Developing Manipulative Basic Movement Learning Model Based on Traditional Games in Elementary Schools

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Abstract: This study aims to develop manipulative basic movement learning models based on tradition games at Elementary schools. Research and development method adopted from Borg and Gall was used. The effectiveness of the application of the manipulative basic motion learning model and catch and capture in these students used the “t-test” technique. Before the data were analyzed, the normality test was carried out on the pretest and posttest results of the basic motion manipulative and catch-and-catch using the Kolmogorov Smirnov test at the real level α = 0.05. The results of the manipulative basic motion of throwing catch between the pretest and posttest were obtained at a value of -24.645 at a significance of 0.000. So it can be concluded that the increase in the basic manipulative movement ability of throw and catch before and after learning has increased significantly. The contribution of the basic manipulative motion learning model of catch and capture is 42.21% based on the effectiveness test data at SD Tanamodindi and SD Inpres Lasoani.

Keywords: Learning model; traditional games; manipulative basic motion.


INTRODUCTION

Physical education in schools is physical activities, but the learning process of physical education is also used as a medium for solving movement problems (Cooper et al., 2016; Lieberman & Houston-Wilson, 2011). This is also consistent with what George Metzler (2017) said Physical education is the school program that is designed to lead youngsters to a lifetime of physical activity. The goal, or purpose, of a quality physical education program, is to guide youngsters in the processes of becoming physically active for a lifetime (Kretschmann, 2014; Rink, 2010; Ward et al., 2015).

Physical education is a school program designed to lead children to lifelong physical activity. The goal of quality physical education is to guide children in the process of being physically active for a lifetime. Physical education is an education to achieve educational goals using means of body/physical movement (Baena-Morales & González-Víllora, 2022; García-Rico et al., 2021; Metzler, 2017). Through this movement, educational goals will be achieved. Two of the goals of physical education according to the National Education Standards Agency (BSNP) 2006 are: (1) to develop self-management skills in the development and maintenance of physical fitness and lifestyle through physical...
activities, and (2) to improve basic mobility skills and abilities.

The basic movement has an important role in learning physical education, especially sports such as sprinting, throwing, long jumping, high jump, and other sports (Lander et al., 2017; Light & Clarke, 2021). From the learning of these skills, it turns out that elementary school students experience problems or difficulties because in childhood the basic movement skills have just developed so that physical education learning cannot be implemented optimally. For physical education learning especially for manipulative basic motion material to be successful, a conducive environment must be created, including modifying tools and creating learning models.

Hanief (2017) state that basic movement skills can be applied in various games, sports, and daily physical activities. Through play activities, it is appropriate to develop basic manipulative movement skills for children in elementary school, because basically, the world of children is the world of play. This is also by what traditional games say that can reduce screen time and reduce the prevalence of obesity in children. Playing Various forms of play can be used by Physical Education teachers to form basic manipulative movements. One form of this game is traditional games.

Along with the development of technology, traditional games have begun to be pushed aside by modern games, such as video games, play stations, online games, various games available on computers, cellphones and laptops, and other modern games (Armen et al., 2022; Kancanadana et al., 2021; Sulistyaningtyas & Fauziah, 2019; Wiyono et al., 2018). Witasari & Wiyani (2020) state traditional games have many benefits for children. Besides not spending a lot of money, it can also be healthy for the body and contains a lot of educational values.

Efforts to develop the basic movements of elementary school students as a whole require training services or in the form of a game approach, of course, needs to be done so that children can do well and be able to develop manipulative basic movements by handling according to the characteristics and abilities of elementary school students. This is also by Nur et al. (2017) saying that the form of play can be applied and used as a special method that is thought to develop empathy and basic movement patterns for children aged 5-6 years. The learning model is a method or strategy carried out by a teacher so that the learning process occurs in students to achieve a systematically designed goal. The learning model to be developed is a manipulative basic motion learning model based on traditional games for elementary school students which will be developed by the Core Competencies (KI) and Basic Competencies (KD) 2013 Curriculum 2013 in physical education subjects for lower-class elementary schools, in particular, clauses 1,2 and 3. Determining the learning model to be used in learning activities must consider: (a) the objectives to be achieved, (b) learning materials (c) students, and (d) other non-technical considerations (Rusman, 2012).

Based on the results of observations and interviews conducted by researchers at several elementary schools in the city of Palu, it was found that there were several images that physical education learning was not effective in developing students' manipulative basic movements. Researchers found several problems faced by both teachers and students at school in terms of basic manipulative movement skills, namely physical education teachers are less creative and less varied in teaching or monotonous, the method used is still conventional/traditional, students are less enthusiastic and lazy to take part in learning. Therefore, the student's ability to perform basic manipulative movements, especially throwing and catch, has not been maximized.

Based on these problems, the researchers formulated the research question as follows: How is the development of basic manipulative motion learning models based on traditional games for elementary school students?
METHOD

This study uses the Borg and Gall version of the research and development model. (Ilma & Wijarini, 2017) state educational research and development (R & D) is a process used to develop and validate educational production. With this understanding, a series of research and development steps are carried out in a cycle, in which each step is developed, always refers to the results of the previous steps and in the end, a new educational product is obtained.

These research and development steps include ten steps, as follows (1) Potential and problems (preliminary study), (2) Conducting research and information gathering (literature review, subject observation, subject matter report preparation), (3) Developing initial product design forms (preparation of teaching materials, preparation of handbooks, and evaluation equipment), (4) Validation of designs (initial evaluation), (5) Revision of designs (according to results in the field at the trial stage), (6) Product Trials (6-12 subjects), (7) Revise products (based on suggestions and results of main field trials), (8) Use trials with 30-100 subjects (9) Revision of final products (10) Production bulk (Make a report about the product).

The approach used in this study is a qualitative and quantitative approach, which is an approach to finding answers to traditional game-based learning models to develop manipulative basic movement skills for lower grade elementary school students.

RESULT AND DISCUSSION

The results of the development of traditional game-based manipulative basic motion learning models for elementary school children are presented in the form of physical education learning models. The development of a traditional game-based manipulative basic motion learning model, for physical education learning, is developed based on analysis and observation of physical education teachers, students, and conditions at school or in the field.

Based on the results of the analysis carried out in elementary schools, the following information was obtained: a) The form of learning manipulative basic motion learning is less varied or monotonous. b) The teacher is still confused about what form of game learning for grade 3 elementary school children if the learning hours of physical education, sports, and health are quite long, namely 4 x 35 minutes. c) The learning process is less effective in the use of time, meaning that the learning process is not used effectively, this is evidenced by the amount of rest time that students use instead of doing motion tasks. d) Match with the lesson plans that have been made by the teacher with practical realities. e) The teacher's creative ability has not been maximized, such as modifying the tools used to support various learning implementations. e) The ability of students to carry out basic manipulative throw and catch movement skills has not been maximized. f) Children are less enthusiastic and lazy to follow the learning process and are difficult to organize because the learning provided is less varied and monotonous. g) Based on the above needs analysis, a form of physical education learning model is needed with manipulative basic motion material, especially throw-and-catch which can accommodate the needs in the field, especially for teachers in carrying out physical education learning based on the applicable curriculum objectives. The focus of development goals includes (1) cognitive aspects seen from students' understanding of the game rules and directions from the teacher, (2) effective aspects seen from students' social behavior such as responsibility, cooperation, and honesty, (3) psychomotor aspects which are seen from the basic manipulative movement ability of the catch.

From the results of the development of the traditional game-based manipulative basic motion learning model, it is hoped that it will be useful for physical education teachers. The learning model for the manipulative and catch-catch basic motion developed is a traditional game that has been selected and is by the characteristics of learning material, the characteristics of elementary school students, as well as the characteristics, components of motor skills, so it is expected that this
traditional game-based manipulative basic motion learning model can attract children's interest and attention to do so to develop basic manipulative movement skills.

**Table 1.** Distribution of Frequency of Evaluation of Material Experts / Game Experts

<table>
<thead>
<tr>
<th>Interval</th>
<th>Category</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
</tr>
</thead>
<tbody>
<tr>
<td>X &lt; 7.7</td>
<td>Less</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7.7 ≤ X &lt; 15.3</td>
<td>Enough</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15.3 ≤ X</td>
<td>Good</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on table 1 of the frequency distribution in the attachment, the total expert score for the manipulative basic motion learning model of catch-and-throw, namely expert one (physical education expert) is 22 located at 15.3 ≤ X interval. interval 15.3 ≤ X. The total expert score for three (game expert) is 22 located at the interval 15.3 ≤ X The total score for expert three (motor expert) is 22 located at the interval 15.3 ≤ X The total expert score is 22 located at the interval 15.3 ≤ X.

using the minimum value limit is said to be feasible (valid) is 7.7. So, the material expert's assessment of the basic manipulative motion learning model of catch and grab is categorized as good (feasible/valid).

The data for the assessment of 40 participants on the effectiveness of the manipulative and catch-and-catch basic motion learning model for elementary school age are shown in table 2.

**Table 2.** Average Value Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Initial Test</td>
<td>6.8750</td>
<td>40</td>
<td>.85297</td>
<td>.13487</td>
</tr>
<tr>
<td>Final Test</td>
<td>9.7750</td>
<td>40</td>
<td>.97750</td>
<td>.15395</td>
</tr>
</tbody>
</table>

Based on the results of the output using SPSS 16, the average value of the results of learning manipulative basic motion and catch-and-catch before being given the learning model is 6.8750 and after being given treatment with the learning model 9.7750 means that the average value of the manipulative basic motion of throwing and catching is increasing.

**Table 3.** Correlation Coefficient Paired Samples Correlations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>40</td>
<td>.675</td>
<td>.000</td>
</tr>
</tbody>
</table>

Furthermore, based on the output table 3 in the attachment, the learning correlation coefficient before and after being given the under-serviced model is 0.675 with a p-value of 0.00 <0.05, so the conclusion is significant. Furthermore, based on table 4, the result = 39 and p-value = 0.00 <0.05, which means that there is a significant difference in learning manipulative basic motion and catch-and-catch before and after the manipulative basic motion learning model treatment.

This information can be said that the developed manipulative basic motion learning model for elementary school-age students is developed, it can effectively improve the basic manipulative motion and catch and catch for elementary school students.

**CONCLUSION AND RECOMMENDATION**

Based on the data obtained, from the results of field trials and discussion of research results it can be concluded that 1)
With the manipulative basic motion learning model elementary students can learn the material of throwing and catching effectively and efficiently. 2) With the manipulative basic motion material that researchers have developed, elementary students can master the catch-and-catch material quickly and correctly.

The product of this development is elementary school students' manipulative basic motion learning model which can be used as a reference by teachers and students. In using it, it is necessary to consider the situation, condition, and infrastructure.

In developing this research in a further direction, the researcher has several recommendations, as follows: first, Research subjects should be carried out on a wider range of subjects, both in elementary schools other than those used as a trial group; second, The results of the development of the basic manipulative motion learning model of elementary school students' catch and throw can be disseminated to elementary schools.

These are the suggestions for the use, dissemination, and further product development towards the development of the basic manipulative motion learning model of catch and catch for elementary school students.

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