INDONESIAN JOURNAL OF SPORT MANAGEMENT
Department of Physical Education, Universitas Majalengka, Indonesia
ISSN 2776-706X.

Construction of the Long Jump Test for Physical Education, Health and Recreation Students

Raffly Henjilito[1A-E*], Zulkifli[2BD], Insani Zikri[3A-C], Iqmal Maulana[4A-C]

[1234]Health and Recreation Physical Education, FKIP Universitas Islam Riau, Indonesia

ABSTRACT

This research aims to make improvements in the long jump test. The repaired components are only in the process of executing the stop starting from the start, support, jump and landing. Usually, the long jump test involves doing the furthest jump and measuring how far the jump is. Test instruments and norms must be used for these athletes to determine the quality of the jumps of Riau Islamic University athletic students. This research method uses research and development methods or research and development. The validation of research and development instruments uses content validation carried out by several experts (expert judgment), including one test and measurement expert and two experts in athletics. Based on the long jump expert instrument test evaluation analysis results, it was declared valid and reliable to be used as research material for athletics students.

Keywords: Test Contruction, Longjump, Physical Education Students

Corresponding author:
*Raffly Henjilito, Universitas Islam Riau, Jl. Kaharudin nasution 113 Marpoyan 28284.
Email : rafflyhenjilito@edu.uir.ac.id

Article History:
Submitted: January, 2024
Accepted: January, 2024
Published: February, 2024

Authors' contribution:
A) Conception and design of the study;
B) Acquisition of data;
C) Analysis and interpretation of data;
D) Manuscript preparation;
E) Obtaining funding.

Cite this article:
Henjilito, R., Zulkifli, Zikri, I., & Maulana, I. (2024). Construction of the Long Jump Test for Physical Education, Health and Recreation Students. *Indonesian Journal of Sport Management*, 4(1), 52-57.
https://doi.org/10.31949/ijsm.v4i1.8492

INTRODUCTION

Sports activities involve many body movements, such as playing and exercising, so they can indirectly improve the health and fitness of those who do them. In line with this, physical education and coaching carried out from an early age are necessary so that people with talent in this field can clearly see where their talent will lead to becoming a sports athlete. One of the goals of sports development and development in Indonesia is to improve sports skills, including long jump. The long jump is a sport with accurate and strategic movements involving all body parts, especially the legs.

Long jumps are one of the activities that develop the ability to move from one point to another. In the long jump, there are three types of styles, namely the long jump squat style (tuck style), hanging style (hang-style), and walking style in the air (walking in the air). Several styles of the long jump regulate the body's posture while floating in the air. Therefore, the specific movement of the long jump is often called the long jump style.

The success of implementing the long jump technique can be seen in three phases, namely, at the start, support, jump, and landing. So, standard test instruments are also needed to determine long jump ability. The current long jump test instrument carries out a long jump test starting from the start, hopscotch, step, jump and landing using basic long jump techniques to jump into the jump tank. The measurement taken is the jump's distance from the jump tub to the position of the foot landing in the jump tub. The value of the test is that the teste performs a jumping movement three times; the furthest or best result of the three jumps is taken, which is the data. Values are measured in meters.

This research aims to make improvements in the long jump test. The repaired components only execute the jump, starting from the start, support, jump, and landing. Usually, the long jump test simply involves doing the furthest jump and measuring how far the jump is. To determine the quality of the Riau Islamic University physical education jumps and track students, test instruments and norms must be used for these athletes. Based on the background above, this research needs to be carried out to create a standard long jump test instrument that complies with the latest IAAF regulations.

This research scheme is based on the Scientific Vision of the Study Program and the UIR Research and Community Service Master Plan (RIPPM), namely R & D, which discusses educational and learning technology. Through this scheme, researchers are interested in raising the title about improving the shape of the long jump test instrument. It is hoped that with this research, it will be easier for the University and PASI, the parent organization for Indonesian athletics, to recruit outstanding athletes through standardized test instruments.

The long jump results from the horizontal speed created when starting with the vertical force generated from the force of the pushing legs. The results of the two forces determine the parabola of gravity points (Bakar, 2007; Dikdik, 2010; Eddy, 2011; Ely Yuliawan, 2013; Fred, 2008; Giri, 2013; Sahadi, 2011; Sukirno, 2008); The long jump is one of the events in athletics that is contested. The long jump movement can be divided into 4 (four) parts, namely the start (approach run), push/support (talk off), body attitude in the air (action in the air), and landing attitude (leading). (Carr, 2003; Mukholid, 2006; Racmat, 2009; Winendra, 2008)

Two-thirds of long jump performance depends on jumping power. A good long jumper must be as fast as a runner and have the sprint power of a high jumper and the rhythm of a hurdler. The long jump is also a movement that jumps forward to keep the body's weight as long as possible (floating in the air), which is done quickly by pushing off one leg to reach the greatest distance. The long jump is achieving the highest initial speed while still being able to make a strong upward push with one leg to achieve sufficient flying height.

Success in the long jump is influenced by the start and support when flying in the air and when landing. A good start, strong support, correct style, and good landing also result in a perfect jump. Long jumps require a fast start, strong support and force in the air, which aims to increase body speed. Therefore, long jumping requires very good sprinting ability and leg strength. Several techniques for floating in the air also help maximize the jumping distance.

Basic long jump techniques are needed to carry out sports activities. The long jump is also a sport always held in competitions and achievement events. The long jump can be used in various movements, especially starting, pushing, flying and

landing. There are four basic long jump techniques (Bramantha, 2017): 1) the start is the initial movement to gain speed when taking off. 2) Repulsion or support is a change or transfer of motion from horizontal to vertical movement carried out quickly. 3) Body attitude in the air, namely, this attitude is related to the wind when the body is in the air, and this can affect the speed and distance travelled. 4) Landing posture, namely this movement, is the main movement; don't let it happen because it is not precise enough; it can result in less than the maximum distance travelled.

Tests are an evaluation tool to measure how far teaching objectives have been achieved (Kadir, 2010). Tests as data collection are a series of questions/exercises used to measure individuals' knowledge skills, intelligence, abilities or talents (Zhannisa & Sugiyanto, 2015). Based on the opinion above, the definition of a test as a measuring tool has various meanings, one of which is that a test is a measuring tool for measuring a person's abilities. Likewise, in this research, the test instrument aimed to measure psychomotor abilities, especially psychomotor abilities and long jump skills, which were slightly modified. A good test must meet several requirements, namely, must be efficient, must be standard, must have norms, and must be objective, valid (valid), and reliable (reliable) (Kadir, 2010).

Measurement is a collection of information. Usually, this activity is carried out by comparing something with a certain size and is quantitative (Susilawati, 2018). Measurement is the process of collecting data or information carried out objectively. Thus, measurements can be carried out if an instrument has been implemented, and then scores are given with raw scores. Measurements must be carried out per program objectives and in the context of developing or refining objectives (Fenanlampir, A., & Faruq, 2015).

Evaluation is always carried out concerning the objectives to be achieved in an activity. Evaluation is a process or activity of selecting, collecting, analyzing and presenting information that can be used as a basis for decision-making and preparation of subsequent programs (Eko Putro WIdoyo, 2012). Evaluation is giving consideration or meaning regarding the value and meaning of something being considered. Something considered can be in the form of people, objects, activities or a particular unit (Fenanlampir, A., & Faruq, 2015). Evaluation aims to obtain accurate and objective information about a program (Junaidi et al., 2018). This information can be in the form of the program implementation process, the impact/results achieved, efficiency, and the utilization of the evaluation results, which are focused on the program itself to decide whether to continue, improve or discontinue it.

RESEARCH METHODOLOGY

This research method uses research and development methods. According to (Sugiyono, 2010), research and development methods are used to produce certain products and test the effectiveness of these products. This research aims to develop or modify the form of an existing long jump instrument and then make slight improvements regarding executing the jump, starting from the start, support, hovering and landing. Many development research models can be used, but this research uses development using the Borg and Gall model (Haryati, 2012: 18). The Borg and Gall version of the development research model includes ten activities, namely: (1) research and information collecting, (2) planning, (3) develop a preliminary form of product, (4) preliminary field testing, (5) main product revision, (6) main field testing,

(7) operational product revision, operational field testing, (9) final product revision, (10) dissemination and implementation. The flow of this research is taken from the development of the Borg and Gall model.

The targets achieved in this research were athletic students. This research is located in Marpoyan, Pekanbaru City and will be carried out after the proposal is received. The population in this study was 36 Penjaskesrek students at Riau Islamic University and a sample of 36 people using a purposive sampling technique. The data analysis technique in this research is as follows: (a) validity test using content and construct validity. The construct validity test was carried out by analyzing the data from the long jump test results. The data obtained from the test was tested for validity using the SPSS computer program, (b) reliability test.

RESULTS AND DISCUSSION

The long jump test is used to properly determine and measure jumping ability in jump competitions, especially in the long jump number. Based on the results of observations, the jumping ability of athletic students is good. However, when making a jump, especially when stepping and jumping, students still need to be more confident in deciding which foot to step on first and pay close attention to the jumping process accompanied by the swing of the hand when making the jump. For this reason, creating a long jump test instrument that focuses more on the jumping process, starting from starting, landing, hovering, and landing, is deemed necessary. So it will be more accurate when doing the long jump test.

The long jump only focuses on the furthest distance of a jump, measured by a meter, improving the components in the long jump test only on executing the jump starting from the start, support, hovering and landing for which the test instruments are made. The long jump test produced in small-group trials is an initial step before conducting research in large-group trials. Therefore, the data produced is validated by one test and measurement expert and two athletic sports experts. Based on tests and measurements of long jump ability in small-scale trials on 15 athletic students.

The test is carried out based on the item criteria: Score 0 (zero) if the sample fails to carry out all movement points, Score 1 (one) if the sample performs 1 (one) movement point correctly, Score 2 (two) if the sample performs 2 (two) movement points that are carried out correctly, Score 3 (three) if the sample carries out all the movement points correctly.

The calculation method is that each point of the test item is first searched for validity; after all the test items are valid, the reliability is looked for using SPSS. If the reliability of the r-value is greater than the reliability of the table, then the test item data is reliable.

The results of the validity of small group trials using the SPSS application with results obtained were 0.66, including the medium category. The known validity results are then compared with the r table values according to the number of samples used in the research. If the calculated r-value is greater than the table r value, then the test results of the instrument are valid and can be used to collect data for research.

The reliability of small group trials was calculated using the SPSS application with a result of 0.72, which is in the medium category. The known reliability results are then compared with the r table values according to the number of samples used in the

research. If the calculated r-value is greater than the table r value, then the test results of the instrument are reliable and can be used to collect data in research.

Based on the data above, the long jump test instrument developed is correlated with the total score and has a validity of 0.66 and 0.66, greater than the r table (0.396). Meanwhile, the reliability result is 0.69, greater than the r table (0.444). This means that the expert assessment and measurements of the long jump test are valid and reliable so that they can be used for research.

The results of the validity of large group trials using the SPSS application with results obtained were 0.73, including the medium category. The known validity results are then compared with the r table values according to the number of samples used in the research. The long jump test measurement results in the developed large-group trials had a reliability value of 0.78. Based on data analysis, long jump skills are the lowest, with a score of 71 and long jump skills are the highest, with a score of 95.

Tabel 1. Frequency Distribution of Long Jump Tests

Interval	Catagory	Frequensy	Percent
71 – 75	Tnot Good	3	8 .33
76 – 80	Pretty Good	5	13.88
81 – 85	Passably Good	9	25.00
86 – 90	Good	12	33.33
91 – 95	Very Good	7	19.44
Total		36	100

The results of research (Ridwan & Sumanto, 2018) show that leg muscle explosive power, speed, and flexibility contribute to long jump ability. In this way, the distance of the long jump can be increased by increasing the explosive power of the leg muscles, flexibility and speed when running fast at the start. Based on the development research steps to produce the product that has been carried out, the final product is obtained as a long jump instrument. After creating this long-range test instrument, students will no longer have difficulty finding appropriate test instruments according to the latest PASI regulations.

CONCLUSION

Based on the analysis results from the evaluation of three experts, namely one test and measurement expert and two athletic sports experts, especially in long-distance events, the validity was 0.73, and the reliability was 0.78, including the high category. This means that the expert assessments and measurements of the long jump test are valid and reliable for research for athletic students.

AKCNKOWLWDGEMENT

We are very grateful to the Chancellor of the Islamic University of Riau, the Dean of the Teacher Training and Education Faculty at the Islamic University of Riau for the Physical Education study program, and all those who have contributed to the writing of this article. This journal can be useful for everyone.

CONFLICT OF INTEREST

There are no conflicts of interest in this article.

REFERENCES

Bakar, A. (2007). Pengaruh Pembelajaran Langsung Koorporatif Tipe Stad Terhadap Kemampuan Lompat Jauh Murid Kelas IV SD Inpres Bertingkat Mamajang II Makasar. *Jurnal Of Physical Education, Sport and Rection*.

Bramantha, H. (2017). Penerapan Modifikasi Media Kardus Dalam Meningkatkan Pembelajaran Lompat Jauh Pada Siswa Sekolah Dasar. *Jurnal Kejora*, *2*(2).

Carr, G. A. (2003). *Atletik Untuk Sekolah*. PT RajaGrafindo Persada.

Dikdik, Z. S. (2010). *Mengajar dan Melatih Atletik* (Bandung).

Eddy, P. (2011). *Dasar - Dasar Gerak Atletik* (Yogyakarta).

Eko Putro WIdoyo. (2012). *Evaluasi Program Pembelajaran.* (P. Pelajar (ed.)).

Ely Yuliawan. (2013). Pengemabangan Model Pembelajaran Lompat Jauh Pada Siswa Sekolah Dasar. *Journal Cerdas Sifa*, *2*(2), 114.

Fenanlampir, A., & Faruq, M. M. (2015). *Tes dan Pengukuran Dalam Olahraga* (Andi).

Fred, M. (2008). *Dasar - Dasar Atletik* (Bandung).

Giri, W. (2013). *Atletik* (Yogyakarta).

Junaidi, I. A., Nasrullah, N., Imansyah, F., Bayu, I. M. A., Manullang, J. G., Handayani, W., Asriansyah, A., & Hardi, A. A. (2018). Pelatihan Pencegahan Dan Perawatan Cidera Dalam Berolahraga. *Wahana Dedikasi : Jurnal PkM Ilmu Kependidikan*, *1*(2). https://doi.org/10.31851/dedikasi.v1i2.2275

Kadir. (2010). *Statistik Untuk Penelitian Ilmu - Ilmu Sosial di Lengkapi Dengan Output Program SPSS* (Jakarta).

Mukholid, A. (2006). *Pendidikan Jasmani Olahraga dan Kesehatan*. Yudistira.

Racmat, F. (2009). *Kenapa Atletik Disebut Induk Semua Cabang Olahraga* (Jakarta Se).

Ridwan, M., & Sumanto, A. (2018). Kontribusi Daya Ledak Otot Tungkai, Kecepatan Dan Kelentukan Dengan Kemampuan Lompat Jauh. *Jurnal Performa Olahraga*, *2*(01), 69–81.

Sahadi, A. (2011). *Latihan Dasar Atletik* (Jakarta TI).

Sugiyono. (2010). *Metode Penelitian Pendidikan Pendekatan Kualitatif, Kuantitatif dan R&D* (Bandung).

Sukirno. (2008). *Belajar dan Berlatih Atletik* (Depok).

Susilawati, D. (2018). *Tes dan Pengukuran*. UPI Sumedang Press.

Winendra, A. (2008). *Seri Olahraga Atletik Lari, Lempar dan Lompat* (Yogyakarta).

Zhannisa, U. H., & Sugiyanto, F. X. (2015). Model Tes Fisik Pencarian Bakat Olahraga Bulutangkis Usia di Bawah 11 Tahun di DIY. *Jurnal Keolahragaan*, *3*, 117–126.