Learning model development short run based games

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ABSTRACT

The aim to be achieved from this research and development is to products Learning Model Short Run Games Based in University of Lampung Penjaskesrek Students. This research and development was carried out to be able to obtain information about the development and application of the Development of Learning Model Short Run Games Based in Lampung University for Penjaskesrek Students and to determine the effectiveness of the models produced. This research uses Research & Development (R & D) method from Borg and Gall. The subjects in this study were Lampung University students consisting of 40 students. The stages in this study are needs analysis, expert evaluation (initial product evaluation), small group trials, and large group trials (testing fields). The model effectiveness test uses a 50 m short running test which is used to determine the level of ability before and after the treatment of a game based short running learning model developed. The initial test that was carried out was obtained the ability level was 7,0582 After being given the treatment of the game-based short running learning model obtained a value of 6,1035. In the significant test of differences with spss 16, the mean = 0.954 shows the difference from the results of the pre-test and post-test results, the results of t-count = 18.182 df = 39 and p-value = 0.00 < 0.05 which means there is a significant difference between before and after being given the treatment of game-based short running learning models. Thus the Learning Model Development Short Run Games Based for students in Lampung University is effective to improve short running skills.

Keywords: Learning, Development model, Running, Based Games

INTRODUCTION

Sports education, which is one of the academics that is the beginning of progress, must be the front guard in the application of every advancement of knowledge and technology, by elaborating all theories by collaborating with every field of science and technology that can support them, because they are in accordance with their characteristics multidisciplinary. In the field of sports education not yet broadly or maximally can be able to access things based on renewable technology with various possible reasons for good resources, as well as the limited resources available. This phenomenon of reality has become empirical evidence for the world of sports, both the sports community and the world of sports education. This can be a serious problem for the continuity of human life that is healthy, fit and happy, because of neglect about the level of resilience or fitness of a person, in the absence of data and methods and models that are correct and good and enjoyable in carrying out any sports activities.

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Coaching is a concept that is carried out as an effort to foster resources owned by humans aimed at achieving optimal achievement, especially in the field of sports. The trainer is a person who provides guidance or education on a sport that aims to make athletes or players able to achieve maximum abilities (Coakley, 2003). The role of the trainer as the person who makes the plan that is related to the training process, prepares the planning of the training program. Usually arranged in a certain period of time. Such conditions, the role of the coach makes a fundamental figure, which means the success or failure of athletes to achieve the highest achievement also depends on the extent to which the training program has a significant effect on the development of athletes. The trainer must have scientific information about the knowledge to be taught. To process scientific information, a trainer needs the art of processing so that he is able to describe and practice scientific data in a coaching program.

Athletics, especially short-distance running, has special characteristics or styles that give individuals the opportunity to make maximum movements, so that someone is required to have good physical fitness. Physical fitness in question is in the form of prime physical fitness to support one's appearance. Physical preparation is an important thing in the preparation period of a team to achieve optimal performance. As previously explained, physical fitness in the form of physical fitness greatly influences one's appearance. Through physical exercise, unfavorable conditions will increase. After doing well-programmed physical exercise, the results of physical exercise can be seen from the increase in a person's appearance which ultimately has a positive impact on appearance.

The development of short distance learning models based on games can help physical fitness of students or athletes in achieving their learning goals, or their peak achievement goals, in the field of measurement tests will be able to assist the measurement process in sports activities with accurate, valid, reliable, easy, effective and efficient. The model developed is a model based on the game, because in the game it contains elements of pleasure, with pleasure every student or athlete will be able and always do well. Therefore researchers will develop learning model instruments based on games or games on short-distance running against students.

The development of short distance running learning models based on games or games is a tool developed by researchers as a form of a tool model that can be seen in terms of efficiency, time effectiveness, easy, cheap, fun, in achieving the expected goals and this tool is tested with validity and reliability testing of experts who are expected to be valid and can provide one solution in overcoming limitations in the level of learning and training with a model.

LITERATURE REVIEW
1. The Concept of Learning
Learning is defined as a deliberate effort by educators to support student learning activities (Kusumandari & Istyarini, 2015). Learning is a general term used to describe changes in behavior and results from experience. In the opinion of Bloom (1976) quoted by Husdarta, he stated that "The learning process experienced by humans takes three main paths, namely those relating to the cognitive domain, affective domain and psychomotor domain" (Yudha, Husdarta, Farman, 2005). Through this opinion has caused a change in the way people see and believe and practice learning situations in school. Bloom's taxonomy has shown the right identification in terms of hierarchical

behavior of each category, so that it has led to a more comprehensive analysis of teaching approaches, expected results, and judgments. Learning is the influence of practice or experience. Capacity development can indeed develop without being trained, this ability develops for example, because of the influence of maturity and growth, such changes in abilities will certainly improve skills even if they only reach a minimum. Changes in children's skills due to maturity, obviously can not be said as a result of learning. This is because these changes are not due to the results of the exercise.

In the definition above it is said that the changes that occur must involve the existence of training or the giving of certain experiences. The important idea in the learning process is the transfer of learning outcomes, this is a classic problem not only in motor learning, but also in learning other fields of study. Thus, in the learning atmosphere, the transfer aspect is the main feature of successful learning. In the implementation of intensive education as a process of human development that lasts a lifetime, the role of physical education is very important, namely providing opportunities for students to be directly involved in various learning experiences through activities physical, playing, and sports activities systematically.

2. The Concept of Learning Motion
Learning to move is a study of the process of involvement in acquiring and perfecting motor skills. Because motion skills are very much tied to the practice and experience of the individual concerned. During this time the success of learning is only measured by the high results achieved by students, but more important than the results of learning is the increased performance of the students themselves. Psychologists have found it useful to define learning in terms of increased ability, performance, skills that develop during the training process, increased ability means also increased performance, increased performance is an indication that the learning process has occurred. William (2010: 9) argues that motor learning is the study of processes involved in acquiring motor skills and variables that promote or inhibit such acquisition. According to Richard (2011: 327), motor learning is a set of processes associated with practice or experience leading to relatively permanent changes in the capability for skilled performance.

The motoric term implies the existence of muscle motion which seems to involve only a few cognitive and perceptual aspects, but the fact that the skills performed are something that is complacent and involves the detection of stimuli, evaluation and decision making which are all carried out at a level that height and real response is only a movement of activity as a whole.

3. Concept of Game
The concept of the game can be said to be a physical activity carried out voluntarily and earnestly to obtain pleasure, as a means of learning by giving children the opportunity to learn in a way that can be categorized as playing, which makes the experience felt and perceived naturally by children so that it becomes meaningful. In every implementation, physical education material is a process of interaction between students and the environment through physical activities that are managed systematically to shape Indonesian people as a whole (Salam, 2016). The game is a tool for children to explore their world, from what is not recognized to what is known, and from what they cannot do until they are able to do it. Playing for children has values and characteristics that are important in the progress of the development of everyday

life. In every playing experience there is a risk, when learning to run fast, jump, throw, etc. will experience pain or stiffness, but if done continuously can improve the ability to understand motion, physical fitness, bioligical growth, foster courage of confidence, and foster pleasure.

4. Model Concept
The concept of the model is a complex act. Complex actions can be translated as the integrative use of a number of components contained in the teacher's actions to convey the message of teaching. A model is a simple representation of more complex forms, processes and functions of physical phenomena or ideas (Gustafon & Branch, 2002). Therefore, in the world of teaching it is better for the teacher to use a prototype of a theory or model. The model is called because it is only an outline or points that require a very situational development.

The learning model is a plan that is used to design. The contents contained in the learning model are in the form of teaching strategies used to achieve instructional goals (Husdarta: 2009). In the context of learning, the model is a physical or conceptual presentation of the learning system into a pattern or framework that is presented in its entirety. A learning model includes the entire learning system that includes the objective component, learning conditions, teaching and learning processes and evaluation of learning outcomes (Juliantine, 2010).

a. The concept of short distance running
In short distance running numbers are parts of the parent sport called athletic sports. The parent athletic sport is a branch of sport which consists of road numbers, running, throwing, and jumping. Athletic words are derived from the Greek word athlon which means "race". Athletics is a sport that was competed at the First Olympics in 776 BC.

Athletics is one of the sports which provides the most gold medals. Every record-breaking in an athletic sport is a historical record in each Olympics. The term "athletics" comes from the Greek word "athlon" which means competing or competing. We can find in the word "penthalton" which consists of the word "pentha" means five or panca and the word "athlon" means race. The full meaning is "five race" or a race consisting of five numbers. If we say an athletic race, the definition includes fast road racing, running, jumping and throwing, which in English the term "track and field" is used. If translated in Indonesian, it means a race conducted on a track and in the field. The term "athletic" in English. The definition of running is the frequency of steps that are accelerated so that when running there is a tendency for the body to drift. That is, when running both feet do not touch the ground at least one foot still touches the ground (Yusuf & A.W, 2017). Short distance running is running at full speed along the distance that must be traveled, or up to a predetermined distance. Short distance runs consist of running 100 m, 200 m, 400 m. technically the only difference is in saving the use of energy, because of the difference in distance that must be taken. The farther the distance that must be traveled, the more energy must be needed. The short distance running movement is divided into three stages: start, sprint, finish movement.

b. Concept of Games
Huotari & Hammart define game as a system in which players engage in an artificial conflict, defined by rules that result in a quantifiable outcome. The concept of the game can be said to be a physical activity carried out voluntarily and earnestly to obtain

pleasure, as a means of learning by giving children the opportunity to learn in a way that can be categorized as playing, which makes the experience felt and perceived naturally by children so that it becomes meaningful. The game is a tool for children to explore their world, from what is not recognized to what is known, and from what they cannot do until they are able to do it. Playing for children has values and characteristics that are important in the progress of the development of everyday life. In every playing experience there is a risk, when learning to run fast, jump, throw, etc. will experience pain or stiffness, but if done continuously can improve the ability to understand motion, physical fitness, bioligical growth, foster courage of confidence, and foster pleasure.

In the game concept, it can be said that the game is an activity that is truly carried out with or without using a tool by developing imagination that produces satisfaction, pleasure, and achievement. Games as educational vehicles will be successful if the teacher or physical education trainer understands the role of the game in education, chooses the type of game that is appropriate to the child's development stage, knows the needs of the child, and can determine learning methods or models that are appropriate for the child's or student's circumstances and the condition of the athlete.

RESEARCH METHODS
Development research is a systematic study to design, develop and evaluate programs, processes and learning outcomes that must meet the criteria, consistency and effectiveness internally. Sukmadinata (2012: 164) states that research and development is a process or steps to develop a new product or perfect existing products that can be accounted for. As stated by Cony, the main target of Development Research is not to formulate or review a particular theory but to develop a particular product (Semiawan, 2010). So development research is not only oriented to the study of the theory but is based on the benefits of the results of the development of the research.

So the development of learning models is the result of research that is oriented towards the results of product development. Research and Development (Research and Development) according to Borg & Gall, 1983) is a process used to develop and validate educational products. Research and development (R & D) according to Borg and Gall in Sugiyono (2016) states that, research and development is a research method used to develop or validate products that are used for use in education and learning. Research and development is research that produces products and can be tested the effectiveness of these products.

Sukmadinata also explained that research and development is a process or steps to develop a new product or perfect existing products, which can be accounted for (Syaodih & Sukmadinata, 2017). So research and development carried out must go through a process or steps so that new products or improvements to existing products can be accountable for their results and benefits. So the research development of research steps is arranged systematically in a circular or rotating manner starting from analyzing activities, designing activities, evaluating to revising the objectives desired by the researcher. Development research is a research approach that is linked to work design and development and has a purpose for design in a learning environment and strives for an understanding of the fundamental scientifically. Development research is not to detail and implement complete interventions but is intended to provide learning motivation by displaying interesting and creative learning.

Thus development research can be concluded as a research that produces a product that has been analyzed before the level of effectiveness in learning or learning, and has been designed, evaluated and revised with the results of development on the model. In this case what will be developed is the development of a game-based running game model for middle school students or beginners

RESEARCH RESULTS
1. Model Development
The development of the Short-distance Learning Model in Students of the University of Lampung Health Center is intended to produce effective and more varied short-distance learning models. The data from the needs analysis are presented in several ways, namely interviewing Student Lecturers in the University of Lampung University of Lampung and distributing questionnaires to students of the University of Lampung Nursing Education. Data from the validation results will be presented by three athletic experts obtained through questionnaires. The data from the results of group trials originating from the members of the University of Lampung Nursing Education Team by filling out questionnaire instruments for small group trials with 20 subjects, 60 field subjects, and the effectiveness of 40 subjects.

a. Results of Need Analysis
There are two objectives to be known in the needs analysis, namely:
1) The importance of developing a short distance learning model for students at the University of Lampung.
2) Constraints or problems and what support is found in the development of the Short Distance Running Learning model for Lampung University Students

This Short Distance Running Learning Model is made based on the problems found by researchers in the field through the process of observation and interviews through questionnaires that the researcher gave to. Based on the results of observations and interviews in the field, researchers will try to provide solutions to these problems by developing a short distance learning model.

b. Results of Data Need Analysis
Based on the data obtained by the researchers through interviews and questionnaires to 60 Students of the University of Lampung Health Laboratory and then processed and described. The formulation of the research carried out for the University of Lampung Students in Health and Medical Sciences was held in January 2018.

Based on the data obtained by the needs analysis in the form of a questionnaire. Based on the analysis of these needs, it can be seen that: (1) Lampung University Penjaskesrek students are interested in participating in Learning activities (2) Lampung University Education and Training Center Students feel that there is no variation in monotonous Short Distance Learning (3) Students of University of Lampung Nursing requires developing a Running Learning model Short-haul. For Lampung University Students (4) Athletics Lecturers need short distance running learning models (5) Lecturers need media references in the form of electronic and non-electronic books to support the learning process. The findings in the field or preliminary studies are then described and analyzed so that the results are descriptive and analytical, with a preliminary study as a reference.

c. Model Feasibility

The development of model learning each implementation begins with a needs analysis with the aim of gathering information needed in making models with interview methods and filling out questionnaires (Damien Gall, 2014) then delivered in 10 steps in the design model of elements of expert validity or expert testing into elements The main thing is to see that the learning model of short-distance running based on games is feasible to become a model that has content or material content that can be used practically and effectively in short distance running athletic learning.

After the researchers conducted the stages of collecting and drafting the Short Distance Running Learning model for Lampung University Students. The next step is done by the researcher doing an expert test. Expert tests are conducted which aim to obtain the feasibility or validity of the model produced by direct assessment of athletic experts.

The researcher presented 3 experts in the field of athletics, two professors as sports lecturers and an athletic trainer in evaluating the feasibility of the Short-Distance Learning Model for Students of the University of Lampung. Based on the feasibility test conducted by experts, it can be concluded that the variation of the Short Distance Running Learning model for Lampung University Students, 1 Learning model was declared inadequate because it was not in accordance with the objectives of the short distance running learning model so that the total Learning model changed to 29 Learning models became 28 short-distance learning models for students at the University of Lampung and can be implemented for students at the University of Lampung Health Center.

Variation in Learning 1 is an inappropriate learning model. Item Learning model is too difficult in aspects of the running reaction movement does not have aspects of practical use and is not effective in running, not suitable for Lampung University Students. To test large scale using 28 model items for the next stage. Expert tests conducted on 3 experts there are several suggestions for perfecting the short distance learning model for Lampung University students including:

1) Instructions and directions for the implementation of motion in the University of Lampung Penjaskesrek students or University of Lampung students in the health education center must be arranged or made clearly, so that it is easy to understand and be carried out by students of the University of Lampung Nursing Education.
2) The learning model should contain easy-to-implement, practical and effective aspects for short distance learning.
3) The image on the model must be clear and attractive so that it is easily understood by students of the University of Lampung Nursing Education.
4) Facilities and tools used should be in accordance with the objectives of the Learning. The target should also be considered the quality to support the learning process.
5) Short Distance Running Learning Models must be in accordance with the Learning objectives, namely for Students of the University of Lampung Nursing Education starting from the easiest to the most difficult.

d. Model Effectiveness

Furthermore, it is strengthened by the stages of learning planning by (Widiastuti, 2019) which includes learning, repetition, skill, perfection, and assessment, short distance learning learning models can be practically used, utilized easily, effectively and validly according to expert input, the model meets the learning stages short-distance running at

the reaction or push stage, acceleration stage, transition stage, maximum speed stage, and speed and finish maintenance stages (Nurdini, 2016).

The learning model fulfills the elements of the game, namely there are goals that are clearly chosen, fun, have a biological and consciously and actively carried out by paying attention to several theories and input expert advice on short-distance running games based on games have practical and effective validity values to be applied to athletic learning models short distance running.

1. First stage results / Small group trials
After the short distance learning model for University of Lampung students has been evaluated by experts, the model is in stage 1 evaluation conducted by experts as a reference for researchers in carrying out the next stage.
Based on the evaluation of the trials in small groups, it can be concluded as follows:
a) All all variations of the Short Distance Running Learning model can be done by Students of the University of Lampung Nursing Education, which need to be considered is the order of difficulty of the learning model starting from the easiest to the hardest so that learning runs in accordance with plans and techniques.
b) When implementing the Short Distance Running Learning model in the Student Field of the University of Lampung, the University of Lampung paid little attention to the direction of the Lecturer and the duties of a Lecturer must always monitor during the Learning process so that the objectives of Short Distance Learning can be achieved in accordance with the expected goals.

2. Second Stage Results / Large Group Test
After a small group trial, the Short Distance Running Learning model for University of Lampung Students and has been revised by athletic experts, the next step is to conduct large group trials. Based on the results of the small group trials that have been evaluated by experts, the researchers then revised the initial product and obtained 28 models of Short Distance Running Learning based on University of Lampung Student games that will be used in testing large groups.

The next step that will be carried out after the model undergoes revision of stage 2 from the expert will then be followed by testing the product with a large group using the subject of research as many as 40 students from the University of Lampung Nursing Academy

3. Effectiveness Test Results
The data shows the results of the short distance running pre-test and post-test for Lampung University students. The pre-test was carried out after small groups and large groups revised. The pre-test was carried out before the implementation of 28 game-based short-distance learning models for Lampung University students. Tests are conducted to find out the results before being given treatment. The average test results of 40 students at the University of Lampung Health Laboratory are 7.0582. After the treatment of the Short Distance Running Learning model is 28 models that have been evaluated and then validated, a post-test is carried out on 40 students of University of Lampung Nursing Education to determine whether there is an increase in short distance running skills. University of Lampung Health Center after being given a variety of Short Distance Running Learning. After the test, it was found that the ability to run short distance running students was marked by a decrease in time with an average of

6.1035. Based on the description above, there are differences in the results of the time between the pre-test and post-test that the Short Distance Running Learning model for Lampung University Students was developed effectively and can improve Short-Distance Learning for Students in the University of Lampung.

In a significant test with MSS 16, the mean = 0.954 shows the difference from the results of the pre-test and post-test results, the results of t-count = 18,182 df = 39 and p-value = 0.00 <0.05, which means there are significant differences between before and after given the treatment of the Short Distance Running Learning model.

Based on these results it can be concluded that the short-distance learning model based on games for Lampung University students is effective and can improve short-distance running capabilities compared to untreated groups. Comparison of the results of the average record of the pre-test and post-test scores of the experimental group after being treated by the model of Short Distance Running Learning for Students at the University of Lampung can be illustrated with pie charts.
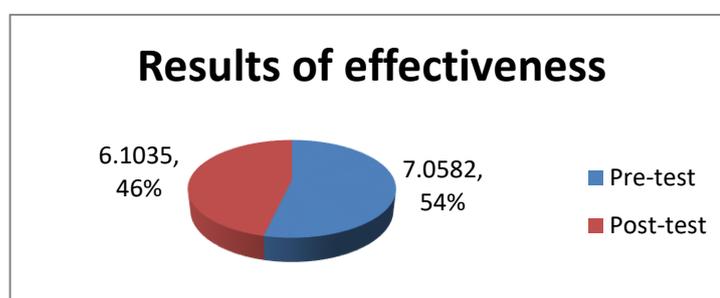

Figure 1. Pie diagram (Product effectiveness)

DISCUSSION
Williams (1964, pp. 13; 26) states that: physical education is the sum of man's physical activities, selected as to kind and conducted as to outcomes. Romar et al (2015: 35) says that physical education has the potential to positively impact children by providing opportunities for active learning. Cawley et al (2012: 19) says that increased physical education leads to greater overall participation by elementary schoolchildren in structured physical activity and more physical activity overall. Interesting learning fulfills the concept of coherent and systematic development model design that is designed to meet the stages of short-distance running techniques and aspects of the game in the learning process so that the development of game-based short-distance running learning models has valid, practical and effective values to be applied in learning process. Development of short distance running learning which has several numbers running 100 m, 110 m goal, 200 m, 400 m, 400 m goal, 4 x 100 m relay, 4 x 400 m relay run number is a lot of learning numbers so that the portion gets a learning in each semester of study students need to get enough time by not ignoring other athletic number learning. The game-based short distance running learning model consisting of 28 models is grouped in the form of 18 experimental groups of game models so that each meeting will do 2 experimental groups of game models. A well-planned learning plan will produce effective learning to achieve goals.

CONCLUSION
Based on the data the researchers obtained from the results of field trials and discussion of the results of the study it can be concluded that:

1. Produce the final product in the form of 28 valid and practical game-based short-distance running learning models that can be practiced against students of the University of Lampung graduating education.
2. With a short distance running learning model based on effective games can improve ability and can increase interest in learning and prevent saturation in learning because the learning model varies so that the learning process does not go monotonous to students of the University of Lampung Nursing Science.

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