

## The search summary

### Dynamic characteristics as a basis for setting special qualities exercises to long and high jump competition

#### - The introduction and problem of the research :

The course track and race course competitions are considered ones of the oldest sports activities practiced by man. Jump, throwing, walking, jogging, and running are all natural motional activities and means used by an individual to achieve his/her purposes at all the stages of his/her growth and development.

The progress of digital levels for the course track doesn't depend on the sports skill only and doesn't come by chance but as a result of regular training for a long time. That comes by the combination of various efforts to plan the training process depending on the scientific bases, research and analysis in training.

As the motional analysis is one of the helping aids for the coach by which we can discover the way of right technical performance. Also, through the motional analysis for the players' actions and motions, the coach can deduce the special abilities of the skill sort, so the motional analysis is considered one of the most important corner stones on which the coach and players depend.

#### - The research aim:

The research aims to identify the Dynamic characteristics as a basis for setting some qualitative special exercises to the competition of the long and high jump achieved through the answer to these questions

#### - The research questions

- 1- What are the dynamic characteristics to the stage of the end of approaching and ascending to the long and high jump?

2- What are the similarities and differences of the stage of approaching and ascending to the competition of high and long jump?

3- What are the special qualitative exercises to the competition of high and long jump?

#### **- The research procedures:**

The researcher used the descriptive curriculum (state study) and that's with the help of graphic video taping.

#### **- The research sample and society :**

The society of the research was represented in the first class jump competition players who could perform the long jump by the way of (hanging) and high jump by the way of (fospray).

#### **- The research sample:**

The chois of analysis sample was chosen by the deliberate way. The best players for each competition is skilful at the technical performance and achieves the highest result of the analysis and photography procedures (steps).

#### **- Collecting information means**

1- Video camera which works with an electric source of 25 v / 5e  
can d

2- Video camera stand provided with a water scale to determine the (inclination) (deviation) level.

3- The use of calibration system to specify the special dimension of performance.

4- Empty video films

5- Adhesive signs to put on the body joint.

#### **- Statistics analysis system**

It was supported by these statistics procedures

- criterion deviation.
- Mathematics mediator (intermediate)

## - Deductions

The height of the player's body center in high and long jump is about 1.27 m.

The momentary estimation for the vertical dislodgment for the left foot ankle point of the long and high jump "foot entry" is the same as horizontal wheel. It's 0.00% m/second<sup>2</sup> for the high and the same 0.00 % m/second<sup>2</sup> for the long.

The momentary estimations to the left foot point of the high and long jump are the same "the moment of putting the foot away". The horizontal dislodgment between them is 00.01% for the high and 0.002 % for the long. The same is with the vertical dislodgment. It's 0.00% for the high and 0.00% for the long . and we'll find similarity between the horizontal speed which is 0.27 m/second for the long high and 0.25 m/second for the long. We have the same similarity of the horizontal speed for the high and the long jump "0.00 m/second<sup>2</sup> ", and the same to the momentary value of the vertical speed for both the high and long jump 0.00% m/second<sup>2</sup> .

## - Recommendation:

- The researcher advises the coaches and players to use the suggested aiming exercises in teaching the two research skills.
- Doing his mechanical analysis for international level skills in athletics sport in general which is achieved by the cooperation with motional analysis units in the physical education colleges.
- The researcher recommends to reanalyze the most of high level skills in athletics sports even that which has been previously analysed but with the use of modern analysis.



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A COMPARATIVE STUDY OF THE DYNAMIC  
CHARACTERISTICS AS A BASIC FOR THE  
ESTABLISHMENT OF THE QUALTATIVE EXERCISE  
RELATED TO SOME JUMP COMPETITION IN  
ATHLETICS

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