



## Developing Game-Based Learning Model of Long Jump for Elementary School

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### Abstract

This research aims was to develop a product of a game-based learning model of long jump for elementary school students. This research is a development research using Research and Development from Borg and Gall which consists of ten stages. The subject in this research is elementary school student in Palembang city . Data were collected through documentation, observation, interview and learning test of long jump skills. Data analysis was done descriptively , qualitatively and quantitatively. The results of the study prove that: 1) the development of game-based learning model of long jump for elementary school students has been declared valid, 2) game-based learning model of long jump for elementary school is 80% can increase the ability of long jump and build a sense of courage and give motivation to elementary school students. Game-based learning model of long jump for elementary school students as a whole is feasible and effective to be used in elementary school students.

### How to Cite

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## INTRODUCTION

In the scope of physical education, sports, and health subjects in Primary Schools includes games and sports, development activities, gymnastic activities, rhythmic activities, water activities, outside classroom education and health. Games and sports include: traditional sports, motion exploration games, locomotor non-locomotor skills, and manipulative, athletic, round, rounders, kippers, soccer, basketball, volleyball, table tennis, field tennis, badminton and martial arts, and other activities. Physical education is indeed the world of children and in accordance with the needs of children. Children can learn happily to share their desire to move. Motion is produced or not, we call exerting a force. When motion is produced by applying a force to an object, it is clear that larger forces give rise to faster motion than smaller forces on the same object under the same condition (Mansfield & O'Sullivan, 2011).

In learning physical education and health there is scope that is a reference for learning. One of the scope of activities that will be taught is development activities in which there are physical fitness material. In physical fitness material, there are components taught in accordance with the basic competencies that have been given by the government. Basic competency is intended as a benchmark for students in conducting a learning process. One of them is the long jump.

The long jump number is one of the numbers incorporated in athletic sports, and this number is always contested in every athletic championship, both at regional, national and international levels. Athletics as the oldest sport in human history is included as a curriculum that must be taught from the basic education level to the upper level. The results of interviews conducted in 3 elementary schools in Palembang, almost all students did not know the full length of their long jump material. They had never studied so far, if taught by students who did not want to learn because they were considered unattractive, most of them only liked and the teacher also did not understand much about the technique of the long jump line. It will have an impact on the low motivation of student learning, for teacher it is important to optimize athletic learning especially in the elementary school then the student will have desire to learn.

The student must master and have basic skills about the techniques of the long jump to do long jump properly and correctly, because basic technique is the main key to master of the sport. Like as with the long jump, without mastering

the basic techniques, surely you cannot make the leap far and right. Learning models of the basic techniques of the long jump do already exist, but the long jump learning model still needs to be developed and even improved so that a student is more active and not motivated in making a move. The facts on the ground are based on the results of observations, interviews, small-scale research, understanding of the long jump in elementary school is still considered monotonous and lack of innovation and teacher creativity so students still feel intimidated and do not find comfort in the teaching and learning process.

In long jump learning, the student has different technique. It is a problem that will impact learning achievement. Then the teacher has to create the creative model. Like as Panteli, Tsolakis, Efthimiou, & Smirniotou (2013) that a considerably higher performance improvement was recorded for the self-talk cluster in post check, whereas once kinematic variables of the motor talent (center of mass displacement) were assessed, "observational learning" tried to be simpler. The findings of the present study recommend that young, beginner athletes, taking part in sophisticated tasks, might have the benefit of psychological feature intervention techniques, through increased basic cognitive process specialize in the foremost vital components of the motor talent. It is related with other research that concluded it is necessary to hold out additional surveys handling this issue so as to work out additional exactly that variables represent the key factors for the optimum performance of the take-off within the long jump, the achieved length and to look at the changes in kinematical variables at most run-up velocities, as a result of it's necessary to grasp what's basically happening in real (competitive) conditions (Matic et al., 2012).

There are several problems that can be used as a basis for improving learning long jump techniques in schools including: (1) the teaching style used by teachers is still monotonous, (2) The implementation of learning that is far from comfortable, safe and pleasant, (3) Lack of teacher approaches to students in the teaching and learning process, (4) students and teachers lack of understanding in achieving learning outcomes, (5) lack of creativity, teacher innovation in the teaching and learning process, (6) boring learning model so that the atmosphere becomes unpleasant and uncomfortable so students do not active to move. Lavin (2008) stated that Every child is capable of being creative. However, when pupils are forced to suppress their creativity by participating in an activity they dislike or which does

not motivate them, then their response can lead to inappropriate behavior.

Researchers use the material conveying long jump over with models that are more interesting and fun for elementary school students. Therefore the researcher prefers to develop game-based long jump learning models for elementary school children that are tailored to the characteristics of students. Tiza, Suroto, & Indahwati (2018) concluded the development of long jump learning strategy through game activity in fifth grade Elementary School physical education, sport and health learning is feasible to be used as a source of learning according to student's responses in learning. With long jump learning model through simple games, students can learn effectively and fun. The game gave the new experience to learn and enhanced the enthusiasm atmosphere of physical learning in the elementary school (Sumantri, 2015). But there is still a lack of game application in jump long learning. Thus, this research is addressed to the development of a long jump learning model that has different the characteristics of students in elementary school students in general who like to play, love to move, love to work in groups and like to feel or do something directly. Game has the high influence to children. The game makes the learning situation enjoyable. Like as Praniata, Kridasuwarsa, & Puspitorini (2019) stated that the model of futsal passing training has effective small-sided games used for futsal passing exercises

Based on the problems that occur, it is considered necessary to have improvements, creativity and the latest innovations in the long jump learning process for elementary school students. Basically, students in elementary school must refer to learning activities that are active, creative, innovative, safe, comfortable, enjoyable, cheerful and not monotonous. The game provides these needs. From the description above, the researchers took the initiative to develop a game-based learning model of long jump for elementary school students.

## METHODS

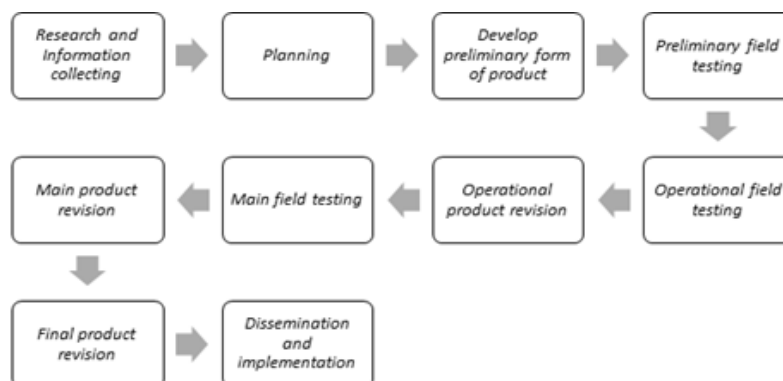
The approach and method used in this study are mixed methods research which combines qualitative and quantitative methods. The research method used in this study is the research and development method (research and development) from Borg and Gall (1983).

The ten steps of development research in **Figure 1** that were applied in this study have been summarized into three major steps, include: (1) preliminary study phase; (2) the planning and development phase of the model; and (3) Model Validation, Evaluation and Revision.

Data collection in this study used: (a) field notes, questionnaires, and tests. Data obtained during the needs analysis, expert validation, and trials in the development activities are in the form of qualitative data (results of observations and suggestions / inputs) and quantitative data (results of questionnaires and results of effectiveness tests). Quantitative data from the results of questionnaires were analyzed using descriptive analysis techniques with percentages and test results data (pre-test and post-test) by t-test. To determine the feasibility category of the long jump learning model for elementary school children, a questionnaire was given to expert judgment and the teacher in the field test. The questionnaire used in the study used a measurement scale, namely the Guttman scale used for experts and teachers with two feasible or inappropriate choices. The results of a proper or inadequate assessment by an expert are then converted into a score and calculated as the result. After that it can be concluded that the results are feasible and not feasible from the model.

## RESULTS AND DISCUSSION

The results of the experimental pre-test group were 12.30 and the results of the experimental post-test group were 17.40. From these data it can be seen that the value of the experi-



**Figure 1.** Research and Development Steps

mental post-test group is higher than the pre-test experimental group. The difference is strengthened by a significant value that is smaller than 0.05 (5%), which is 0,000 (in the Independent Sample Test table, Sig 2 tailed column).

The calculation results obtained a Sig 2 tailed value of 0,000 <0,005, then there is a difference between the average pre-experimental group class with an average value of 14,10 with an average class post-test experiment with a value of 17.50. This shows that the results of the increase in the experimental group's post-test group were higher compared to the experimental class pre-test group.

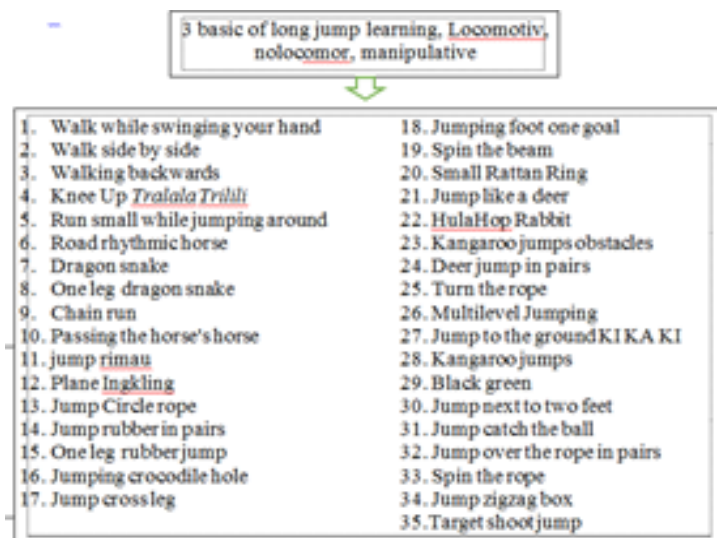
Based on observations and interviews that learning is not getting more attention from teachers and students, it not only can use the equipment but also the learning process will use to develop game-based learning model of long jumps, the school still lacks understanding, and the teacher does not physically give students a sense confidence, courage, a sense of togetherness, and basic movement in students, and teachers also do not provide physical abilities of students, such as increasing speed, and agility. Therefore it can be concluded that physical education teachers and elementary school students need game-based learning model of long jump as one of the alternatives in good learning activities, right according to what is expected, so that students do not feel bored and know a lot of basic moves in the form of game jumps which gives rise to joy, and pleasure.

The model design is adjusted to the results of the needs analysis. The game model in long jump learning is divided into 3 concepts: 1) Locomotive 2) nolocomor, and 3) manipulative. Of the three basic concepts varied into 35 types of games as illustrated in the following **Figure 2**.

Based on expert tests that have been done, it can be concluded that variations in the game-based learning model of long jump for elementary school have 8 models of games that are not feasible by the age of elementary school students, so that initially 35 games become 27 games that are feasible and can be used for elementary school students. As for inappropriate games for elementary school students is cross leg jump, jump over one-foot goal, play beam, throw a small rattan ring while jumping, black green, jump crab, jump catch ball.

The results of the recapitulation of small group trials / initial field trials with the subject of 20 elementary school students above can be concluded that the overall basic game-based learning model of long jump for elementary school students can be applied to each student with direction from the trainer teacher. The results of this small group trial indicate that the product learning model can be carried out at the trial stage of a large group / main field test. Based on the results of the evaluation of the small group trials that have been assessed, the model of the learning of the basic long jump motion can be concluded, as follows:

1. The games made are quite easy to do in accordance with elementary school criteria and play on the basic techniques of long jump. Observation results of 89% is included in the criteria of good or feasible to do.
2. Concept of explanations and implementation observed by 78% so that the criteria are good or feasible to do
3. The interest of students in performing their observations of 96% so that they are included in the criteria of good or feasible



**Figure 2.** Concept of Long Jump Learning

to do

4. The level of game security were 96% so that they were included in the criteria of good or feasible to do
5. Infrastructure, and game equipment, such as boxes, cones, ropes, etc were 60% so that it is sufficient or feasible to do.

Based on the results of trials of large groups or main groups it can be concluded that the game is feasible and can be applied

1. The games made are quite easy to do in accordance with elementary school criteria and play on the basis of basic techniques long jump observation results of 96% so that it is included in the criteria of good or feasible to do
2. Concept of explanations, implementation and basic techniques observed by 98% so that they are included in the criteria of good or feasible to do
3. Level of interest's students in performing is 95% so that they are included in the criteria of good or feasible to do
4. Level of game securityise 80% so that they are included in the criteria of good or feasible to do
5. Infrastructure and game equipment, such as boxes, cones, ropes, and others whose observations are 85% so that entry in criteria sufficient or feasible to do.

## CONCLUSION

In accordance with the results of field trials and discussion of the results of the study, it can be concluded that:

Products have been produced is game-based learning model of long jump for elementary school students.

Based on the results of the model effectiveness test, it is proven empirically that the product results in the form of a long jump learning model for elementary school students have very good effectiveness for students. This is indicated by the results of the t-test on long jump learning, there is a very significant increase. So, long jump

learning model for elementary school students is based on effective games to improve learning long jump skills.

Game-based learning model of long jump for elementary school students as a whole is feasible and effective to be used in elementary school students. Therefore, the findings can be used as a model of learning should be used by physical education teachers as an alternative form of physical activity for elementary school students because it is effectively used to improve long jump learning skills in students.

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