in physical activity without considering reach or other negatives.

Students who are proficient in lob badminton will have better acting abilities and be more confident in developing what they have learned at elementary school age. Because of this, it is hoped that students will be involved more in physical activities so that their growth is not hindered, especially in mastering their ability to lob badminton and can also support their technical abilities in certain sports.

This research has been attempted to the maximum with the capabilities possessed by researchers. However, the results of this research certainly have many shortcomings due to the limitations presented. The limitations are:

a. It would be even better if this product trial was carried out in a wider area.
b. The products created are still far from perfect and have flaws.
c. The use of facilities and infrastructure is limited.
d. Due to limitations in funding and research time, it is not possible to provide comprehensive treatment to the sample. This can affect the data collected on the appearance of the sample because, outside of the schedule, there will be social contact in the home environment because of the appearance of the sample in the

learning process and at the time of data collection.

CONCLUSION

Based on the data obtained, from the results of field trials and discussion of the results of the research it can be concluded that:

1. With the learning model of lob badminton in grade 5 elementary school students it can be practiced effectively and efficiently.

2. With the learning model for lob badminton for grade 5 elementary school students that was created, students can receive this learning material for lob badminton quickly because the learning model is game-based and very fun.

REFERENCES

Awira, A., Prawira, A. Y., & Dariyanto, D. (2022). Keterampilan Pukulan Lob Bulutangkis Melalui Pembelajaran Terpimpin pada Siswa Sekolah Dasar. *Edukatif : Jurnal Ilmu Pendidikan*, *4*(1), 1119–1125. https://doi.org/10.31004/edukatif.v4i1.1750

Hoorweg, J. C. (2019). Motor ability. *Protein-Energy Malnutrition and Intellectual Abilities*, *01*, 98–103.

Hutama, D. P., Sari, E. F. N., & Mustafa Mashur. (2019). *Improving the Basic Movement Learning Outcomes Through Modification of Learning Media in Grade V Elementary Student. 01*, 25–33.

Lin, K. C., Wei, C. W., Lai, C. L., Cheng, I. L., & Chen, N. S. (2021). Development of a badminton teaching system with wearable technology for improving students' badminton doubles skills. *Educational Technology Research and Development*, *69*(2), 945–969. https://doi.org/10.1007/s11423-020-09935-6

Opstoel, K., Chapelle, L., Prins, F. J., De Meester, A., Haerens, L., an Tartwijk, J., & De Martelaer, K. (2020). Personal and social development in physical education and sports: A review study. *European Physical Education Review*, *26*(4), 797–813. https://doi.org/https://doi.org/10.1177/1356336X19882054

Pelana, R., Setiakarnawijaya, Y., Dwiyana, F., Sari, L. P., Abdurrahman, Antoni, R., & Yusmawati. (2021). The effect of arm length, arm endurance and self-confidence on petanque shooting. *Journal of Physical Education and Sport*, *21*(4), 2381–2388. https://doi.org/10.7752/jpes.2021.s4319

Peñeñory, V. M., Manresa-Yee, C., Riquelme, I., Collazos, C. A., & Fardoun, H. M. (2018). Scoping Review of Systems to Train Psychomotor Skills in Hearing Impaired Children. *Sensors*, *18*(8). https://doi.org/10.3390/s18082546

Puspasari, R. (2019). Pengembangan Buku Ajar Kompilasi Teori Graf dengan Model Addie. *Journal of Medives : Journal of Mathematics Education IKIP Veteran Semarang*, *3*(1), 137. https://doi.org/10.31331/medivesvetera n.v3i1.702

Samsudin, & Subandi, O. U. (2022). *Disain dan Pengembangan Kurikulum Pendidikan Jasmani*.

Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif*. CV Alfabeta.

Sutrisno, H., Utami, N. S., & Dwihandaka, R. (2021). *Semangat Berolahraga* (E. S. Kriswanto, S. Raharjo, Suroto, & Yusmawati (eds.); 3rd ed.). Pusat Kurikulum dan Pembukuan, Balitbang , Kemendikbud.