



Kinestetik : Jurnal Ilmiah Pendidikan Jasmani 7 (2) (2023)

Kinestetik : Jurnal Ilmiah Pendidikan Jasmani

<https://ejournal.unib.ac.id/index.php/kinestetik/index>

DOI : 10.33369/jk.v7i2.26643



Development of a High Jump Apparatus in High School

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Article Info

Article History :

Received : February 2023

Revised : June 2023

Accepted : June 2023

Keywords:

Facilities,
High Jump,
Learning Media,

Abstract

The main objective of this research is to develop a high jump tool for senior high schools. This research was carried out at SMA Kristen Immanuel Medan Medan and will be held from August 6 to September 7 2022. The type of research used is Research and Development, with small group trial media experts reaching 88% in the valid category, media experts learning in small group trials reached 82% in the valid category, athletic experts in small group trials reached 87% in the valid category, and small group trials of 10 students reached 80% in the valid category, then large group trials of media experts reached 95%. In the valid category, the large group trial of learning media reached 90% in the valid category, the large group trial of athletic experts reached 95% in the valid category, and the large group trial of 30 SMA Kristen Immanuel Medan students reached 85% in the valid category. On the basis of the data obtained, the development of a high jump tool is declared valid or suitable for use as a medium for high jump learning in senior high schools.

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ISSN 2685-6514 (Online)
ISSN 2477-331X (Print)

INTRODUCTION

Physical education is a phase of the whole educational process that cares about the development and use of individual movement abilities that are voluntary and meaningful and for reactions that are directly related to mental, emotional and social, education is very important meaning that without human education it will be difficult to progress and develop according to with the demands of the times, thus education must really be directed in order to be able to produce quality human beings and be able to compete having a sense of mind and noble character and good morals.

Thus the goal of carrying out physical education in schools is identical with educational goals, while the goals of physical education as written in the permendiknas law number 22 of 2006 are "developing self-management skills in an effort to improve and maintain physical fitness and a healthy lifestyle a goal that will can be achieved if the tools, content or curriculum that are used as guidelines are relevant, meaning that they are in accordance with these educational goals, and the curriculum is a program that is designed, developed and implemented in teaching and learning situations that are deliberately created in the scope of the school. In addition to the curriculum which is used as a guide in achieving education, a teacher is also very influential in this field, one of which is a physical education teacher, because a physical education teacher has an important role to educate the nation's life where physical education teachers can develop from the cognitive, psychomotor and religious. The high jump is one of the athletic numbers in the jumping branch which prioritizes strength and agility, athletics is also the basis of all sports in carrying out these sports activities. The main goal in this high jump branch is to

be able to jump as high as possible by being able to cross the bar.

Prior to the development of the high jump equipment in senior high schools, the researchers conducted observations of physical education facilities in senior high schools in Sibolga City, so the observation sheets were carried out in 4 (four) Sibolga State Schools, and the following data were obtained: suggestions for high jump in SMA N 1 Sibolga 33% with sufficient information, at SMA N 2 Sibolga 33% with categories, at SMA N 3 Sibolga 50% with sufficient categories, at SMA N 4 Sibolga 33% with less categories. The problem with the observation results is that there is no + tool high jump, the researcher wishes to design a tool to assist students in implementing the high jump learning process. The tool designed in this study is MERANPAT (Leap Learning Media) which is expected in this development research to be an innovative learning media tool and can contribute to effective and efficient learning for students and teachers.

METHODS

This study uses research with the Research and Development method, according to Borg and Gall (1989), Research and Development is a research method used to produce certain products and test the effectiveness of certain products. The questionnaire is used to find out the opinions of respondents or students regarding the development of high jump equipment in high schools. Observations are used to determine existing needs in the field. Instruments are developed with a scale of 5. The lowest score is given the number 1 (one) and the highest score is given the number 5 (five) (Sugiyono 2012) The instrument used in this study was a questionnaire given to athletic experts, media experts,

learning media experts and students. Data analysis techniques used with descriptive analysis techniques with percentages. Quantitative data analysis from distributing questionnaires. The analysis used is descriptive analysis with the aim of knowing students' needs for the problems faced during the physical education process, so the formula used is Sudjana in Joni Tohap Maruli Nababan (2019)

Subject and Object

The subjects in this study were students of Christian High School Immanuel Medan with small group trials of 10 male students and large group trials of 30 students. The object of this research was the high jump equipment.

Place and time of research

Place and time of research

This research was carried out at SMA Kristen Immanuel Medan on Jalan Slamet Riyadi No.1, Madras Hulu, Medan Maimun, Madras Hulu, Kec. Medan Polonia, Medan City, North Sumatra 20151, namely the High School (SMA) level. and the research time is expected to be carried out from May to November 2022. The analysis used is descriptive analysis with the aim of knowing students' needs for the problems faced during the physical education process, so the formula used is Sudjana in Joni Tohap Maruli Nababan (2019). Note: Answers (a) will be given a score of 1 and answers (b) will be given a score of 0. The number of all responses will be divided by the number of people who responded and multiplied by 100%. From this, it is known how big the athlete's need is for the obstacles faced in learning.

Table 1.

| Percentage | Description | Meaning |
|------------|-------------|---------|
| 80%-100% | Valid | Use |
| 60%-79% | Valid | Use |

| | | |
|---------|---------|----------|
| 50%-59% | Invalid | Replaced |
| <50% | Invalid | Replaced |

RESULT

The type of research used is research and development, with media experts in small group trials reaching 88% in the valid category, learning media experts in small group trials reaching 82% in the valid category, athletic experts in small group trials reaching 87%. with a valid category, and small group trials of 10 students reached 80% with a valid category, then large group trials of media experts reached 95% with valid categories, large group trials of learning media reached 90% with valid categories, large group trials athletic experts reached 95% in the valid category, and a large group trial of 30 SMA Kristen Immanuel Medan students reached 85% in the valid category. On the basis of the data obtained, the development of a high jump tool is declared valid or suitable for use as a medium for high jump learning in senior high schools.

DISCUSSION

Based on the results of data analysis on the background of the problems that have been described, the researcher contributes ideas to problems that exist in senior high schools, namely the lack of high jump learning media facilities. Therefore the researchers made a design for the development of the meranpat high jump tool. then discussed with lecturers and tool-making experts. This study uses the research & development (r&d) type of research from borg & gall (1989) which consists of eight steps, after discussing with tool-making experts, the tool-making process takes approximately 1 month, with the concept to be developed namely, height and low, mechanism, size and how the tool works.

As explained by riantoso (2016) suggests that developing learning tools or media can be done by adding a lot, modifying the size, modifying the height and low, modifying the size and can modify the shape. This research was conducted in senior high schools in terms of previous research conducted by yeni sambas (2013) with research on improving learning outcomes in the high jump straddle style by modifying rubber media as a learning medium for class xi high school students, and concluded that modifying learning media in high school can efforts were made to improve student learning outcomes, and supandi (2019) with research to improve high jump learning outcomes by modifying rubber as a learning medium for manukung state high school students. Soeporto (2000) in arya manual prayuda (2022) suggests that developing media or tools in the learning process is very useful not only for students but also for teachers. This product stage is the selection of materials and the manufacture of tools in the form of high jump frames and assembling them. All the framework and requirements needed have been designed to the fullest. At this stage the researchers also discussed with experts to perform product validation, the results of product validation became the basis for whether the product was suitable for use or not.

In product validation to experts, this states that the tool is feasible to try out. Researchers conducted trials, the results of small group trials of media experts reached 88% in the valid category, small group trials of learning media experts 82% valid category, small group trials of athletic experts reached 87% with valid categories and where the value obtained was known that the score small group trials on students with 10 samples obtained by 80% (valid or feasible) it can be stated that high jump learning media products are suitable for

use as learning media in senior high schools. The next stage was discussions with media experts, learning media experts and athletic experts. At this stage the researchers provided small group test videos, in the form of documentation. Then it was obtained that the decision to adjust the support pile foundation and the length of the ruler must be adjusted to the needs of the students after the finished product, the researcher conducted a large group trial. Large group trials, media experts reached 95% with the category (valid or feasible), large group trials of learning media experts reached 90% with the category (valid or feasible), large group trials of athletic experts reached 95% with the category (valid or feasible) where the value obtained is known that the large group trial with 30 student samples obtained a score of 85% (valid or feasible). This means that the MERANPAT high jump learning media product meets the criteria or is suitable for use

CONCLUSION

Based on the results of small group trials, revised revisions, wider group trials, revised improvements, it can be concluded: The modified high jump learning media at MERANPAT High School can be used during the learning process.

1. The high jump tool provides convenience and contribution to students when learning the high jump.
2. The development of technology-based high jump equipment can increase student knowledge regarding technological developments in developing learning facilities in senior high schools

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