BULUTANGKIS SERVICE EXERCISE MODEL FOR BEGINNERS

# Benny Badaru1, Hasmyati2, Sufitriyono3, Juhanis4, Hasbi Asyhari5

1,2,3 Department of Physical Education, Health and Recreation,

Faculty of Sports Science, Makassar State University, Indonesia

[1benny.b@unm.ac.id ,](mailto:1benny.b@unm.ac.id,%20)[2hasmyati@unm.ac.id ,](mailto:2hasmyati@unm.ac.id,%20)[3sufitriyono@unm.ac.id ,](mailto:3sufitriyono@unm.ac.id,) [4juhanis@unm.ac.id](mailto:4juhanis@unm.ac.id) 5hasbiasyhari89@gmail.com

# ABSTRACT

The aim of this research and development is to produce a badminton service training model for beginners. This research uses the Research & Development (R&D) research method of Borg and Gall with 10 steps and produces a training model product. The subjects in this research and development are middle school students consisting of 54 people. Test the effectiveness of the model using the badminton service test to determine the level of badminton service ability for junior high school beginners. The initial test data obtained by student data was 23.64, then after being given treatment in the form of a badminton service training model there was an increase in students' badminton service ability by 34.12. So the badminton service training model developed is effective in improving the ability of badminton service for beginners of junior high school age. Based on the results of the development it can be concluded that: (1) Badminton service training model for beginners can be developed into 6 service training models consisting of 3 lob services and 3 short services (2) With the badminton service training model for beginners that have been developed, there is evidence of an increase the ability of this service punch is shown in the test results of the pre-test and post-test results of a significant difference between before and after the treatment of the model.

***Keywords*:** Model, Service, Badminton and Beginner

# INTRODUCTION

Badminton is a type of achievement sport that is very well known throughout the world. Badminton is a sport that is played by using the net, rackets and balls with a variety of stroke techniques ranging from relatively slow to very fast accompanied by deceptive movements. Badminton games, there are three types of services, namely short service, high service, and flick service or half high service[1]However, services are usually combined into forehand and backhand types. Each type of service varies according to the game situation on the ground. In the rules of badminton, service is the initial capital to be able to win the match.

Motion activities are often done by exercising at school. Sport is an activity that is popular with students. One of them is badminton. Badminton is one of the popular branches of sports and is popular with the people of Indonesia, including the people of Makassar. This is evident that the majority in the community and schools have built badminton courts. In addition, various regions in Indonesia have held a lot of badminton matches between students, students, and the public. The match between students is a place or talent competition which is usually held in school extracurricular activities.

In junior high school physical education learning has an important role in the growth and development of students. Physical education learning as one of the tools of education can shape body postures and gestures that are perfect in accordance with the functions of the body tools. This is indicated by the shape of the body that is not bent, not tilted, can walk, and jump well, and perform other activities as they should without disturbing obstacles. Both aspects are developed by providing stimuli from the outside. This will lead to the emergence of activities in children in the form of learning as a distributor of activities that have been owned by children before, namely in the form of exercise. Therefore, physical education learning that should be presented to children in the form of variations in the form of training and activities of children called learning while practicing. Utilization of infrastructure becomes one of the supporting media tools for students to better understand the subject matter being taught[2]. The development of Physical Education learning model is one of the efforts to help solve the problem of limited physical education facilities and infrastructure in schools. Physical education model development conducted by Physical Education teachers can bring an innovative and creative learning atmosphere so that learning can be fun and motivate students to have more opportunities to exploit the movement widely and freely according to their ability level. Boring learning in junior high school students will cause a decrease in motivation to engage in physical education learning (Sun, 2013). This is confirmed by the statement[3]that one of the most appropriate motivations is from the trainer or teacher, motivation is needed to drive to do something caused by an interest in a goal so that a response arises in the form of activity display, so students are interested in following the next process.

A player who is unable to service correctly will get a fault. However, most coaches and players cannot pay special attention to training and mastering these basic techniques well. Coaches also rarely provide good forehand service training and short backhand service to their trainees. This is a big mistake, because the service is crucial in getting a score. It is said beginners because of their ability to master badminton skills that are relatively new in participating in the training of badminton.

In the Observation of needs analysis, it was found that the students were less motivated to take part in badminton extracurricular training especially in service because the training was boring and monotonous. Seen from the training process the athlete does not seem to directly do his job to perform service movements but tends to directly play badminton. The results of teacher interviews with students at school also showed that most of the novice athletes who attended training at school were bored with the training model provided, especially in service training. So from the results of these observations teachers and students in schools need a new model of badminton service training so that in addition to motivating students can also increase the quality of techniques in badminton.

The quality of service of students at school can also be seen from the results of tests conducted by researchers from a simple randomized test, seen that there are still many athletes whose services are still involved in the net, the position of the racket and the ball (shuttlecock) is not under the navel or the waist, the direction of the ball at long serve, the ball does not get to the back of the badminton court, the direction of the ball does not soar high with a parabolic pattern.

Based on the background above, researchers want to develop a model of badminton service training. For this reason, researchers will develop a model of badminton service training exercises for beginner athletes at junior high school age in Makassar City.

# RESEARCH METHOD

Research Conducted at SMP Negeri 24 Makassar, the research subjects were SMP students in Makassar City. The time for conducting research according to Borg and Gall is 6 months. The instruments in this study used instrument passing and controlling in playing futsal. Development research includes experimental activities and improvements to a development product that can be directly used by users. This research method uses qualitative and quantitative approaches and uses the Research & Development (R&D) development model from[4] which consists of ten steps in the image below:

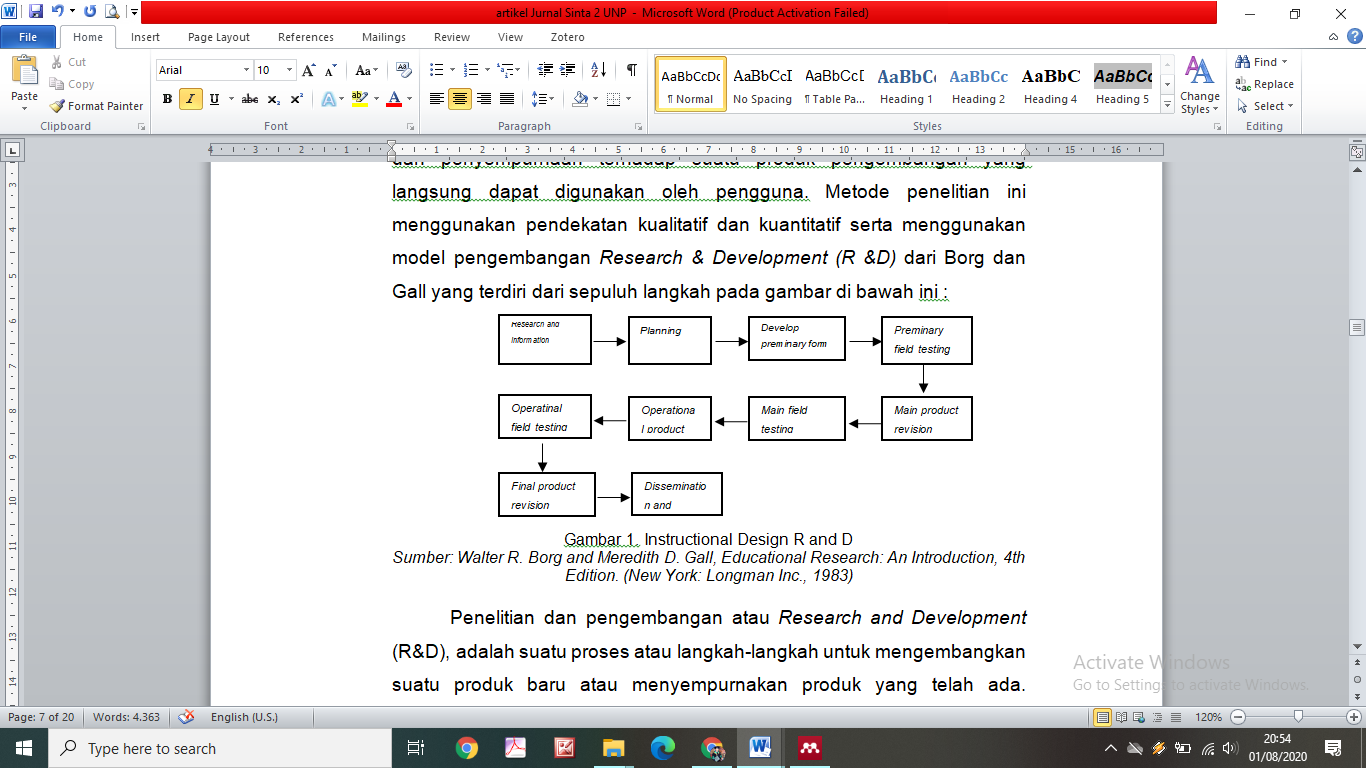


Figure 1. Instructional Design R and D

Sources: Walter R. Borg and Meredith D. Gall, Educational Research: An Introduction, 4th Edition. (New York: Longman Inc., 1983)[4]

Research and development or Research and Development (R&D), is a process or steps to develop a new product or improve an existing product. While the development model used is the Research & Development (R&D) development model of[4]which consists of ten steps including: (1) The first time determined is the problem or potential on which the model is developed; (2) Further information is collected as a rationale for making concepts; (3) Making the basic Passing-controlling technical training model (product design), the design form is the basic Passing and controlling futsal technical training model at junior high school age; (4) Design validation, carried out by 3 experts, (5) Revision, from the results of expert testing (design validation); (6) Carry out small trials (with 10-12 subjects); (7) Conduct product revisions (based on suggestions and small trial results); (8) Larger usage test or group test, 120 subjects; (9) Revision of the final product; and (10) Making a report on the product in a journal, work with publishers who can distribute commercially. The same thing was also conveyed by Sugiyono (2016) who stated that research and development are research methods used to produce certain products, and test the effectiveness of these products. Research and development is a process or steps to develop a new product or improve existing products, which can be accounted for[5].

1. **Preliminary Research**

The first step taken in this study is to conduct preliminary research by carrying out analysis in the field. Needs analysis is carried out by observing in the field, with sports that are new to developing in the community. This development model is expected to be an exact development that is very much needed in the development of basic technical training model training for beginners of junior high school age

1. **Model Development Planning**

This basic badminton technical training model was developed using the Borg and Gall development steps. At each stage of this research and development there are design steps whose explanations are described. The next step is to make an initial product in the form of a series of development models that can later be used as guidelines or instructions to improve quality, skills and accuracy. The initial product is outlined in an exercise model. The development of the training model is expected to be a product that can be developed systematically and logically, so that this product has the effectiveness and efficiency that are worth using. In the manufacture of products developed by researchers, researchers must consult the product with badminton sports experts to produce the perfect product.

The planned passing-controlling training model is:

1. Service Exercise Model I
2. Service Exercise Model II
3. Service Exercise Model III
4. Service Exercise Model IV
5. Service Exercise Model V
6. Service Exercise Model VI
7. Service Exercise Model VII
8. Service Exercise Model VIII
9. Service Exercise Model IX

Data to find out the results of student assessments is needed grading rubrics. In this study the steps taken for assessment are the pretest and posttest which is the prestest to know the students' initial ability and the posttest to find out the results after the treatment. Suharti & Darisman (2017) stated that in this study conducted observations twice, namely before (pretest) and after (posttest). After obtaining the results of the initial score and the final score subsequently the score is changed to a value. Next the difference is calculated between the pretest value and the posttest value to get the gain or gain value[6]. The formula used in calculating the gain score is:



# RESULTS AND DISCUSSION

# Model Development Results

The results of the development of the model in this study researchers produced products in the form of manuscripts that present various forms of training models of basic service techniques in badminton games for junior high school age children. Based on the research method used by researchers, one of the steps in the process of developing the model is the collection of data, in this case the researchers discuss with several badminton experts during training. This is used to find out how much is needed to develop a basic technical training model for basic service techniques in a badminton game which will later be developed by researchers and made an initial draft of a basic badminton technical training model. The results of preliminary studies or findings in the field are then analyzed and discussed in order to obtain a data result that has been collected. The formulation of these results is descriptive, referring to the purpose of the preliminary study. Researchers hope that the resulting product can improve the quality of learning of basic badminton service training exercises that can make students actively participate in learning, so that it is expected to improve the ability to play futsal. The resulting product is also expected to help Physical Education teachers to provide more varied, basic badminton service training exercises using these products. so it is expected to improve the ability to play futsal. The resulting product is also expected to help Physical Education teachers to provide more varied, basic badminton service training exercises using these products. so it is expected to improve the ability to play futsal. The resulting product is also expected to help Physical Education teachers to provide more varied, basic badminton service training exercises using these products.

|  |  |  |
| --- | --- | --- |
| NO | EXERCISE MODEL | IMPLEMENTATION |
| 1 | Exercise Model 1 (Service lob with 3 goals)  Objective: This training model is expected to be able to practice service lob skills and practice service lob accuracy | 1. Athletes are lined up to be given directions that have previously been warming up 2. The trainer explains the purpose and objectives of the exercise and demonstrates it 3. Athletes perform the movement begins by standing in the area of ​​the box or cone boundary 4. The athlete prepares to hold the racket and shuttlecock 5. Athletes lob service and try to put the shuttle kock into one of the 3 trash baskets that have been placed behind the opponent's field area 6. Each athlete is given the opportunity to repeat as many as 50 times the chance |
| 2 | Exercise Model 2 (Lob service with 2 goals)  Objective: This training model is expected to be able to practice service lob skills and practice service lob accuracy | 1. Athletes are lined up to be given directions that have previously been warming up 2. The trainer explains the purpose and objectives of the exercise and demonstrates it 3. Athletes perform the movement begins by standing in the area of ​​the box or cone boundary 4. The athlete holds the racket and shuttlecock 5. Athletes lob service and try to put the shuttle kock into one of the 2 trash baskets that have been placed behind the opponent's field area 6. Each athlete is given the opportunity to repeat as many as 50 times the chance |
| 3 | Exercise Model 3 (Service lob with 1 goal)  Objective: This training model is expected to be able to practice service lob skills and practice service lob accuracy | 1. Athletes are lined up to be given directions that have previously been warming up 2. The trainer explains the purpose and objectives of the exercise and demonstrates it 3. Athletes perform the movement begins by standing in the area of ​​the box or cone boundary 4. The athlete holds the racket and shuttlecock 5. Athletes lob service and try to put the shuttle kock into the trash basket that has been placed behind the opponent's field area 6. Each athlete is given the opportunity to repeat as many as 50 times the chance |
| 4 | Exercise Model 4 (short service with 3 goals)  Objective: This training model is expected to train short service skills and train short service accuracy | 1. Athletes are lined up to be given directions that have previously been warming up 2. The trainer explains the purpose and objectives of the exercise and demonstrates it 3. Athletes perform the movement begins by standing in the area of ​​the box or cone boundary 4. The athlete holds the racket and shuttlecock 5. The athlete performs short service and attempts to put the shuttle kock into one of the 3 trash baskets that have been placed in front of the opponent's field area 6. Each athlete is given the opportunity to repeat as many as 50 times the chance. |
| 5 | Exercise Model 5 (short service with 2 goals)  Objective: This training model is expected to train short service skills and train short service accuracy | 1. Athletes are lined up to be given directions that have previously been warming up 2. The trainer explains the purpose and objectives of the exercise and demonstrates it 3. Athletes perform the movement begins by standing in the area of ​​the box or cone boundary 4. The athlete holds the racket and shuttlecock 5. The athlete performs short service and attempts to put the shuttle kock into one of the 2 trash baskets that have been placed in front of the opponent's field area 6. Each athlete is given the opportunity to repeat as many as 50 times the chance |
| 6 | Exercise Model 6 (short service with 2 targets and rope hurdles)  Objective: This training model is expected to train short service skills and train short service accuracy by directing the shuttle kock as close as possible to the net so that it is not easily returned by the opponent | 1. Athletes are lined up to be given directions that have previously been warming up 2. The trainer explains the purpose and objectives of the exercise and demonstrates it 3. Athletes perform the movement begins by standing in the area of ​​the box or cone boundary 4. The athlete holds the racket and shuttlecock 5. The athlete performs a short service and tries to insert the shuttle kock into one of the trash bins that has been placed in the front of the opponent's field area with the result of the shuttle kock being struck between the net and the stretched rope or as close as possible to the net and does not exceed the upper limit of the rope which stretched on the net 6. Each athlete is given the opportunity to repeat as many as 50 times the chance. |

1. **Analysis of Small and Large Group Trial Data**

After lobbing and short service basic training model products in badminton are trialled in small and large group trials, after testing the product will experience changes by experts to match the actual conditions and be effective when used during the learning / training process. When the product is tested on a sample and also ask for advice from experts / experts then the product is tried by involving students.

The results of small group and large group trials on the development of basic lob service techniques are as follows:

**Table 1** Average value

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  |  | The mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Initial Test | 23,641 | 54 | 3,06014 | .41643 |
| Final Test | 34,1296 | 54 | 3.70133 | .50369 |

**Table 2. Correlation Coefficients**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Paired Samples Correlations | | | | |
|  |  | N | Correlation | Sig. |
| Pair 1 | Initial Test  &  Final Test | 54 | .326 | .000 |

**Table 3. Significant Differences**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Paired Samples Test | | | | | | | | | |
|  |  | Paired Differences | | | | | T | df | Sig. (2tailed) |
|  |  | The mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |
|  |  | Lower | Upper |
|  | Initial Test -  Final Test | 1,048 | 3.96 | .53900 | 11.56 | 9.40 | 19.45 | 53 | .000 |

*(Source: data processing)*

In the significance test of the difference with SPSS 22, the result of t-calculation = 19.45, df = 53 and p-value = 0.00 <0.05 which means that there are significant differences in the passing and controlling exercises of students before and after the treatment of the futsal passing and controlling training model. junior high school age developed, can effectively improve the passing and controlling futsal for middle school age. The following comparison of the average of the levels of passing and controlling tests before giving treatment and after giving treatment with models of passing and controlling futsal exercises with bar charts in the following figure:

**Initial Test**

**Final Test**

Figure 1 Bar Diagram

(Product Feasibility Test)

The results of small group trials and large group trials can be concluded that the model of futsal passing and controlling training for junior high school age can be used in the process of passing and controlling for junior high school age and is feasible and effective to improve the passing and controlling of athletes / students. Based on the results of the output table above, the correlation coefficient of training before and after the given passing and controlling futsal model is 0.326 with a p-value of 0.00 <0.05 so the conclusion is significant.

**Discussion**

Based on the acquisition of the figures in the table above it can be concluded that the basic technical training model for lob service and badminton short service for beginners of junior high school age can and is feasible and effective to be used in basic badminton service training exercises for junior high school age. There is a comparison of numbers which shows that the results of the initial and final tests have progressed, from the initial tests which amounted to 1277 then were treated in the form of training models of basic lob service techniques and short service badminton sports that have been developed then only a final test or post test is held to determine the effectiveness of the model developed and obtained data totaling 1843, So this model of basic lob training service techniques and short service badminton sports is effective for developing basic badminton service training techniques in junior high schools. Of the 6 basic technical training models consisting of 3 models of lob service training and 3 short services made above the aim is to develop cognitive aspects, affective aspects, and psychomotor aspects. Psychomotor aspects related to locomotor, non-locomotor and manipulative motion. According to Lumintuarso (2013) said that multilateral motion is an amalgamation of various basic movements (locomotor, non-locomotor, and manipulative motion) and basic motion sports skills. Of the 6 basic technical training models consisting of 3 models of lob service training and 3 short services made above the aim is to develop cognitive aspects, affective aspects, and psychomotor aspects. Psychomotor aspects related to locomotor, non-locomotor and manipulative motion. According to Lumintuarso (2013) said that multilateral motion is an amalgamation of various basic movements (locomotor, non-locomotor, and manipulative) and basic motion sports skills. Of the 6 basic technical training models consisting of 3 models of lob service training and 3 short services made above the aim is to develop cognitive aspects, affective aspects, and psychomotor aspects. Psychomotor aspects related to locomotor, non-locomotor and manipulative motion. According to Lumintuarso (2013) said that multilateral motion is an amalgamation of various basic movements (locomotor, non-locomotor, and manipulative motion) and basic motion sports skills.

Seeing the advantages and disadvantages of the products made there are inputs that researchers will convey in order to achieve the improvement of this product, while the input is as follows:

1. In this model it is necessary to adjust the movements of students who practice with the basic technical model of service lob and short service badminton.
2. The use of more equipment and pay attention to comfort and safety can make children more leverage in doing the movements of the basic technical model of lob service and short service badminton provided by the teacher / trainer.
3. Characteristics and understanding of athletes / students, requires the teacher / trainer to provide direct practice to students to learn the movements that are felt to be new.

**Product Discussion**

The basic technical model for lob service and badminton short service made by researchers is a product that aims to assist the teacher / trainer in delivering material to improve the basic technical skills of the lob service and short service badminton athletes / students, and as a reference for training materials. This basic service model is made based on the level of children's needs in training activities especially the basic techniques of playing badminton in extracurricular badminton for beginners of junior high school age. This product after reviewing some of the weaknesses that need improvement, it can be conveyed several advantages of this product include:

1. Improve basic lob service techniques and short service athletes / student badminton.
2. This model can make athletes / students more active, and enthusiastic in training the basic techniques of lob service and short service badminton.
3. Athletes / students can feel comfort and safety in the process of badminton training at school, especially basic lob and short service techniques.
4. The basic engineering model lob service and short service badminton is more effective and efficient
5. Can help trainers in training athletes / students in extracurricular activities in schools.
6. Contributions to science, especially physical education at school
7. The basic technical model of lob service and short service badminton is done systematically from easy to difficult.
8. Athletes / students are also required to think quickly, precisely.
9. The model used is very varied which can increase the level of enthusiasm of athletes / students in training.

# CONCLUSIONS

Based on the data obtained, from the results of field trials and discussion of research results it can be concluded that this research and development produced a product model of the basic technique training stroke service in badminton games for junior high school age beginners. With the development of the basic technique training model of service punches in this badminton game to students, coaches and teachers of physical education and health can learn and implement the basic technical training model practice punches effectively and efficiently, so that students / athletes can master the material and practice of badminton early on properly and correctly.

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