DEVELOPMENT OF A BASIC TECHNICAL LEARNING MODEL FOR LONG JUMP SQUAT STYLE BASED ON TRADITIONAL GAMES FOR STUDENTS

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Abstract

This research aimed to develop a learning model for basic long jump techniques based on traditional games. This research's subjects were the students of SMAN 1 Pulau Punjung, Dharmasraya Regency. The research method used model development research, Borg and Gall. The data collection techniques used the results of expert validation and tests effectiveness through experiments with statistical data analysis paired t-test. The results of research and development of a traditional game-based learning model for basic long jump techniques in squatting style for students at SMAN 1 Pulau Punjung showed that the learning model for basic long jump techniques in squatting style based on traditional games is suitable for students. The results of the effectiveness test showed that the traditional game-based long jump technique learning model was effective for students of SMAN 1 Pulau Punjung, this was demonstrated by the results of the T-Test and N-Gain Score on the basic technical abilities of the traditional game-based squat style long jump which showed significant improvement.

Keywords: long jump, learning model, traditional games, basic techniques

INTRODUCTION

Athletics is a sport that consists of a combination of several types of physical sports, such as running, throwing, jumping, and walking. Athletics is a mandatory material in physical education subjects that must be taught in schools. It is hoped that student involvement in the athletic learning program can help optimize student development and growth, and improve students' physical fitness components, such as endurance, power, flexibility, agility, balance, and movement coordination (Thompson et al., 2022; Scantlebury et al., 2020; Aizawa et al., 2021).

Apart from developing the physical aspects of athletic learning, it is also hoped that it can develop mental aspects such as motivation to learn, self-confidence, courage and discipline, attitudes of tolerance, and cooperation which are social aspects that are also expected to experience changes for the better (Ribeiro et al., 2021; Ronkainen et al., 2020).

One of the athletic sports is the long jump. The long jump consists of three styles, including squatting, hanging, and walking in the air. The squat style is the easiest style to do because the jumper only moves to bend both legs while floating in the air, especially for high school-age students. The goals to be achieved through the long jump learning program at school are different from the goals for high-achieving long jump athletes. Long jump learning at school places more emphasis on achieving three aspects as a whole, namely the cognitive, affective, and psychomotor aspects.

The cognitive aspect to be achieved through learning the long jump is increasing students' understanding of the basic technical

concepts of the long jump squat style. Apart from that, students' courage, hard work, and self-confidence, which are affective domains, can also develop. From the psychomotor aspect, it is hoped that the movement experience will increase and the amount of time for students learning activities will increase, thereby having an impact on students' abilities.

The statements explain that every child can develop creativity, but when children are forced to emphasize their creativity by participating in activities that they do not like or that do not motivate them, then creativity is difficult to emerge. One of the weaknesses in learning the long jump is that students have to do jumping movements repeatedly so students feel bored.

Teachers should be able to overcome students' boredom by creating a learning model (Sii et al., 2017; Feladi et al., 2023; Nasution et al., 2024; Emiliya et al., 2023; Arpan et al., 2022; Syaifullah et al., 2024), especially in the long jump squat style (Maksum, 2017). One of them is implementing a traditional game-based long jump learning model for squatting. Games play an important role (Arifah & Dinata, 2014). The jumping game is one way to make students interested in the long jump material and it is hoped that learning outcomes can improve.

The results also strengthened by a preliminary study carried out by researchers. In the preliminary study, researchers gave a squat long jump test to 30 class X Phase E.8 students at SMAN 1 Pulau Punjung. The following data were the results of the students' squatting long jump ability test.

Table 1 Data on Learning Outcome Scores for Long Jump Material

Test Results	Information	The Number of Students	Percentage
Score < 72	Not Completed	23	77.6 %
Score ≥ 72	Complete	7	23.3%

Based on Table 1, there was 77.6% of students did not complete their learning outcomes. It can be concluded that the long jump learning results do not follow the expected results. This is the basis for researchers to find a solution to improve student's abilities in squatting long jump

material. Based on the results of reflections carried out by researchers on students, it was found that there was no suitable learning model to improve long jump ability in squat style and the media for delivering the material was very monotonous.

In long-jump learning, some things need to be considered, including connecting learning with practice and problems, using technology, and making it real (Byrne et al., 2019; Deys et al., 2021). Therefore, it would be good for long jump learning to have a learning model that teachers can use to facilitate students' learning to understand basic jumping techniques. Several studies have proven that the role of learning models can facilitate conceptual understanding and can increase children's concentration (Damayani et al., 2019; Meza et al., 2015; Saad, 2022).

Most of the research was carried out on elementary-level students. However, it does not rule out the possibility that traditional games can be applied to junior high students. Several relevant studies proved that traditional game learning can be used in junior high school children (Ali et al., 2019; Bile et al., 2021; Djawa, 2017). The research results have proven that the role of traditional games has a positive significance applied to junior high school students. There was a fun element that increased student activity.

Traditional games can be used by high school students. This is in line with the opinion that interactive traditional games can be applied to long-jump learning and can even influence long-jump learning outcomes (Ningsih, 2021; Indriyani et al., 2021). Traditional games play a role in increasing concentration and facilitating students' understanding.

Based on the analysis of several studies, several research gaps have been found, including (1) existing research has shown that traditional games make it easier for students to understand learning, (2) existing research has proven that traditional game models can determine students' strengths and weaknesses in long jump. Researchers are interested in developing traditional games to improve squatting long jump abilities. So, this research aimed to produce a traditional game-based learning model of basic long jump techniques for squatting style for students of SMAN 1 Pulau Punjung.

METHOD

This type of research was research and development with quantitative methods. This method was determined based on data collection techniques carried out during the product development phase. Development research includes the process of finding novelty and excellence in the context of effectiveness, efficiency, and productivity. In this research, Borg and Gall were used. Development research is research-oriented to developing and validating products used in education.

This research focused on the development of basic techniques for long jump squatting based on traditional games through validation from athletic experts, traditional game experts, learning experts, biomechanics experts, and construction test experts. The user evaluation is carried out by teachers and students. The target of developing this product is students of SMAN 1 Pulau Punjung class X Phase E.

The first step includes needs analysis, literature study, literature study, small-scale research, and required reporting standards. Then design a traditional game-learning model. Involving students as test subjects to test the practicality of the product. The test subjects in this research were class X Phase E students in public high school 1 island in economics subjects numbering people.

The data collection technique used consists of two techniques, namely test and non-test techniques. The test technique was used to test the effectiveness of developing basic long jump techniques based on traditional games by conducting a significance test between the learning outcomes of students who use the basic squatting style long jump technique based on traditional games with students who do not use the traditional game-based squat style long jump basic technique model.

The significance test used a t-test difference test using SPSS 20 with the criteria that if the significance level is ≤ 0.05, then it is stated that there is a significant difference in learning outcomes. Meanwhile, non-test techniques take the form of expert judgment to validate the product from experts in the form of a questionnaire using a Likert scale and a questionnaire of student and teacher responses

regarding the practicality of the traditional game learning model that has been developed.

RESULTS AND DISCUSSION
Results

The research results from this development are a traditional game-based learning model of basic long jump techniques for squatting style for high school-age students which will be included in printed and digital books by presenting 20 traditional game models related to the long jump as well as an Android application as support. To be able to develop a product, several stages are carried out including (needs analysis, evaluation data, and trial data).

At this stage, these three aspects will be explained, namely (a) results of needs analysis, (b) expert evaluation, and (c) trials. These results are presented based on data obtained from needs analysis, namely in the form of filling out a questionnaire by the teacher and observing students' basic techniques when learning the long jump, then the next presentation of data is from the evaluation of athletic learning experts, game methodical didactics, learning development and control, trials small group and large group trials.

The instruments used by researchers to collect data were presented in the form of a questionnaire given to (1) 3 physical education teachers for the needs analysis stage, (2) observations of 30 students for the needs analysis stage (3) 5 experts as follows: Athletic experts, learning experts, traditional games experts, biomechanics experts, and Construction Test experts, (5) phase I (small scale) trials of 24 people and phase II (large scale) trials of 45 people for the trial phase.

Figure 1 presents data from the needs analysis in the field in the form of distributing questionnaires containing 6 questions to 3 physical education teachers and observations of students during long jump lessons. From the results of filling out a questionnaire for PJOK teachers at SMAN 1 Pulau Punjung, data was obtained that all of them had a bachelor's degree in physical education, and taught basic movement material which included locomotor, non-locomotor, and manipulative movements.

Based on their teaching experience, they concluded that children's basic long jump technique abilities were not optimal in learning. These teachers also stated that game elements

should be included in the achievement of the material. However, the basic technical material was not conveyed by playing by the teacher because he did not know how to convey it. This is an obstacle for teachers, namely the lack of references in delivering material, which makes them confused. This impact results in children being less enthusiastic and bored with learning. Teachers need to provide movement material so that children understand how to learn the squat long jump and agree to the traditional game model for the basic techniques of the squat long jump.

No	Analisis Kebutuhan	Temuan di Lapangan
1.	Hasil Pengisian angket guru penjas	1) Guru belum mengajar materi motorik gerak dengan baik. 2) Kemampuan Teknik dasar lompat jauh gaya jongkok kurang maksimal. 3) Guru mengungkapkan bahwa analisis dalam teknik dasar sangat penting dan bermanfaat. 4) Unsur Permainan hendaknya dimasukkan dalam penyampaian materi. 5) Hambatan guru dalam penyampaian materi kurang referensi materi untuk penyampaian sehingga anak kurang antusias. 6) Semua guru setuju dengan adanya model pembelajaran Teknik dasar lompat jauh.
2.	Hasil observasi terhadap siswa	1) Didapat bahwa umumnya kemampuan Teknik dasar lompat jauh kurang baik. Hal ini terlihat saat mereka melakukan aktivitas pembelajaran. 2) Siswa kadang terlihat malas untuk bergerak dalam pembelajaran. 3) Siswa cepat merasa bosan terhadap aktivitas. 4) Siswa kurang serius dalam menerima pembelajaran.

Figure 1 Problem Identification Data

Data from the analysis of students' needs was obtained by researchers through direct observation by researchers of students while taking physical education lessons. Observations carried out by researchers focused children on controlling movements, they carried them out but were slow in understanding the movements. Therefore, students need interesting movement activities so that they can easily carry them out. Students sometimes seem too lazy to move. If they are not supervised properly so they are difficult to pay attention. Students quickly get bored with their activities. If children have carried out certain activities, they will want to try other movement activities.

Discussion

After carrying out a preliminary study in the form of a literature study and needs analysis, a draft model was carried out to be used. There are 20 traditional game-based long jump learning models for squatting. The following traditional game models will be used in developing this learning model.

Table 2 Types of Traditional Games

Long Jump Stages	Traditional game
Initial Level	Model 1 Fortification Model 2 Hide and seek Model 3 Gobak Sodor Model 4 Cat and Mouse Model 5 Chase - Chase
Push Level	Model 6 Jump Cloth Model 7 Oglak-aglik Model 8 Clogs Model 9 Running Shell Model 10 Engklek
Hover Level	Model 11 Jump Rope Model 12 Yeye Model 13 Long Jump Model 14 Leap Frog Model 15 Kangaroo Jump
Landing Level	Model 16 Sack Racing Model 17 Bamboo Jump Model 18 Running beam Model 19 Squatting Cat Model 20 Donald Duck

Based on the model design prepared by Borg and Gall, there are 10 stages that researchers must go through in creating and developing a model. The first stage that will be carried out by researchers is carrying out expert validation. The aim of obtaining feasibility is made by direct assessment from experts. The long jump sport uses movements that can cause injury to students. So, if any student misuses this method, injury occurs. Therefore, it is important to carry out intensive supervision of teachers (Gipit et al., 2017).

Teachers must master teaching materials and have the latest references. Teacher knowledge is positively related to the process of teaching and learning activities. The importance of improving the quality of education and the quality of educational services that can educate and teach while producing quality students and graduates. Teachers need to increase their knowledge to enrich the material they want to convey and not make students feel bored. Increasing student interest is very important in the learning process.

The learning model must be arranged based on the level of difficulty to facilitate teachers in providing material. Teachers must understand the level of difficulty of the learning model before teaching (Feladi et al., 2022; Fajri & Sahlan, 2023; Arpan & Sahbidin, 2017; Simanungkalit &

Tarigan, 2022). The level of difficulty can be analyzed by trying to understand the model related to the student's teachability. The learning process must be carried out in clear stages (Asti et al., 2024; Arpan et al., 2020; Nadia et al., 2023; Sopanda et al., 2022; Marlianto, 2021).

The process is better done successively. That is starting from an easy process and then a more difficult learning process. This is done so that students can easily understand each long jump movement. A game-based long jump style learning model was created by researchers to help improve long jump style results. So, this model was created specifically for the needs of high school students to convince them that studying this material is more fun. Therefore, it is hoped that this model will become a reference for teachers, trainers, and also for the students themselves.

CONCLUSION

Based on results and discussion, PJOK teachers at SMAN 1 Pulau Punjung taught basic movement material which included locomotor, non-locomotor, and manipulative movements. They concluded that children's basic long jump technique abilities were not optimal in learning and game elements should be included in the achievement of the material. The obstacle for teachers was the lack of references in delivering material, which made them confused. Teachers need to provide movement material so that children understand how to learn the squat long jump and agree to the traditional game model for the basic techniques of the squat long jump. students need interesting movement activities so that they can easily carry them out. Students sometimes seem too lazy to move. The types of traditional games are grouped into 4 levels. They are initial level, push level, hover level, and landing level.

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