

STUDY ON THE DECLINE OF PERFORMANCE IN THE LONG JUMP TEST FROM THE PLACE DURING ONLINE SCHOOLING IN RURAL STUDENTS

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Abstract

In the field of school sports, emphasis has been placed on the use of general physical development exercises, due to their high degree of accessibility and the relative simplicity with which they can be transmitted to the student by the teacher, and mobility and local strength exercises, in order to prevent, or at least slowness, deterioration of students' physical abilities . Our study is intended to make a statistical analysis of the results obtained by the students of the Sagu-Fiscut juetul Arad Middle School in two standing long jump tests, before and after the interruption of the face-to-face didactic activity. 94 rural students between the ages of 8 and 14 participated in the tests between 2020 and 2021. The goal is that practicing any kind of physical training, whether in person or online, will result in less change of the performance in a sports test than stopping any physical training. The final conclusion is that at present, the transition to an education system via the Internet is not a reliable approach.

Keywords of standing long jump, online school, SARS-CoV-2 restrictions, student adaptability

Introduction

Due to the pandemic caused by SARS-CoV-2 a significant difficulty was observed in the normal course of sports activities, both in performance sports and in school sports, both systems being forced to are subject to operating rules that did not allow the use of training methods considered effective and desirable

The restrictions mentioned above included, among others, the interruption of face-to-face sports activities opting instead for their conduct in the electronic, online environment. Due to the students' difficulty in adapting to the new teaching system, a high percentage of absenteeism was observed remained constant throughout the distance teaching period despite the attempts by the schools administration.

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During the distance learning period, due to the variation of equipment available to each student and the impossibility of the teacher to provide effective help, general physical development exercises were predominantly used in the didactic activity.

General physical development exercises are one of the tools used not only in physical education but also in mass and performance sports

We can say about physical education that it is a social activity. (Săvescu Iulian, 2009; Andrei Vasile Liviu, 2010) It is practiced at all levels, professional or amateur, by all categories of people, age, social class, sex, etc. (Andrei Vasile Liviu, 2010; Cârstea Gheorghe. 2000)

In the practice of physical education we have at our disposal an almost infinite number of physical exercises, mainly due to the countless combinations of movements that the human body is capable of performing. Physical education has a formative character, producing physiological and psychological changes in the participants. It can be carried out in two ways: as an instructive-educational process, within sports centers and educational units, and as an independent activity, practiced by each individual who wishes for the benefits it offers. (Cârstea Gheorghe, 2000)

A specific terminology is used in physical education, in the following I will define some terms specific to it:

Motor capacity can be defined as the totality of the morphological, functional, and motor features with which an individual is born or develops during his life, they allow him to perform exercises and efforts varied in dosage and structure. (Nicu Alexe, 2002)

Motor quality is an attribute of an individual, both mental and physical, it is based on psychological, biochemical and physiological mechanisms, which ensure the execution of motor actions with specific indices of resistance, skill, speed and strength. (Nicu Alexe, 2002)

Motor skills are one of the component parts of the physical education model, which are formed, developed, perfected and even automated during the individual's life. Mandatory for their learning is their passage through the four phases of the motor learning process. These are initial acquisition, or initiation into the basics of the motor act, consolidation, refinement and, finally, evaluation, not necessarily formal. (Andrei Vasile Liviu. 2010)

In the stage of initial acquisition the basic concept of the learned motor skill is formed. It is necessary to express a high degree of concentration in order to correctly execute the movement and external support is often needed to correct it. A wrongly acquired motor skill is more and more difficult to correct as the learning process progresses. (Andrei Vasile Liviu. 2010; Cârstea Gheorghe, 2000; Nicu Alexe, 2002)

The second stage of learning is consolidation. This is dedicated to the correction of execution mistakes. The subject still has to put in extra effort by paying attention to the way of execution and avoiding mistakes, but we see an increase in the ability to withstand high-intensity effort compared to the initiation stage. Maintaining relatively constant running conditions and effort intensity become more important. (Andrei Vasile Liviu. 2010; Cârstea Gheorghe, 2000; Nicu Alexe, 2002)

Evaluation and improvement are the last two stages of the learning process and are considered perpetual, interdependent processes of checking and improving execution. The refinement of technique in execution is continuously interspersed with periodic evaluation, used to determine the validity of the direction chosen for the improvement of execution. Only during this period can automaticity be installed, if the complexity of the motor skill allows this. (Andrei V L. 2010; Cârstea Gh., 2000; N. Alexe, 2002)

Some characteristics should also be mentioned in the case of motor skills. Namely, that they are acquired in special processes of practicing physical exercises or in the practice of life, often without awareness on the part of the subject, they are classified as basic motor skills and found in every individual, and specific to a sport branch. The basic components of motor skills are the dynamic stereotypes formed through numerous repetitions, depending on the required effort and their degree of complexity, they can be partially or fully automated they are acquired unevenly, in the final phase of development we speak of the so-called senses, of the snow, the ball, water, etc., the individual acquires an intrinsic understanding of the condition of the external factors that change the execution and anticipates the possible changes, disadvantages and

opportunities created by them. (Andrei VL 2010; Cârstea Gh., 2000; N. Alexe, 2002, Popa L, 2015)

In large-scale sports the standing long jump test is used to compare the strength of a subject with the strength values of the population it belongs to; determining health status, i.e. level of recovery from injury, physical development and growth, etc.; for selection and forecasting in performance sport. (Galea I . D., 2014)

Minimal materials are required to apply this sample, such as a marked straight surface, preferably with markings every centimeter. Of course, more complex materials can be used, such as the sand pit in combination with the roulette and assistant to obtain more accurate measurements.

To obtain reliable results the test is performed after preparing the body for exercise. The subject is positioned in front of the surface on which the jump will be performed, the subject executes a single flexion of the thighs on the calves, followed by a quick and powerful extension of the lower limbs simultaneously with the swinging of the arms from back to front, resulting in a release from two feet and landing on two feet. To determine the results the distance between the subject's heels at the moment of landing, or the last mark in the sand in the case of using the sand pit, and the starting point of the jump is measured. Record the result in meters and centimeters. The test can be repeated twice, to ensure the most realistic representation of the subject's biomotor potential. (ID Gallery, 2014)

Material and methods

Our analysis included a number of 94 students who took the standing long jump test in the 2020-2021 school year in the Sagu-Fiscut Secondary School, Arad county, before and after the distance learning period. Data was collected during the 2020-2022 school year. It should be emphasized that the analysis refers only to students from rural areas.

We used scatterplots to determine how subjects are distributed with respect to age, gender, and their hourly attendance rate.

We also used the correlation index (Pearson) to see if there are possible relationships between the different results and the attendance rate of the subjects

And last but not least, we used the graphic method of presenting the obtained data.

Result and discussions

In order to be able to carry out an effective didactic activity through the means of distance teaching, in both performance and school sports, it is necessary:

To ensure unrestricted access to all students to platforms, resources and materials that allow them to participate in courses:

After the tests, the following results were obtained:

Table no.1 Results obtained by students attending online courses (group 1) reported with mean and standard deviation

	Sample 1	Sample 2
Mediate	138.80	137.54
Standard Deviation	37.83	37.13

Table no. 2 Results obtained by students without attendance at online courses (group 2) reported with mean and standard deviation

	Sample 1	Sample 2
Mediate	151.59	138.91
Standard Deviation	38.39	37.03

Table no. 3 Results obtained by boys attending online courses (group 1 boys) reported with mean and standard deviation

	Sample 1	Sample 2
Mediate	144.53	142.03
Standard Deviation	39.42	39.46

Table no. 4 results obtained by boys without attendance at online courses (group 2 boys) reported with the mean and standard deviation

	Sample 1	Sample 2
Mediate	158.36	143.04
Standard Deviation	39.01	39.16

Table no. 5 Results obtained by girls attending online courses (group 1 girls) reported with mean and standard deviation

	Sample 1	Sample 2
Mediate	121.27	121.36
Standard Deviation	27.28	26.65

Table no. 6 Results obtained by girls without attendance at online courses (group 2 girls) reported with mean and standard deviation

	Sample 1	Sample 2
Mediate	131.84	122.63
Standard Deviation	28.84	28.36

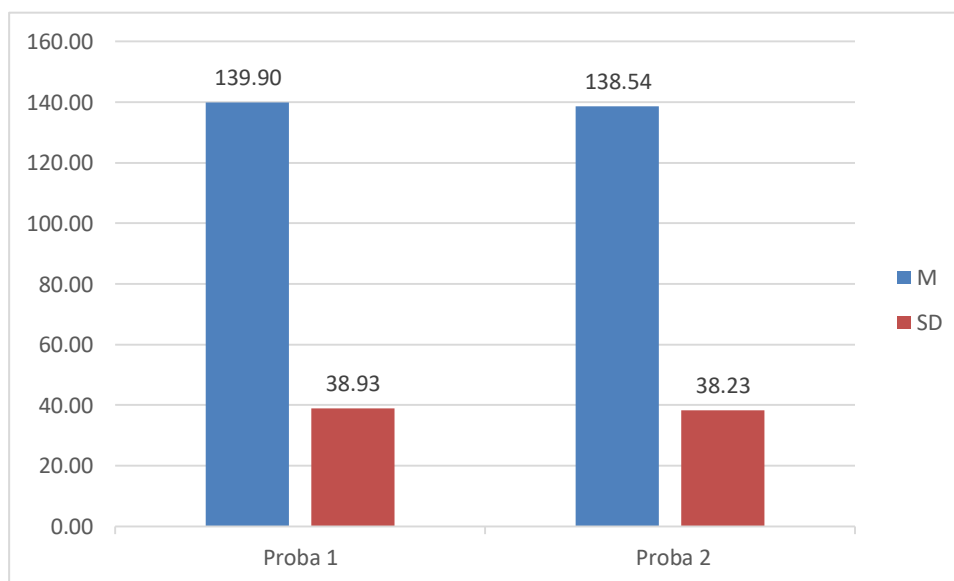


Fig.1 Group 1 results, reported with M and SD.

From fig. 1 we observe that, after the online training period, group 1 shows a decrease, on average, in the length of the jump of 1.36 cm or 0.97% and a decrease in the standard deviation of 0.70 points or 1.79%.

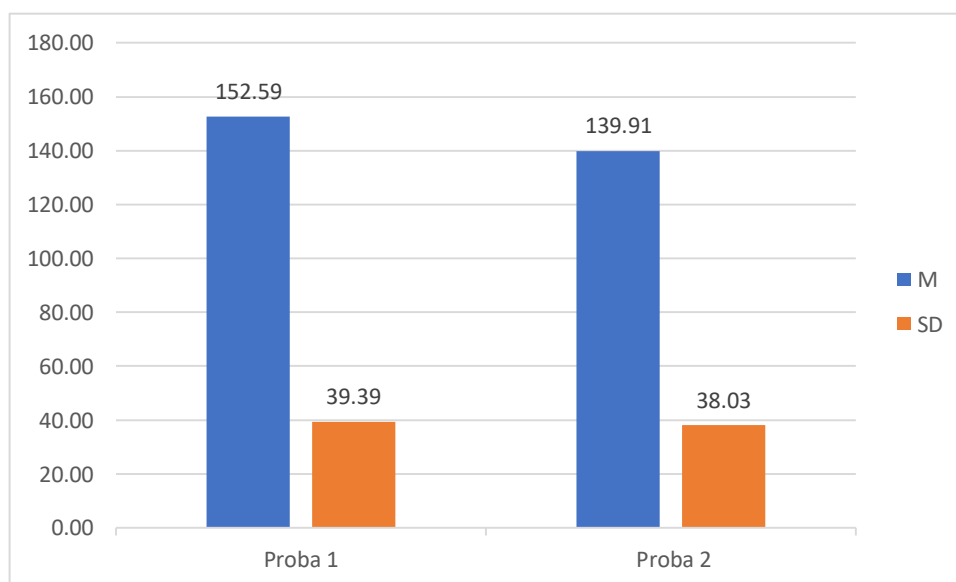


Fig. 2. Group 2 results, reported with M and SD.

In contrast to group 1, group 2 shows a more significant decrease in the average length of the jump, of 12.68 cm or 8.30% with a decrease in the standard deviation of 1.36 points or 3.42%

so a difference of 11.32 cm or 161.25% in the average length of the jump and a difference of 0.66 points or 64.07% in the value of the standard deviation.

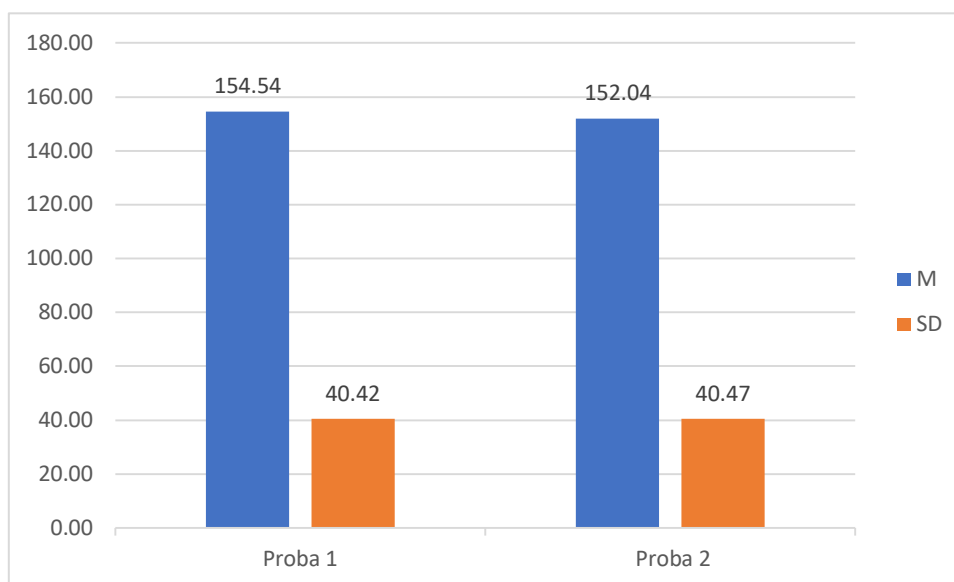


Fig.3. The results of boys in group 1, reported with M and SD.

From fig.3. a 2.5 cm decrease or 1.61% decrease, on average, in jump length is observed after the online training period. An increase in the standard deviation of 0.04 points or 0.12% is also observed. Results consistent with the group 1 trend, i.e. little change in mean jump length and standard deviation.

From the analysis of the experimental data it is observed that:

1. Regarding the results of group 2 compared to group 1 following test 2, we observe a large difference in the decrease in performance 161.25% in the average length of the jump, in favor of group 1 .
2. The same situation for group 2 of boys compared to group 1 of boys after test 2, i.e. a difference of 143.88% between the two groups of boys after the online training period, in favor of group 1 .
3. For group 2 of girls compared to group 1 of girls after test 2 we observe a difference of 193.59% in favor of group 1 .
4. Also group 1 of girls is the only one that shows an increase, although insignificant, of performance, from M=121.27 cm to M=121.36

Final conclusions

1. Re-evaluating and improving the framework methodology for organizing didactic activity through the Internet in the field of physical education and sports in such a way as to cover the Physical and Sports Education curriculum and adapt it to the new learning environment; the curriculum should be adapted in such a way as to achieve as many of the learning objectives as possible but without requiring too much specific equipment.
2. Since, following the analysis of the results obtained by the subjects in both tests, no correlation was discovered between the attendance at the classes and the slowing down of the performance decline in the standing long jump test, we propose the following:
 - Organizing a new experiment with a larger base of subjects to verify the validity of the results of the experiment described in this paper;
 - Determining, through the new experiment, the variable that influenced the maintenance of performance in group 1 or its loss in group 2.

In cases where it is absolutely necessary for the sports activity in person to be interrupted for a longer period of time, it is recommended to use any methods of training in physical activity, by training using the means of education with the help of the Internet or by other methods, to prevent or at least slowing performance loss

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