

# Long Jump Ability:

## A Comparison Between Students with High and Low Physical Fitness

Ervan Kastrena\*

Department of Physical Education, Universitas Suryakencana  
Cianjur, Indonesia

\*ervankastrena@unsur.ac.id

Adang Suherman, Amung Ma'mun, Eka Nugraha, Lutfi Nur

Department of Sport Education, Postgraduate School,  
Universitas Pendidikan Indonesia  
Bandung, Indonesia

**Abstract**—Long jump ability is a skill that must be possessed by high school students as a part of the achievement of physical education learning outcomes. This study was aimed at determining the differences in long jump learning outcomes in students with high and low fitness levels. This research is an experimental research involving 30 students from Vocational School of Pasundan 1 Cianjur, Indonesia, as the samples. The research instruments used in this study were the Indonesian physical fitness test for high school and rating scale for squat style long jump. This assessment scale was made through the following steps: a) assessment scale analysis; b) analysis of the rating scale format. The results of this study indicated that there were differences in the results of long jump abilities in students who have a high and low physical fitness. This finding is expected to be an evaluation for the physical education teachers on the importance of the health condition owned by the students in order to gain optimal learning outcomes.

**Keywords:** long jump, physical fitness, learning outcomes

### I. INTRODUCTION

Physical fitness is an indicator of someone's health [1]. By having good physical fitness, someone's body is able to perform various activities well without experiencing significant fatigue [2,3]. When associated with the Physical Education learning process, students who have good physical fitness will carry out their tasks well during learning and have the potential to enhance their ability and willingness to learn. This means that a person's level of physical fitness will affect the readiness or physical ability and mind to accept workload (learning activities) [4]. Factors that influence a person's physical fitness level are as follows: genetics, age, sex, physical activity, exercise habits, nutritional status, hemoglobin levels, health status, smoking habits and adequate rest [5].

In children and adolescents, physical fitness is often forgotten [6]. Though physical fitness is very useful to support the physical work capacity of children which in the end is expected to improve their performance. Therefore, monitoring the development of physical fitness is also very important to do because the results of this monitoring can be used as an evaluation tool for students to improve their physical fitness development. In addition, test results can also be used as an evaluation tool for teachers to improve and enhance the physical learning process and as a basis for assessing the

success of the physical learning process by physical education teachers in schools.

Research on physical fitness has been carried out and shows the relationship between physical fitness and physical activity undertaken [7-9]. However, there is still few researches that concerns on physical fitness in Physical Education. In this study, researchers aimed to examine the comparison of the results of long jumps conducted between students who have high physical fitness with students who have low physical fitness.

### II. METHOD

This research is a pilot study to obtain preliminary data of students' long jump ability. The method used in this research is descriptive research method. A total of 101 son of as many as students vocational high school X class pasundan cianjur 1 around year old 15-17 involved in this research and they were tested to measure their physical fitness level and each of the 15 students with the highest physical fitness and the lowest physical fitness were given the squat-style long jump ability test as an addition test. The research instrument used in this study was the Indonesian physical fitness test for high school and rating scale to determine the results of squat style long jump. Then the data were analyzed by SPSS version 23 to find out the difference in squat style long jump by using the t test.

### III. RESULTS AND DISCUSSION

The results show that the long jump of students who have low physical fitness and high physical fitness are as follows:

TABLE I. DESCRIPTION OF THE SUMMARY DATA OF LONG JUMP ASSESSMENT RESULTS

	Low Fitness	High Fitness
Total	148	169
Mean	9.87	11.27
SD	1.09	1.13

In table 1, it can be seen that the number of assessment scores in students with low fitness gets a total score of 148 while in students with high physical fitness get a total score of 169. Consequently, the average value of students with low physical fitness fitness is 9.87 with the standard deviations of

1.09 and high physical is 11.27 with a standard deviation of 1.13.

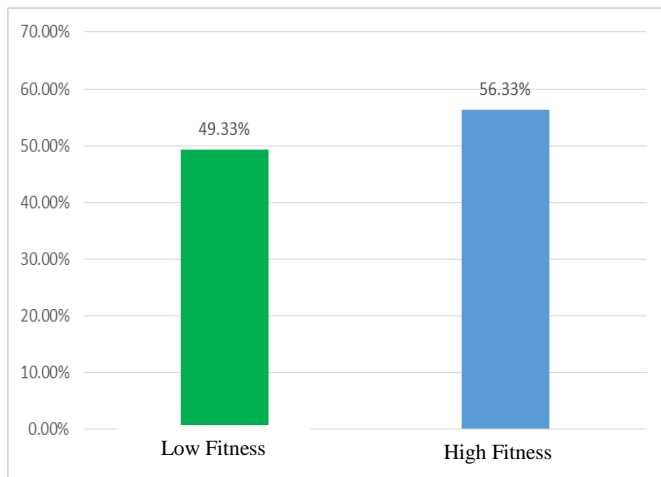


Fig. 1. Percentage of long jump achievement in students with low physical fitness and high physical fitness.

Figure 1 shows the percentage of students' long jump achievements. In students who have low physical fitness, the percentage achievement obtained was 49.33% while in students with high physical fitness gained 56.33%. Overall, the achievements of the long jump students are in the range of 40% - 60%.

TABLE II. DATA ANALYSIS OF STUDENT LONG JUMP ASSESSMENT RESULTS.

	T count	T table	Signification	Conclusion
t-test	3.446	2.048	.002	There is a significant difference

Table 2 shows that the t score of 3,446 > t table of 2,048 with a significance value of 0.002 so that it can be concluded that there are significant differences between students who have high physical fitness and students who don't through the squat style long jump results.

The aspect of physical fitness is an important part of supporting physical activity and as a measure of one's health. Fang et al [8] revealed the importance of physical fitness as an effort to prevent obesity in children. Furthermore, Ortega et al [10] added that the level of physical fitness had a positive effect on reducing depression, anxiety, and supporting higher academic performance.

Although there are significant differences in squat style long jump results, student fitness is still in the range of 40% - 60%. This means that efforts need to be made so that the percentage of physical fitness increases. The practice patterns and learning models applied are one of the important points that must be considered so that the selection of innovative and fun learning models in the form of games can be an alternative choice to increase student participation in learning [11,14]. Kurniawan and Suroto [15] explained that the application of

audio-visual media can be used to improve the results of long jumps on students, besides providing motivation while learning also has a positive impact on students [16]. Based on the results of research and study findings conducted, it is expected to be used as a consideration and evaluation material for educators in conducting learning activities in schools.

**IV. CONCLUSION**

The results of this study conclude that students who have high physical fitness get better long jump learning outcomes compared to students who have low physical fitness. Through these findings, it is expected to be an evaluation material for physical education teachers in an effort to improve students' physical fitness and understand how important the role of physical fitness levels is in various activities in physical education.

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