

# THE DEVELOPMENT OF SPRINT LEARNING MODEL BASED GAME IN ELEMENTARY SCHOOL

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## Abstract

This study aims to produce an effective, valid, and practical learning model. This research method is Research and Development (R & D). The data were collected by questionnaires from teacher evaluation and questionnaires by students. The results of the experiments for the validity of the small group test were obtained on average percentage (84%), whereas in the large group trial showed the prevalence rate obtained by the average percentage (78%), the product had good category validity. To see the practicality of the results of the students' questionnaires after conducting the trials, small group trials got an average percentage of 78.8% and large group trials were 81% and thus the practicality level was good. To see the effectiveness of the product from the aspect of motivation, the results of small group trials show the relationship of motivation aspect is 70.8% and large group trials are 71.2% of the cognitive, affective, and psychomotor aspects. From these results, the tested product tried to show the effectiveness of the good category. Thus the development of sprint learning model based game in elementary school has been effective so that it can apply it in the learning of physical education.

**Keywords:** Development, Running Distance, Game

## PRELIMINARY

The athletic sports branch is one of the existing learning materials in the subject of physical education of sports and health at elementary, junior high. Even athletic learning materials are the preferred sport because athletics has movements such as roads, running, jumping and throwing. Athletics comes from the word "Athlon" from the Greek word meaning race. So athletics is a physical activity or physical exercise, containing natural and natural movements in accordance with what is done in our daily lives. Like the road, run, lompar, throw, and reject. Athletics performed in various ways since the beginning of human history to set foot on earth. Formerly athletic movements were performed in an attempt to sustain life, such as earning a hunting animal, defending themselves from wild animals, after the development of human civilization increasingly advanced then athletic activities changed leads to self-actualization through a race that is set in such a way to achieve high achievement.

According to (Nelistya, 2008: 21) a short distance run is also called a sprint or sprint. Initially, a short distance run contested diajang race race fast ancient Greece. At that time, the length of the track is 200 meters. Trajectory used in the form of a straight path, then in 1958 in every official race track athletics used on the 200 meter run is a turn path. It used to be done on grass so the runners can make a hole for a foothold at the start of the run. It was later banned by the IAAF as it was considered to be fraudulent. The use of grass field was converted into artificial or synthetic grass field. The first world run record for the 100-meter race was achieved by Jim Hines from the United States in 1968, the time it took for him was 9.9 seconds. Up to now a 100-meter sprint record is never far from 10 seconds for men and 11 seconds for women.

Based on the above description, the development of short distance learning model based on game in elementary school found some things, such as being one page with other schools so that the sporting hours coincided, narrow field, tools and facilities that are less supportive of the growth, development and character of students are not effective and valid in modifying, so that still found students who feel athletic learning provided by the teacher is less effective and the lack of interest of students to be more active in doing the motion. This elementary school itself is positioned in a densely populated area so that it can prove a narrow space and school yard. At the age of primary school children in general have the pleasure to play, with the learning model on the run through the game-based number is expected to overcome the problem of limited facilities and infrastructure that are inadequate in learning PJOK so that students can do active motion, feel happy, and not feel bored in follow the lesson. So that learners better understand how important in doing sport and do motion for the purpose of PJOK can be achieved.

Purpose

The purpose of this study is:

1. To know the student's interest in learning through the Development of the Game-Based Short Distance Learning Model.
2. To see the effectiveness of the Development of a Game-Based Short Distance Learning Model.

## **METHOD**

Research and development methods or in English is a research method used to produce a particular product and test the effectiveness of the product. To be able to produce a certain product used research that needs analysis and to test the effectiveness of these products in order to function in the wider community, it is necessary research to test the effectiveness of these products (Sugiyono. 2014).

### **Research procedure**

Data collection can be used can be used with a variety of techniques tailored to the characteristics of the data to be collected in the study.

1. Observation techniques, interviews, and questionnaires
2. In the collection of data using existing instruments, for it needs clarity about the instrument, validation, reliability, and ever used where as well as to measure what.
3. In the data collection instrument developed by the researchers themselves.

### **Subject**

The subjects of this study are students of class V in Primary School 26 Prabumulih, Primary School 6 Prabumulih, Primary School 54 Prabumulih. In this study the authors use nonprobability sampling technique that is purposive sampling. The reason for using nonprobability sampling techniques is to avoid opportunities/ equal opportunity for each element/ members of the population to be selected to be sampled. The reason for using purposive sampling because the population has a technique of determining the sample with certain considerations that, among others, students who have not completed the KKM, students who are less active in following the process of learning PJOK, the attitude of students in following the learning.

**Product Validation Data Analysis**

Based on the validation of PJOK teachers to know the validity of the content of the questionnaire. To ensure this questionnaire has good content validity, where the researcher asks the advice of both mentors and teachers of PJOK to be used as a reference to revise the product being developed, until the developed product is considered feasible or not and ready to be tested, then the questionnaire is tested to try to elementary school students. Data obtained, The validation sheet is given to PJOK teachers in the form of Likert scale, while the sheets for students are in Guttman scale. Scores obtained from the assessment of PJOK teachers are searched average by using the formula:

$$\bar{X} = \frac{\sum x_i}{n}$$

Information :

X = Average value

$\sum x_i$  =The amount of data values

N = Lots of data (Sudjana, 2005)

The Likert Scale used to classify five categories are: Very Good (SB), Good (B), Fair (C), Not Good (TB), and Very Not Good (STB), as shown in the following table:

*Table Category Validation Value*

Answer Category	SB	B	C	TB	STB
Statement	5	4	3	2	1

(Sugiyono, 2014:93)

Validation results from validator to all aspects assessed are presented in tabular form. Next look for the average, then the average is confirmed with the specified criteria. How to get the criteria are as follows:

Span of scores ranging from 1 to 5

1. Criteria is divided into five levels, the terms used are adjusted to the respective aspects.
2. The average span is divided into five interval classes
3. The five interval classes are then grouped into the five categories described in table 11 below:

*Validated Average Category Table*

Average	Category
4,21-5,00	Very good
3,41-4,20	Good
2,61-3,40	Pretty good
1,81-2,60	Not good
1,00-1,80	Very Not Good

Guttman scale, measurement scale with this type, will get a firm answer, namely "Yes-No" "True-False" "Never-Never" "Positive-Negative" and others. The data obtained can be data interval or dichotomy ratio (two alternatives). So if on a Likert scale there are 3,4,5,6,7 intervals, from the word "Strongly Agree" to "Strongly Disagree", then on Guttman scale there are only two intervals "Agree". Research using Guttman scale is done if you want to get a firm answer to a problem in question. Guttman scale can be made in multiple choice, can also be made in the form of checklist. Answers can be made the

highest score of one and the lowest zero. For example, the answer agreed to be given a score of 1 and not agree given a score of 0. The analysis is done as on the Likert scale. (Sugiyono, 2014:139)

Product Effectiveness Test

Proving the effectiveness of the game's short-range running product needs to be tested statistically using an instrument test, a 40-meter test run "Black green game" (X1), the results of a 40 meter test run "game fortress" (X2), the result of cognitive knowledge "audio visual" (X3) to the respondents. In this case to know the effectiveness of products that have been made by researchers using t-Test data processing (Test Test). To know the level of hubugan test result 40 meter (X1) to motivation (Y), result of test of 40 meter (X2) with motivation (Y), result of cognitive knowledge "audio visual" (X3) with motivation (Y) researcher using Linear Regression formula in the Multiple Regression equation with the following formula:

$$\hat{Y} = a + b_1X_1 + b_2X_2 + b_3X_3$$

Information :

$\hat{Y}$  = (Read Y cap), subject of the dependent variable being projected

X = Independent variables that have a certain value to predict

a = The value of the constant of price Y if X = 0

b = The value of the direction as a predictor of a forecast (prediction) indicating an increase (+ or a decrease value (-) of variable Y

$$a = \frac{\sum Y - b \cdot \sum X}{n} \qquad b = \frac{n \cdot \sum XY - \sum X \cdot \sum Y}{n \cdot \sum X^2 - (\sum X)^2} \qquad \text{(Riduwan, 2006:244)}$$

Small group trial

No	Aspect of Assessment	Small Scale Results		Criteria
		Amount	Persentase	
1.	Motivation	71	71%	Good

No	Early	End	Enhancement	Persentase
1	7.73 Detik	7.02 Detik	0.71 Detik	71%

Uji coba kelompok besar

No	Aspect of Assessment	Trial Results		Criteria
		Amount	Persentase	
1.	Motivasi	8,15	82%	Baik

No	Early	End	Enhancement	Persentase
1.	7.69 Detik	6.94 Detik	0.75 Detik	75%

## **RESULTS**

### **Data Description Validasi Teacher PJOK**

The data obtained from questionnaires by PJOK teachers is a guide to indicate whether the product of a short distance learning model based on a game can be used for small group and large group trials. The results of filling questionnaires from PJOK teachers are made in the table. Based on the results of filling questionnaires undertaken by teachers PJOK below obtained an average of 82% and the level of validity in teachers PJOK obtained value amounted to 41 or included in the category of "GOOD" assessment. Therefore, it can be concluded that the draft of short distance learning model based on game in elementary school can be used for small group trial.

### **Discussion**

This study was raised by analyzing the potential problems that have been obtained by researchers on SD 6, SD 26, and SD 54 Prabumulih with the barriers in the learning process in the athletic material of short-range running game-based. In this case the constraints of limited facilities, PJOK teachers who do not understand about modifying the game so that it can make students feel bored and less motivated and less interesting in following the learning PJOK, because basically most teachers PJOK in delivering the material sometimes only with theories, there is also only by using the old method of students are left to play alone without any teaching material from the teacher PJOK, so the main objective of physical education sports and health in learning materials running short distance based game has not been achieved. The method used in this research is research-based research (development based development) method, used to produce a specific product and test the effectiveness of the product used (Sugiyono, 2014: 297). The order in this study 1. Collecting information and observation, 2. Develop the initial product of a short distance learning model based on the game, 3. Evaluate PJOK teachers and conduct small-scale trials using questionnaires, consultation, evaluation and analysis, 4. Revision of the first product, 5. Field trials, 6. Revised final product used based on field test results, 7. The final outcome of the short distance learning model based on the game given based on the results of the field test. The data analysis technique used by the researcher is the percentage for analyzing the assessment of product development (Sukirman, 2003: 879). In conducting this research, the researcher conducted a case study approach method by using research design of Research and Development method that has uniqueness and 3 aspects of affective, practical, and valid (Sugiyono, 2010: 4017).

### **Discussion of Small Group Trial Analysis**

In this study, the short distance learning model based on the game has been tested its validity. Furthermore, after conducting small group trials, researchers gave a questionnaire/ questionnaire to 10 students this is done to know the response to the draft model of short distance learning products based on the game in the process of learning PJOK. That way based on the questionnaire results / the questionnaires of researchers get a value of 71 entered in either category. With the results of the data have shown a model of short-range running short-distance run when given to 10 students tested on a small scale has been tested. The next step of the researcher is to analyze the effectiveness of the product of the short distance learning model based on the game on the students to find out

whether there is a motivation relationship before and after doing the short distance learning model based on the game. The first motivation conducted on 10 students got 71% and then after completion the researcher get the amount of value equal to 71. The result from before and after doing learning model of short distance run based on effective game there is correlation with motivation equal to 71%. So then the researchers calculate and prove there is a significant relationship of motivation before and after a model of short distance learning game based on statistical t-test (paired sample) through the program SPSS 16, from the data obtained results 0.000 value which means there is a relationship of motivation significant, the basis of this decision if p value less than 0.05 then  $H_a$  accepted that there is a relationship between aspects of motivation before and after doing a model of short-range running distance learning game.

### **Discussion of Large Group Test Analysis**

In large group experiments the short distance learning model has been tested for its validity. This result was obtained from the questionnaire validity with evaluation sheet of PJOK teacher, the result of the draft evaluation of the short distance learning model based on the game has been tested by the PJOK teacher validator and got the average percentage of 84%. With validation results that have been assessed by PJOK teacher validator, then the short distance learning model based on the game has entered in either category or valid. So then after completion of the test large groups of students are given a questionnaire / questionnaire to find out the students' responses to the short distance learning model based on the game. Based on the questionnaire / questionnaire results obtained a percentage of the average value of 82% entered in either category or valid. So with this result shows the short-run run-based development model given to 40 students on field trials has been tested. Furthermore, the researcher tries to analyze the effectiveness of the model of short distance learning model based on the game before and after doing the learning to 40 students has got the average value of 82%. After implementing the short-run run-based model of the game the researchers found a motivational relationship that reached a value of 8.15. This result was obtained from after and before the short distance learning model based on the game entered in the effective category, and the motivation relationship was 82%. Furthermore, calculate and prove the significant relationship of motivation before and after the implementation of learning model of short-run arc run game through the program SPSS 16, so got the value 0,000 which means there is a significant motivation relationship, the basis of this decision if p value less than 0.05 then  $H_a$  accepted that there is a relationship between aspects of learning motivation. The next process the researcher tries to ask for opinions, suggestions, and revisions for the final product of the game's short distance learning model. The intended revisions of the opinions, suggestions, given by the PJOK teacher validator against the product draft of short distance learning model based on the game are: made scoresheet calculation sheet, appropriate learning model to the development of learning PJOK. Short-run learning models based on pennygames such as black green, bentengan, and audio visuals are well suited to elements of basic athletic skills of short distance running.

## **CONCLUSION**

The end result of this research is the development of a short distance learning model based on the game that has been produced in small group trials and field trials. Based on the results of the analysis of the research and the discussion of the material, it can be concluded that the results of validation questionnaire / kusioner given to the teacher validator PJOK on the product model of short distance learning based on small scale testing game obtained the value of the amount of 71 and on field trials obtained the average value percentage of 71% entered in the category of good or valid and can be used in learning PJOK in primary school.

Thus, the development of short-distance learning model based on the game on the students, effective to make students actively move, not feel bored and fun and can attract the interest of students to be motivated in following the learning process PJOK, then this product can already be used by teachers PJOK for more understood in modifying the learning materials so that students do not feel bored and fun and motivated to be more active in participating in learning PJOK especially athletic materials running short-distance to grade V students in SD Negeri 6, SD Negeri 26, and SD Negeri 54 in Prabumulih.

## **Suggestion**

Based on the results of this study suggestions that can be given are as follows:

1. For students, it is expected that this short distance learning model can make students to be more active in moving, not feel bored, more interesting and become a motivation in learning PJOK
2. For teachers, in order to be a solution for athletic learning run short distance because this product has been proven there is a relationship between aspects of motivation with learning PJOK.
3. For the next researcher, a similar research can be done and can develop a better short distance learning model based on the game to improve the quality for the learning progress of PJOK in elementary school.

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