

The Development of Equipment and Models of Sport Training for Early Childhood Education Program

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ARTICLE INFO

Article history:

Received Sept 30, 2022

Revised Oct 12, 2022

Accepted Oct 25, 2022

Keywords:

Equipment,
Exercise Models Sports,
Early Childhood Education,

ABSTRACT

The purpose of this research is to improve the sports development system in early childhood education through the infrastructure approach and training model applied to early childhood. The specific goal to be achieved is to create training models along with supporting facilities and infrastructure that can be used in the development of sports at an early age that are able to overcome limited funds and space, as well as provide safety, comfort and encourage children's desire to move in supporting their multilateral skills. It is hoped that the products and training models from this research will obtain Intellectual Property Rights so that they can be used nationally. This research is research and development (Research and Development) with research subjects from kindergarten to lower grades of elementary school (1-3). The stages of development are carried out by: 1) analyzing the information that has been collected, 2) planning the research, 3) developing the initial product, 4) expert validation and revision, 5) large-scale trials and revision of the final product. The research subjects were kindergarten and elementary school students in several schools in Metro City with a total of 100 students. Data were collected by observation using observation sheets and open questionnaires, interviews with material and media experts, teachers and audio-video recording studies in the field. The data obtained were analyzed in stages: 1) data reduction, 2) data classification, 3) data display, 4) data interpretation.

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1. INTRODUCTION

Sport is all systematic activities to encourage, foster, and develop physical, spiritual and social potential. On the natural side, the world of children is always familiar with the world of play. Likewise, when traced archaeologically, that sports entity was also born from a playing activity. So in this case, we will try to make a guideline to systematically direct the pattern of children's play based on an analysis of the growth and development of children into a play structure which is formally referred to as sport.

Currently, many parents prioritize only academic learning activities without paying attention to the needs of children's movements, even though the physical activity they do is also a medium for developing and stimulating children's intelligence. Children should be given space and time to move and play which in turn can improve children's movement skills and their physical fitness. Through

sports children can develop their motor perception abilities. By mastering these motor skills, it is hoped that a child will feel happy and confident. With sports children also learn to compete, so that their academic achievement is also affected. In addition, by exercising children can improve self-esteem and social skills. Even by exercising children can reduce negative behavior in themselves. Thus, exercising can make children live in balance. Also supported by a conducive social environment will make them active, fit, creative and skilled children.

Many people have the perception that sports are only for school children, teenagers, adults, and the elderly. But in fact there are also sports for children aged 1-5 years (preschool). Dr. Ade Tobing, SpKO (2009) from the Faculty of Medicine, University of Indonesia reminds parents to realize that children have different characteristics from adults, namely the process of growth and development. Preschoolers need the movement they can get while they are playing; children move while playing, that's sport for them. A good length of play for children is 60 minutes accumulated in a day. Furthermore Ade Tobing (2009) explained the benefits of exercise for preschool-age children who have multiple abilities, because it can improve physical health and become the basis of their health in the future. By actively doing physical exercise, children have started a healthy lifestyle earlier that will protect them from sedentary diseases such as heart disease, diabetes, obesity, osteoporosis and others.

2. Research Method

2.1 Research Design

This research is research development (Research and Development). In this case, development is carried out to obtain a model of sports activity for early childhood and manufacture of early childhood sports equipment. Perhaps we have encountered a lot of early childhood equipment, but in this study we tried to make equipment that is multifunctional in a complete unit so that it can be played in various forms of sports training according to the intended purpose. Because this equipment will be intended for early childhood, several indicators such as attractive, safe, easy to use, and inexpensive are some of the criteria in making this tool. The early childhood referred to this time refers to the age of students from kindergarten to lower grades of elementary school (grades 1-3).

2.2 Developments Procedure

The development procedure in this study is in accordance with the development research steps according to Borg and Gall. According to Borg and Gall (1983) in conducting development research there are several steps that must be taken, including: (1) analyzing the information that has been collected, (2) planning the research, (3) developing the initial product, (4) expert validation and revisions, (5) small-scale field trials and product revisions, and (6) large-scale trials and final product revisions.

Based on the steps above, a procedure was designed in this study as follows:

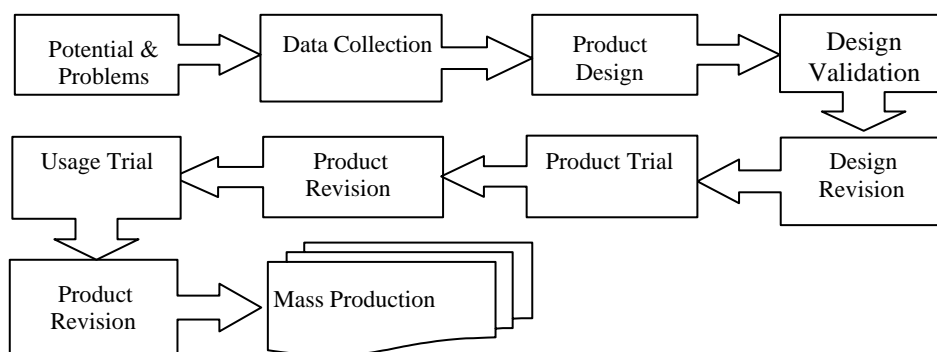


Figure 1. Langkah-Langkah Metode Research and Development (R&D) (Sugiyono,2009).

2.3 Product Trial

a. Product Design

In this research, it is hoped that a product will emerge in the form of a sports training model for early childhood along with the accompanying equipment. From the resulting model, it is hoped that it will have more value in the level of effectiveness in its use stage. What is meant by the value of effectiveness include; 1) accommodative to various forms of physical exercise (sports) for children according to their developmental characteristics; 2) has an element of interest and a level of security that is easy to control in a learning activity; 3) effective in overcoming space constraints which have been a rather apprehensive situation in many existing schools; 4) easy to use and easy to develop further by physical education teachers in schools.

b. Small scale trials

The small-scale trial was carried out using 10 kindergarten students and 10 elementary school students accompanied by two teachers. In small-scale trials, it is hoped that this will become a space to see the shortcomings of the product so that it can be used as material in improving equipment models and training model forms.

c. Data Type

The data to be collected in this study is in the form of qualitative data derived from the input of experts, teachers and the results of field observations during the research process. The data will be in the form of detailed accounts of all the phenomena that occur in the field. Furthermore, the data will be used to assess the resulting product. If the tendency is satisfactory, it means that the product can be said to be suitable for use/massage. However, if the findings of data trends later indicate weaknesses in the product, it will be used as a revision of the model and equipment that has been made.

d. Data Collection Instruments

This research is research development (Research and Development). In this case, development is carried out to obtain a model of sports activity for early childhood and manufacture of early childhood sports equipment. Perhaps we have encountered a lot of early childhood equipment, but in this study we tried to make equipment that is multifunctional in a complete unit so that it can be played in various forms of sports training according to the intended purpose. Because this equipment will be intended for early childhood, several indicators such as attractive, safe, easy to use, and inexpensive are some of the criteria in making this tool. The early childhood referred to this time refers to the age of students from kindergarten to lower grades of elementary school (grades 1-3).

Because in this study the expected data is data that is opened as wide as possible to the research subjects, the instruments used in this study are in the form of observation sheets and open questionnaires. It is hoped that the data collected will be more complete, bearing in mind that the models and equipment that are trying to be produced in this study are intended for early childhood, of course, must be loaded with caution. So all kinds of input from experts, teachers, and recordings of field events must be accommodated as optimally as possible. That reason is the background for choosing the type of instrument in this study. In addition, this research will be assisted by several recording devices in the field, namely in the form of photos and video recorders

e. Data Collection Techniques

He data analysis techniques in this study are as follows (Kaelan: 2005):

1) Data reduction

The data that will be collected in this study is expected to be very abundant. This was made possible because it came from three sources, the first from expert input, input from teachers, as well as the results of field observations during the research process. Through the data reduction process, it is hoped that it will make it easier to control and organize data.

2) Data classification

Data classification is the step of grouping data based on their respective characteristics according to the formal object of research. From the classification process will be obtained data that is less relevant or data that is relevant to the research object and then separated so that it will not interfere with the next data analysis process.

3) Data displays

Data display is done to facilitate interpretation or the process of reading data.

4) Interpretation / Interpretation of Data

After the last step above, namely data display, the data will appear in clear tabulations according to their characteristics. Furthermore, the researcher will carry out an interpretation based on the indicators that have been formulated previously, namely a model and early childhood exercise equipment that is cheap, attractive, safe and multi-functional so that it can be used in various forms of children's sports games.

3. Results and Discussion

3.1 Small Scale Trial

The small-scale trial was carried out using 10 kindergarten students and 10 elementary school students accompanied by two teachers. In small-scale trials, it is hoped that this will become a space to see the shortcomings of the product so that it can be used as material in improving equipment models and training model forms.

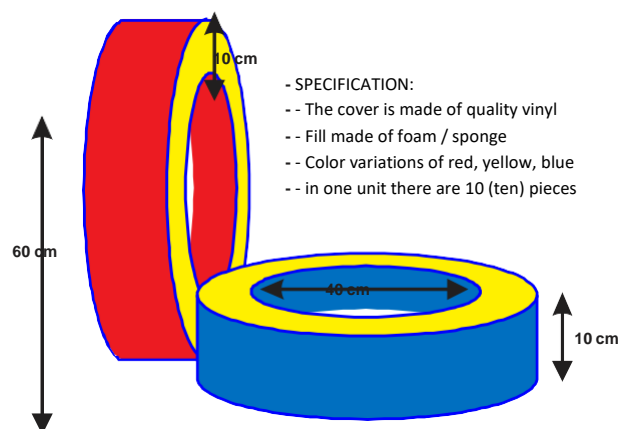
From some of the input obtained from experts, it is then used as a basis for making improvements to the product both in terms of tools and training models. In this methodological step it is also interpreted as a content validity test, namely the expert provides an assessment of the content of the tool and the training model judging from the suitability of the development goals of the model itself.

3.2 Big Scale Trial

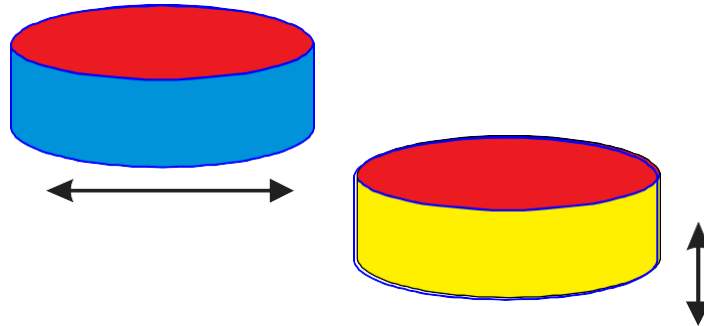
Because the tools created in this development research are relatively large both in size and quantity, of course the manufacturing costs for testing prototypes are quite expensive. Therefore, to reduce the number of required costs and to provide a greater effect from this research and development process, the researchers partnered with the Ministry of Youth and Sport Assistant for Special Service Sports, the field of Early Childhood Sports to carry out trial activities on a large scale as well as a socialization space for teachers. This activity was carried out in the courtyard of the Jakarta Kemenpora office involving many Kindergarten students and teachers from Jabodetabek. From the results of large-scale trials it can be seen that this equipment is very liked by students and teachers because it is very helpful in the learning process and children's play. It can be seen that the children felt challenged and enthusiastic to repeat and repeat the exercise program which was arranged in a cheerful playing atmosphere. In fact, some teachers even asked if they could buy this kind of equipment. This is a form of appreciation from the teachers for the usefulness of the sports equipment and models produced in this study. For further details, you can look at the documentation in the form of films and photos that are included in the report on the results of this research.

3.3 Specifications for the final product/outcome tool

a. Wheel Foam



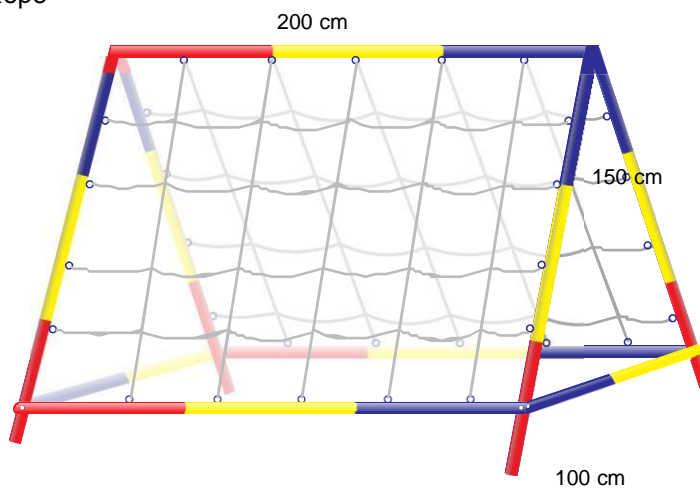
b. Zig-zag Pie



SPECIFICATION:

- a) Cover is made of quality vinyl
- b) The contents are made of foam/sponge
- c) Color variations of red, yellow, blue
- d) in one unit there are 10 (ten) pieces

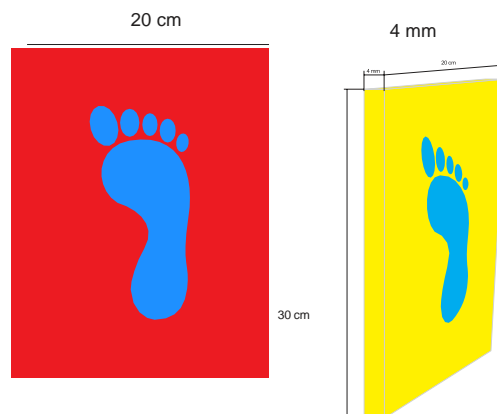
c. Pyramid Rope



SPECIFICATION:

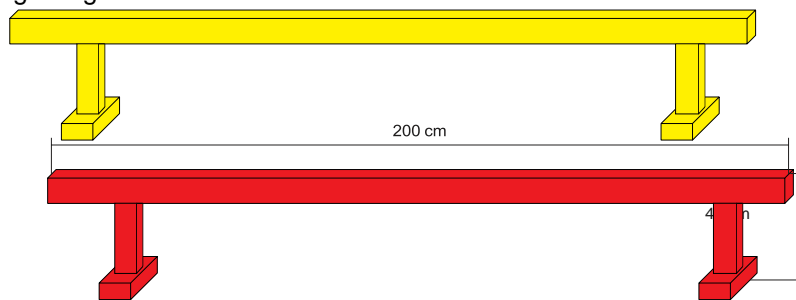
- a) the framework of a strong iron pipe measuring 1 dim
- b) Rope made of nylon fiber (semi-synthetic)
- c) Color variations of red, yellow, blue
- d) there is 1 (one) fruit in one unit

d. Step Matres



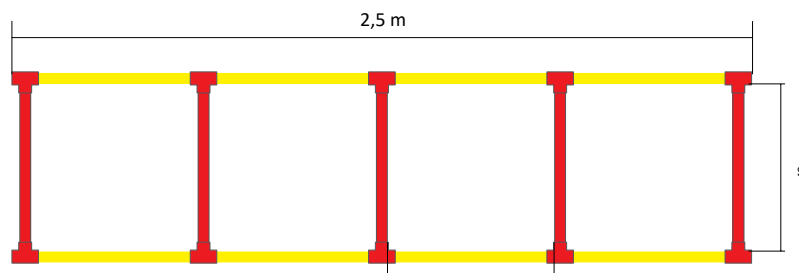
- SPECIFICATION:
- a) made of Sponge Ati
 - b) Screen printing of footprints
 - c) Color variations of red, yellow, blue
 - d) 10 pieces in 1 unit

e. Balancing Bridge



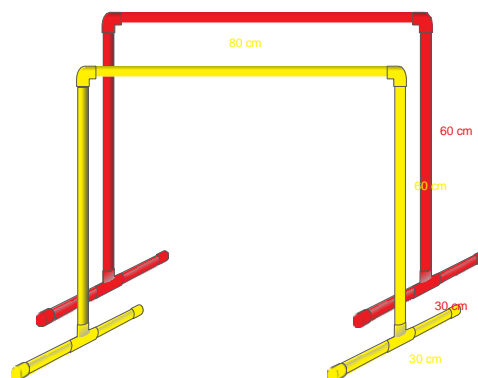
- SPECIFICATION:
- a) Made of strong wood with a width of 10 cm
 - b) Framework reinforced with iron clamps
 - c) There are two colors red and yellow
 - d) In one unit there are 2 (two) pieces

f. Jump Stairs



- PECIFICATION:
- a) Made of 3/4 dim quality PVC pipe
 - b) Color variations of red, yellow, blue
 - c) In one unit there are 2 (two) pieces

g. Save Gate



- SPECIFICATION:
- Made of Quality PVC Pipe size 3/4 dim
 - Color variations of red, yellow, blue
 - In one unit there are 10 (ten) pieces

Physical activity for pre-school children is a vital need, especially for their growth and development. children do not automatically acquire knowledge, attitudes and skills without good physical activity. There is evidence that the activity benefits the individual doing it. In real terms, increasing the physical fitness of everyone at all age levels can be achieved through regular physical activity. This can happen for several reasons. First, participation in physical activity can improve

health-related physical fitness, namely muscle strength, flexibility, muscle endurance, cardiovascular endurance, flexibility and body composition. Physical activity can also reduce the risk of heart attack, including obesity and hypertension. Physical activity that is carried out regularly can increase bone density, besides that it is also a way out to release tension and anxiety.

Second, physical activity can improve motor skills which will be needed later in everyday life. Physical activity that is carried out with certain qualities can improve life skills, especially in decision making, leadership and cooperation which are obtained through positive interactions with other people that occur during activities.

Third, physical activity that is carried out regularly from an early age can improve motor perceptual abilities, namely an ability that can predict a student's academic ability. Motor perception is an ability that links movement skills and cognitive function.

4. CONCLUSION

From the research steps in accordance with the procedures in development research, a series of tools/models are produced that can be used as supporting alternatives for the development of early childhood sports. The more than the sides of the equipment produced include; a) more accommodating to provide various models of training for early childhood including non-locomotor, locomotor, and manipulative movements. In addition, this model of equipment can be used in the form of competitive exercises so that it further triggers the child's desire for movement; b) the type of portable knock down equipment allows it to be used in various types of land owned by the school. This was made by taking into account the current conditions where many schools relatively have limited land; c) various types of training models theoretically sports science will be able to lead to an improvement in the child's condition in the motor, affective, and cognitive domains according to the stage of development; d) facilitating and assisting teachers in presenting various models of sports training for early childhood; e) simple, so that it can lure the teacher to be able to make modifications through simple equipment with materials that can be found around it.

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