

The Effectivity of Physical Fitness Test on Multi Level Run to Improve Students' Motivation, Performance and Achievement (A Case Study At Class X Mipa 1, Sma Negeri 1 Mertoyudan Magelang)

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Abstract

The nature of physical fitness training is a physical condition exercise (Physical Conditioning) plays a very important role to maintain or increase the degree of physical fitness (Physical Fitness). The degree of physical fitness of a person determines his physical ability in carrying out daily tasks. The higher the degree of physical fitness of a person, the higher the physical work ability. In other words, his work is increasingly productive if his physical freshness increases. Lack of endurance, joint flexibility, muscle strength, and agility are the main causes of injury. This is due to a physical exercise program that is done by a person is not perfect before carrying out more physical activities. Physical fitness training programs need to be planned systematically. The goal is to improve physical fitness and the ability of the body's ergosystem. The process of physical fitness training is carried out carefully, repeatedly with increasing days of training load, it will improve physical fitness. This will cause a person to become more skilled, strong and efficient in his movement. Physical fitness does not only provide benefits in carrying out their daily tasks. Our body will get tremendous health benefits from the physical fitness exercises we do regularly. The steps of the research are a series of research processes where researchers face problems and try to solve problems, after the problem is found the answer from the field, then in the next stage the researcher will make a decision in the form of conclusions related to the results of the research found, so as to be able to answer the research hypothesis submitted.

Keywords: *physical fitness test on multilevel run, students' motivation, performance, achievement.*

Background

The basic thing about physical fitness is cardiorespiratory endurance, this is one way to assess the durability of one's cardio respiration by measuring the VO₂max value. VO₂max measures the capacity of the heart, lungs, and blood to transport oxygen to the muscles and measure the use of oxygen by the muscles during exercise. Someone who

has a higher VO₂max value will be able to practice more intensively, so the opposite applies.

The purpose of the physical fitness test was to run multi-stage, to find out the physical fitness level and the difference in VO₂max values between each student. While the research method uses Action Research Design (Action Research Design) and Experimental Design (Experimental Design).

Action Research Design Essence (Action Research Design) is an action to follow a cycle so that the focal point is an intervention action carried out over time in various forms. A new intervention strategy is carried out and the cycle process repeats until the problem is solved.

While Experimental Design (Experimental Design) is a blue-print procedure that allows researchers to maintain control over all factors and in doing this researchers determine or predict what might happen. Experimental research often uses time priorities for causal consistency and correlation magnitudes. The classic experimental design determines the experimental group and the control group.

Research Methodology

The research method is the method used by researchers in collecting research data (Suharsimi Arikunto, 2002: 136). The research method used in this study is the test survey method. The steps of the research are a series of research processes where researchers face problems and attempt to solve problems, after the problem is found the answer from the field, then in the next stage the researcher will make a decision in the form of conclusions related to the results of the research found, so as to be able to answer the research hypothesis submitted.

Whether the hypothesis can be accepted or rejected based on the results of the study, if the results of the hypothesis are accepted, it means that the data obtained from the field after being analyzed shows significant support, whereas the research hypothesis is rejected if the research data obtained from the field after analysis does not support the proven research hypothesis. submitted.

Here are some understanding of research methods from experts:

1. Large Indonesian Dictionary.

The method is defined as a regular method used to conduct a business in the hope that the goal is achieved. Then research is a way to get the truth of the data on the symptoms of nature, society, or humanity. With a goal, through a way that can get something expected.

2. Ministry of Social Affairs of the Republic of Indonesia

The method is a systematic way and is used to do work with the aim of getting the results obtained.

3. Rusdy Ruslan

The method is a scientific activity related to how it works to understand a subject and object of research. And in an effort to find scientific facts and the validity of a study.

4. Muhidin Sirat

The research method is a way to determine the problems that will be examined as well as the determination of the title.

The conclusion is that the research method is a scientific way to solve problems using certain methods or processes. Research methodology is a scientific process in the form of ways to obtain data that can be used in the interests of scientific research. A methodology is a theoretical analysis of a method. While research is a scientific and systematic investigation in order to develop knowledge. Research is also a systematic and structured effort in investigating a problem that requires scientific answers. Devinisi experts regarding population include the following:

1. Sabar (2007), the population is the unity of subjects in research which is the most important element in a study.
2. Sugiyono (2011), population definitions are areas of generalization that exist in research. This region includes the object or subject that can be deduced.
3. Arikunto, devinisi population is the whole object in the research that is involved and also recorded all forms in the field.

From devinisi experts above, it can be said if the general understanding of the population is the part that becomes the object or subject so that it becomes an important element in a study conducted.

Understanding the sample is part of the population that is obtained by using a particular method to later be considered as a representative of the population that becomes the focus in social research methods or research in statistics.

Understanding the sample according to experts as follows:

1. Arikunto, in his view, the sample deviation is a small part of the population and is considered to have a population of research conducted.
2. Sugiyono, the meaning of the sample according to him is the small amount that is in the population and is considered to represent him.

From the definition above, it can be said if the sample is in the population that is considered to be a representative and represents certain characteristics in the population it takes.

The research subjects were 32 students of class X MIPA 1 SMA 1 Mertoyudan Magelang with ages between 14-18 years. Characteristic data taken are motivation, learning outcomes, and achievement. Measurement of VO₂max values using the Multi-Stage Running Physical Fitness Test method.

The implementation of a physical fitness test for multi-stage running can be done with several people at once (group / group) and is very easy / not complicated.

Findings and Discussion

The form of Multi-Stage Run is a back and forth run (Shuttle Run) used to assess aerobic freshness. The distance traveled between 16-20 meters and adjusted to the conditions that exist in the school environment where the multi-year race is held.

The tools and equipment used in the multi-stage physical fitness test are as follows:

1. Ribbon / rope / duct tape / lime powder.
2. Chest / back number.
3. Tape recorder, active speaker, CD, flashdisc, handphone.
4. Field / yard out door or in door with a minimum size of 20 meters the surface / floor is flat and not slippery).
5. Stopwatch.
6. Con / corner / stake flag.
7. Form.

The procedure for carrying out a physical fitness test for multi-stage running is as follows:

1. When carried out outside the building (out door) it should not be more than 10:00 a.m., because the hot sun can affect the results of physical fitness tests.
2. First check the player used (Tape recorder, active speaker, CD, flashdisc, handphone) using a one-minute calibration period and adjust the running distance if necessary (as described in the recording instructions).
3. Instruct the testi to run towards the opposite end / end and touch one foot behind the boundary line when the "tuut" sounds. If the testi has arrived before the sound "tuut", the testi must rest on the turning point, awaiting the sound signal and then run towards the opposite line so as to achieve accuracy when the next sign sounds.
4. At the end of each minute the time interval between the two "tuut" sounds is shorter, therefore, running speed is increasingly fast.
5. Testi must reach the line at the specified time and not late. Emphasize the testi to spin and run back, not run to make curves turn, because it will take a lot of time.
6. Each testi must run as long as possible so that the testi can no longer chase the "tuut" sound mark. The condition to stop the testi is if the testi is left with the "tuut" sound mark twice and more than two steps behind the end line.
How to assess a multi-stage physical fitness test as follows:
 - a. Record the level and the last shuttle that you can do or complete the test.
 - b. Twice the testi cannot complete the track end line when bunti "tuut", then the testi will fall and must stop at the level and the shuttle.

- c. When carried out outside the building (out door) it should not be more than 10:00 a.m., because the hot sun can affect the results of physical fitness tests.
- d. First check the player used (Tape recorder, active speaker, CD, flashdisc, handphone) using a one-minute calibration period and adjust the running distance if necessary (as described in the recording instructions).
- e. Instruct the testi to run towards the opposite end / end and touch one foot behind the boundary line when the "tuut" sounds. If the testi has arrived before the sound "tuut", the testi must rest on the turning point, awaiting the sound signal and then run towards the opposite line so as to achieve accuracy when the next sign sounds.
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- 1) Record the level and the last shuttle that you can do or complete the test.
- 2) Twice the testi cannot complete the track end line when bunti "tuut", then the testi will fall and must stop at the level and the shuttle.

Conclusion

The degree of physical fitness of a person determines his physical ability in carrying out daily tasks. The higher the degree of physical fitness of a person, the higher the physical work ability. Lack of endurance, joint flexibility, muscle strength, and agility are the main causes of injury.

Physical fitness training programs need to be planned systematically. The goal is to improve physical fitness and the ability of the body's ergosystem.

The process of physical fitness training is carried out carefully, repeatedly with increasing days of training load, it will improve physical fitness. This will cause a person to become more skilled, strong and efficient in his movement. Multi-Stage Run is a form of physical fitness test that is appropriate and can increase motivation, learning outcomes and student achievement in school.

The implementation of the Multi-Stage Run physical fitness test can be carried out with several people at once, it is very easy to do and not complicated. Physical fitness tests run multi-stage, namely to find out the physical fitness level and the difference in VO₂max values between each student.

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