The Utilizing of Leftover Wood as a Sit-Up Bench in Developing Fitness Equipment

Ronny Rahail¹, Dilli Kuswoyo² *, Mikkey Suganda³

¹, ² Department of Physical Education, Health and Recreation, Universitas Musamus, Merauke, Indonesia
³ Nahdatul Ulama University, Cirebon, Indonesia

Abstract. The purpose of this research is to develop and produce a sit-up bench as fitness equipment for people in Waninggap Nanggo Village, Semangga District, Merauke which utilize the leftover wood. This method is a development research that refers to the Borg & Gall which has conducted, namely: (1) Conducting Preliminary Research and Gathering Information, (2) Developing Initial Product Forms, (3) Evaluation, (4) Revise First Product, (5) Field trials, (6) Revise Final Product and (7) Final Results through field trial revision. The questionnaire is used in collecting the data; the results obtained were expert evaluation, limited trial, and trial use by the people. Data in the form of production results regarding product quality, product benefits, and its ease. Based on the results of the Physical Education Experts 96.87% (Very Good), through limited trial was 93.75%, and the last one is obtained through trial use was 90%. Based on the data that has been received above, it can be stated that sit-up bench which utilize the leftover wood can be used by the people Waninggap Nanggo Village, Semangga District, Merauke because it can be accepted.

Keywords: Leftover wood, Sit-Up Bench, Fitness Equipment.

1 Introduction

Physical exercises as known as fitness, exercise, conditioning, resistance training or fitness training, however, is a very complex reality [1]. Having a healthy and fit body is everyone's dream. Several studies have shown that physically active adults are healthier and have a higher Physical Fitness than inactive adults[2] where physical exercise is a training process with systematically programmed, carried out over and over with gradually load increase[3]. In the fitness world, there are various types of physical activity that can be done, one of them is sit-up. Sit-up exercises are carried out aimed in increasing muscle tone, muscle fibers and abdominal muscle mass so it will increase the strength of the abdominal muscles too [4]. Its similar with Hanum states that Sit-up is a kind of physical exercise which aims to strengthen the abdominal muscles can also metabolize fat in the abdomen so that excess abdominal circumference can be overcome with just simple movements [5], sit-up can be started with lying down position and then lifting the body slightly and returning to the floor with the load in the form of repetitions, sets and intervals between each set [6] then this movement is done for 15 times then rest for 60 seconds and repeat again for 3 sets [7]. The sit-ups test can evaluate not only muscle endurance of abdomen but also static strength[8]

Getting a measurable and programmed physical activity such as sit-up exercises, it is necessary to have a sit-up bench. To enjoy this training aid facility, the people of Waninggap Nanggo Village, Semangga District, Merauke have to travel a long distance by taking about 120 minutes to Merauke City. This condition is certainly not effective and efficient. Therefore, researchers want to develop a sit-up tool by utilizing leftover wood. Based on that reasons, the researchers conduct a research entitle “The Utilizing of Leftover Wood as a Sit-Up Bench in Developing Fitness Equipment”.

2 Research Method

2.1 Research Type

This study is a Research and Development (R&D) which refers to Gall and Borg explain that in education, Research and Development is an industry-based development model, used to design learning product is the finding of the research[9] this product is systematically tested, then evaluated, and refined until meets certain standards; effective, efficient, and quality[10]. In this research, sit-up bench as a fitness equipment is the development research with utilizing the leftover wood.

* Corresponding author: kuswoyo_fkip@unmus.ac.id
2.2 Sit-Up Bench Development

This fitness equipment as known as sit-up bench has been modified by the researchers which utilize leftover wood to facilitate people in Waninggap Nanggo Village so they can treat their self or had the sit-up exercise in this village without wasting time and energy to travel the Merauke City for 120 minutes. The steps taken in this research are; preliminary research is conducted, gathering information, and absolutely field observations and literatures. Developing sit-up bench, Evaluation of experts. In this development research and Physical Education experts, Revision of product first, this is based on experts’ suggestions, This step will be used as an improvement to the product, Field test and the last revision about the product obtained through field test results and the last but not least is The result of sit-up bench produced through revised field trials.

3 Result and Discussion

Sit-up is a kind of physical exercise which aims to strengthen the abdominal muscles can also metabolize fat in the abdomen so that excess abdominal circumference can be overcome with just simple movements [5]. The results of data analysis from the expert of physical education was 96.87%, then the data analysis through limited trial was 93.75%, and the last one is analytical data obtained through trial use was 90%. Based on the data analysis described above, it can be concluded that sit-up bench product as the fitness equipment to facilitate people in doing sit-up of kindergarten in Waninggap Nanggo Village, Semangga District, Merauke has a Very Good criteria. Where this point is obtained through the assessment in the questionnaire such as tool shape suitability (1), ease of use of the tool (2), tool benefits (3), and the tool quality (4).

Table 1. The completely results

<table>
<thead>
<tr>
<th>Components</th>
<th>Results</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert of Education</td>
<td>96.87%</td>
<td>Very Good</td>
</tr>
<tr>
<td>Limited Trial</td>
<td>93.75%</td>
<td>Very Good</td>
</tr>
<tr>
<td>Trial Use</td>
<td>90%</td>
<td>Very Good</td>
</tr>
</tbody>
</table>

The data above shows that the product (sit-up bench) placed “very good” category, meaning sit-up bench can be used as a fitness equipment in facilitating people to exercise, and this is refers to the existing percentage, from 90% to 96.87% which have a very good category.

4 Conclusion

The findings obtained from this research process is how this sit-up bench helps people to exercise sit up, at Waninggap Nanggo Village, Semangga District, Merauke. The evidence supporting this statement that the results from the expert of physical education evaluation data was of 96.87%, limited trial was 93.75%, and the last one through trial use was 90%. Based on these data, the sit-up bench is very good and so helpful people to exercise sit-up without wasting time and energy.

Acknowledgment

This acknowledgments is addressed to several parties who has involved directly even indirectly in this research, which is as follows: a) The whole range of Universtiy of Musamus, Merauke which has facilatated this research ; b) Rector of Musamus University has espoused this study by allowing the research team conducting research on campus; c) Dean and all academic community of Education Faculty of Musamus University who have provided input and support for this study; d) People of Waninggap Nanggo Village, Semangga District, Merauke who are participated and being cooperated in while reseacher.

References
