

The Effect of Speed Training on The Results of The Long Jump in Class X IPS Students of SMAN 1 OKU

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Abstract: This study aims to determine how much influence speed training has on increasing long jump results in class X IPS students at SMA N 1 OKU. This research is experimental research using a pretest-posttest control group design with the independent variable speed training, the dependent variable the long jump result. The subjects in this study were male students of class X IPS students who were selected by the sampling technique, to determine the experimental and control groups the researcher used a simple random sampling technique with an ordinal pairing system. The data collection method used is a test. In each group, the test was given at the beginning before treatment and at the end after being given treatment. The treatment in the experimental group was in the form of speed training (30-meter sprint), After being given treatment for 5 weeks with a frequency of exercise 4 times a week. Based on data analysis by means of the t-test statistic with a significant level $\alpha = 0.05$, it is obtained $t_{\text{count}} = 16.42$ and $t_{\text{table}} = 1.771$, if $t_{\text{count}} > t_{\text{table}}$ then H_a is accepted and H_o is rejected. Thus, the truth that was proposed by H_a can be accepted, that speed training has an effect on long jump results in class X students at SMA N 1 Ogan Komering Ulu.

Keywords: Long Jump, Results, Speed Training

A. Introduction

Sport is an activity that is very closely related to human life. In daily activities, unknowingly humans have actually carried out sports activities (Zeigler, 2007; Kay, 2019). Starting from walking, running, jumping, jumping, reaching, hitting and so on.

Athletics is one of the sports that is taught in schools, from elementary to high school. The athletics branch consists of several numbers including walking, running, jumping and throwing. According to Khomsin (2018), jumping numbers in athletics are divided into high jumps, long jumps, triple jumps, pole vault high jumps. Athletics is one of the sports that is easy to do, but this sport is less attractive to the public, because usually people tend to like sports that contain elements of play. Athletics is the mother of all sports, one of which is the long jump. Competency standards practice

athletic skills taught in schools, namely by using modified rules and the values of cooperation, honesty, respect, enthusiasm, and confidence.

According to Fajar (2020), the long jump is a form of walking movement by repulsing with one leg and lifting the leg up and then pushing it forward, in an effort to bring the body's point of weight as long as possible in the air which is done quickly to reach the farthest distance. Meanwhile, according to Aziz & Yudi (2019), long jump is the skill of moving from one place to another with one push forward as far as possible in order to get maximum results.

In high school level school, the allocation for long jump learning is only 6 x 45 minutes in one semester with an allocation of 2 hours of practical lessons and one hour of theory lessons (1 lesson = 45 minutes), so there are only 2 scheduled meetings to discuss long jump material. From the time allocation available, it is clear that it is not enough to learn long jump in depth and improve the basic movement techniques of long jump. Therefore, it takes more time to get better results, by adding to the schedule of meetings with exercises that will be held in extracurricular activities.

With additional training, it is hoped that the long jump branch will be able to make achievements for the school (Burhanuddin et al, 2022; Aburrachman et al, 2018). Because in the last few sports week events, the participants representing SMAN 1 OKU have never been able to make achievements in the long jump branch. Even if seen from their physical condition and posture they are quite good.

After being observed, it was seen that when doing the prefix running these students were still too slow. This can be seen from the condition of the students' bodies who are big, small, fat, and tall have almost the same running time records or not too significant differences. Based on the results of observations when making observations at SMAN 1 OKU, while doing long jump learning most of the students who did the jumps did not get maximum results, their jump results ranged from 2 to 3.4 meters. In accordance with the standard jump for achievement suggested by Gerry (2003), namely for ages 13-14 years, namely 3.6 meters is considered satisfactory, 4.2 meters is considered good and 4.6 meters is considered very good. It is very visible that the results of student jumps are still far from being able to excel.

On the basis of the description and explanation in the background of the problems above, the authors are interested in conducting research entitled *The Effect of Speed Training on Long Jump Results*.

B. Methods

This research was conducted at *SMAN 1 OKU* which is located in Ogan Komering Ulu District, precisely located in East Baturaja District. The training given in this study was in the form of physical exercise while the element of physical training was in the form of speed training. The form of speed training taught to the experimental group was the 30-meter sprint exercise. This exercise is given to increase running speed when doing the long jump prefix. This type of research is quasi-experimental research. Many experimental designs are considered by many to not be able to say that they have the characteristics of an actual experimental design, because the variables that should be controlled cannot be controlled, so that the validity of the research is not sufficient enough to be called a real experiment (Suryabrata, 2010).

The population referred to in this study were all male students of class X IPS *SMAN 1 OKU*, totaling 60 students. The sample of this research was male students of class X *IPS SMAN 1 OKU* with a total sample of 60 students. All samples did a pretest and the results of the long jump pretest were ranked from the shortest jump distance to the farthest jump. So, it was divided into 30 students as the experimental group and 30 students as the control group. After dividing into 2 groups using the ordinal pairing system, as shown in the following table.

Table 1. The Number of Samples of Class X IPS students at *SMAN 1 OKU*

No	Amount	Gender	Group
1	30 People	Man	Experiment
2	30 People	Man	Control

Data collection techniques were carried out by using a pre-test and post-test. Research instruments are tools or facilities used by researchers in collecting data so that their work is easier and the results are better, in the sense that they are completer and more systematic so that they are easier to process. The instrument used in conducting the research was a 30-meter running speed test and a long jump ability test for male students in class X *IPS SMAN 1 OKU*.

The data analysis technique is the method used to obtain or analyze the data obtained. The analysis aims to correct the hypothesis that has been formulated, a hypothesis will be accepted or rejected depending on the results of the data. The statistical data analysis technique used is the t test. To test whether the data is normally distributed, a slope test is used with the person coefficient formula:

$$Km = \left[\frac{\bar{x} - Mo}{s} \right] \text{ (Sudjana, 2005)}$$

Information:

km = Slope of the Curve (Slope of Person)
 $\bar{x}$ = Average
 Mo = mode
 S = Standard Deviation

C. Results and Discussion

Based on the results of the long jump pretest in the experimental group, it was found that the class X IPS SMA N 1 OKU was 339cm farthest and the closest jump was 190cm and the experimental group's pretest average was 262.8cm. After being given the treatment of sprint training for 5 weeks with a frequency of exercise 4 times a week, it turned out that there was an increase of 78.7 cm, so that the posttest average of the experimental group was 341.5 cm. With the result of the farthest jump of 401cm and the shortest jump of 252cm. Whereas in the control group the result of the farthest jump was 338cm and the closest jump was 190cm and the pretest average of the control group was 262.8cm. After carrying out the posttest the result of the farthest jump was 339cm and the closest jump was 190cm and the pretest average of the control group was 263.7cm.

The results of the pretest data obtained, then performed data processing using tests of normality and homogeneity as a condition of data analysis. After being tested, it turns out that the pretest data were normally distributed and homogeneous. The data were stated to be normally distributed and homogeneous, so that a hypothesis can be submitted using the "t test" statistic. Criteria for testing the hypothesis accept H_0 if $t\text{-count} < t\text{-table} (1-\alpha)$ and reject H_0 if $t\text{-count} > t\text{-table} (1-\alpha)$, where $t (1-\alpha)$ is t obtained from the t distribution table with $dk = n_1 + n_2 - 2$ and probability $(1-\alpha)$. It can be $t\text{-count} = 16.42$ while $t_{0.95} = 1.771$ so $t\text{-count} = 16.42 > t_{0.95} = 1.771$ thus speed training has a significant effect on increasing long jump results in class X IPS SMA N 1 OKU (Bridgett et al, 2016; Elashker et al, 2019).

D. Conclusion

Based on the results of research and data analysis, it can be concluded that speed training (30-meter sprints) can increase the results of the squat style long jump in Class X IPS SMA N 1 OKU, this can be seen from the increase in the pretest and posttest averages of the experimental group from 262.8 to 342.5 or an increase of 78.7

while the average pretest and posttest control group from 262.8 to 263.7 or an increase of 0.9. The results showed that speed training (30-meter sprint) could be used as a training method to improve long jump results.

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References

- Abdurrachman, A., Sugiyanto, S., & Doewes, M. (2018). Prediction of Physical Variable to Squat Long Jump Achievement (a Multivariate Correlational Study on Trained Students of a State Senior High School in Pekalongan Regency). *International Journal of Education*, 10(2), 101-106.
- Aziz, M. A., & Yudi, A. A. (2019). Differences in the Effect of Plyometric Training and Running Speed on Long Jump Ability in Squat Style. *Jurnal Patriot*, 1(3), 1239-1246.
- Bridgett, L. A., Galloway, M., & Linthorne, N. P. (2016). The effect of run-up speed on long jump performance. In *ISBS-Conference Proceedings Archive*.
- Burhanuddin, S., Risal, A., & Jumareng, H. (2022). Efforts To Improve Learning Outcomes of Squat Style Long Jump Through Play Approach Using Teaching Aids at Elementary School In Indonesia. *Journal of Positive School Psychology*, 6(8), 4311-4323.
- El-Ashker, S., Hassan, A. M. R., Taiar, R., & Tilp, M. (2019). Long jump training emphasizing plyometric exercises is more effective than traditional long jump training: A randomized controlled trial.
- Fajar, A. I. (2020). The Effect of Obstacle Jumping and Target Reaching Training on Long Jump Ability in Squat Style in Cirebon City 16 Public Middle School Students. *Jurnal Syntax Transformastion*, 1(1) <https://doi.org/10.46799/jst.v1i1>.
- Kay, T. (2019). Developing through sport: Evidencing sport impacts on young people. In *The Social Impact of Sport* (pp. 69-83). Routledge.
- Khomsin. (2018). *Athletics 2 Revised Edition*. Semarang: UNNES Press.
- Sudjana. (2005). *Statistical Methods*. Bandung: Tarsito
- Suryabrata, S. (2010). *Research Methodology*. Jakarta: Raja Grafindo Persada.
- Zeigler, E. F. (2007). Sport management must show social concern as it develops tenable theory. *Journal of Sport Management*, 21(3), 297-318.