The effectiveness of Murder's strategy in cognitive achievement and technical performance learning and the completion of the discus throw event for the students of the Al-Mustaqbal University College

Harith Abdelelah Alshukri

Physical Education and Sport Sciences Department, Al-Mustaqbal University College, 51001 Hillah, Babil, Iraq. *Corresponding author Hareth_Abdeleah@mustaqbal-college.edu.iq

ABSTRACT

Recent trends have emerged calling for the use of modern strategies for teaching, including the Murder strategy, which is one of the cognitive learning strategies that include six stages (mood, comprehension, recall, assimilation, expansion, and review.

The problem of the research was manifested through the knowledge and experience of researchers in the field of teaching and their observation of some athletics lessons. It turns out that the dependence in the teaching of athletics in general and the effectiveness of discus throwing in particular on the traditional method, which explains the poor technical performance and achievement of effectiveness is not caused by a lack of effort. Or the lack of desire to learn, but it may be due to the strategy followed, which is the reason for not reaching the required learning. Hence the need to apply a strategy that provides the learner with opportunities to understand effectiveness and retrieve information well when technical performance and achievement of the effectiveness of throwing the disc, and the study aimed to know the effectiveness of the Murder’s strategy in the cognitive achievement of the effectiveness of the discus throw for the first stage, to identify the effectiveness of the Murder’s strategy in the technical performance The achievement of the effectiveness of the discus. In order to achieve the objectives of the study, the researchers used the experimental method (designing two equal groups with a pre- and post-test) representing the research community with students of the second stage - Future University College - Department of Education for the academic year (2021-2020), which numbered 122, while the research sample was chosen by the method Simple randomization from the original research community and...
by lottery, which numbered (40) students, were divided into two experimental and control groups in each group (20) students. Dimensional tests.

The researchers reached several conclusions and recommendations, the most important of which are: The Murder strategy and the adopted method had a clear effectiveness in increasing the students’ ability to cognitive achievement, artistic performance and achievement in the effectiveness of discus throwing. The experimental group showed a clear and significant development than the control group in cognitive achievement, technical performance and achievement.

The most important recommendations are: Using the Murder’s strategy in learning technical performance and achievement for the effectiveness of discus throwing, providing devices and tools that help in implementing the Murder’s strategy.

**Keywords:** Murder's strategy, Technical performance learning, Students

**INTRODUCTION**

The current era is characterized by scientific and knowledge progress, rapid development and renewal, and the resulting entitlements and changes in all fields, especially in the educational process.

Therefore, we must choose the methods that contribute to achieving high-level learning for learners based on foundations and criteria that define their roles and mechanisms. What is commensurate with theoretical lessons may not be commensurate with practical lessons, and what is appropriate for students at a certain stage may not fit with students at another stage, but Everyone agrees that the teacher must possess knowledge, practical practice and theory of teaching methods that harness all the talents, abilities and energies stored in the learners to achieve the goals to be achieved.

Teaching is no longer limited to learners acquiring a limited amount of information, facts and concepts, but rather an interest in thinking processes that enable them to search and investigate facts and reach a conclusion, so the educational process needs to evaluate modern methods and strategies to enhance the positives and avoid the negatives.
Modern strategies have emerged in learning, including the Murder strategy, which is one of the cognitive learning strategies that includes six stages (mood, comprehension, retrieval, assimilation, expansion, and review). Processes of processing and processing a large amount of information contained in the knowledge content, which helps in retrieving that information and employing it when facing a specific problem (Baha Hamouda Information, 2005, p. 3).

This matter is not limited to the theoretical material, but goes beyond it to the practical one, which is athletics in general and the effectiveness of discus throwing in particular, as the discus throw is one of the sporting events that require physical abilities and kinetic abilities especially for its practitioners, in addition to some physical characteristics of the thrower like other activities. The other throw, the learning of performance and achievement in it depends on the application of technical aspects in an integrated manner, hence the importance of the research by using the Murder strategy and employing it to facilitate the learning process and knowing its effectiveness in cognitive achievement and learning the technical performance and achievement of the effectiveness of throwing the disc for students of the Future College of the University.

The problem of the research was that the activities of athletics are among the basic lessons in the curriculum of the faculties of physical education and sports sciences, and through the experience of researchers in the field of teaching and their observation of some athletics lessons, it was found that the reliance in teaching athletics in general and the effectiveness of discus throwing in particular on the traditional method, which explains Weak technical performance and achievement of effectiveness is not caused by lack of effort or lack of desire to learn, but may be due to the strategy followed, which is the reason for not reaching the required learning. Hence the need to apply a strategy that provides the learner with opportunities to understand effectiveness and retrieve information well when technical performance and achievement of the effectiveness of discus throw, this is what prompted the researchers to experiment with the Murder’s strategy to know its role in cognitive achievement and learning the technical performance and achievement of the effectiveness of discus throw.

The study aimed to know the effectiveness of Murder’s strategy in the cognitive achievement of the effectiveness of discus throwing for students of the second stage, as
well as to identify the effectiveness of Murder's strategy in technical performance and achievement of the effectiveness of discus throwing.

2- Research methodology and field procedures

2-1 Research Methodology:

The researchers used the experimental method with tight control by designing two equal groups (control and experimental) with a pre- and post-test to suit the nature of the problem to be solved, and table (1) shows the experimental design used (Nuri Ibrahim Al-Shawk and Rafe’ Al-Kubaisi, 2004, p. (59).

Table (1)

Shows the experimental design used

<table>
<thead>
<tr>
<th>Post-test</th>
<th>Experimental treatment</th>
<th>pre-test</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive achievement, technical performance and achievement for throwing the discus</td>
<td>Murder’s strategy</td>
<td>Cognitive achievement, technical performance and achievement for throwing the discus</td>
<td>Experimental</td>
</tr>
<tr>
<td>Cognitive achievement, technical performance, and achievement for throwing the discus</td>
<td>Study style followed</td>
<td>Cognitive achievement, technical performance, and achievement for throwing the discus</td>
<td>Control</td>
</tr>
</tbody>
</table>

2 -2 A society and sampled by the research:

The research community was determined by the intentional method, students of the second stage - Department of Physical Education and Sports Sciences - College of the Future University for the academic year (2020-2021), numbering (122) students. The research sample was chosen in a simple random way from the original research community and by lottery, which numbered (40). )
students, they were divided into two experimental and control groups in each group (20) students, and thus the percentage of the research sample is (33.33%) for the research community.

2-3 The homogeneity of the sample and the equivalence of the two research groups:

3-3-1 Homogeneity of the research sample:

The researchers took the variables (age, height, weight) to find out the homogeneity of the sample. The results showed that the values of the skew coefficient of the above variables are less than (3), which indicates the homogeneity of the research sample in these variables and distributed normally. In order to verify the equivalence of the two research groups in the variables related to the tests of cognitive achievement, technical performance and achievement for the effectiveness of discus throw so that the two research groups are in one starting line, the researchers used the (T) test, as the results showed that all values of (error rate) were not significant when The level (0.05), which indicates that the differences are not significant and that the two groups are in one start.

2-4 The means, devices and tools used in the research:

2-4-1 Research Methods:


2-4-2 Devices and tools used in the research:

1. Chinese-made manual stopwatch. (1)

2. Computer (DEII)

3. A Japanese-made SONY video camera with a frequency of 60 frames per second. Number (2).

4. Display device (Data Shaw)


2-5 Field Research Procedures:
2-5-1 Determining the cognitive achievement test for the effectiveness of discus throwing:
In line with the objectives of the research, and after reviewing similar studies and research, the researchers chose the cognitive achievement of the research sample prepared from (Buthaina Abdel-Khaleq Ibrahim, 2005, p. Educational) measured by (49) supplementary space, and the test items were divided into three areas (history of effectiveness, basic skills, effectiveness law), and the highest test score was (15) and the lowest was (zero).

2-5-3 Determining the validity of the cognitive achievement test:
In order to determine the validity of the cognitive achievement test, a group of experts and specialists in the field of athletics were presented to determine its validity. The researchers presented the test to (9) experts, and the specialists' responses were analyzed by using the (percentage) law. It was found that all (15) paragraphs A paragraph that got complete agreement in its validity in the (cognitive test). 

3-5-3 Determining the effectiveness of the discus throw test:
The effectiveness of throwing the disc for the research sample (experimental, control) was tested in the pre and post tests, where the student carries the disc within the discus circle and the student performs according to the technical stages. As the researchers photographed the technical performance of the research sample by installing the camera on a fixed stand that is (7 m) away from the throwing circle and at a height of (1.25 m) and three attempts were given to each student and the best attempt was chosen with achievement to evaluate the technical performance by experts, through a form Prepared by (Buthaina Abdel-Khaleq Ibrahim, 2005, p. 121).

2-6 The exploratory experience:
The researchers conducted a reconnaissance experiment on Monday, 23/11/2020 in the Physical Education Sports Science Stadium - Babylon University on a group of (13) students within the research community outside a sample (experimental and control) and its purpose was to find out:
1 - Validity of devices and tools.
2- Identify the obstacles and difficulties that the work team may face when conducting the tests.

3- To identify the extent of the ability of the assistant work team and their understanding of the method of work.

4- Knowing the time required to carry out the tests.

5- Determine the height and distance of the camera.

6- Knowing the appropriate time to answer the paragraphs of the cognitive achievement test.

2-7 main experiment procedures:

2-7-1 Pretest:
Tests and tribal imaging were conducted for the two research groups (experimental and control), which numbered (40) students, on Monday, 26/11/2020, on the playground of the Faculty of Physical Education and Sports Sciences - Babylon University, as the researchers took the following measures:

1. A cognitive achievement test: The cognitive achievement forms were distributed to the students and a time was given of (20) minutes, then the forms were received after the sample answered them.

2. Filming (3) attempts to throw the disc, three (3) attempts were given to each student and the attempts were photographed. Where it was presented to the experts to evaluate the technical performance of the attempt to the best in terms of achievement.

2-7-2 for the educational curriculum
The researchers prepared a curriculum for teaching the effectiveness of discus throwing, where the educational units for the Murder strategy were developed for the experimental group and included (6 components) and in a manner that fits the topic and sample of the research and distributed into (7) educational units

The application of the educational units of the Murder’s strategy began on Sunday, 12/1/2020, at an average of two educational units per week for the experimental group and for the days (Tuesday, Wednesday) of each week, according to the department’s schedule, with a total of (7) educational units. The period of application of the educational units for the experimental group ended in On Thursday, January 21, 2020.

3-7-3 Post- tests:
After completing the implementation of the educational units according to the Murder’s strategy, the post-tests of the two research groups (the control and experimental) were conducted on Tuesday, 26/1/2021, at the same time, place, test steps and pre-measurement for the tests of cognitive achievement, technical performance and achievement in the effectiveness of discus throwing as much as possible.

2-8 Statistical means:
The researchers used the spss statistical bag. (Ayed Karim Al-Kinani, 2009, p. 33).

3- Presentation, analysis and discussion of the results.

3-1 Presenting the results of the cognitive achievement test for the effectiveness of discus throwing between the two groups

Experimental and control in the pre and post-test and their analysis:

Table (2)

<table>
<thead>
<tr>
<th>Indication of differences</th>
<th>mistake percentage</th>
<th>value T</th>
<th>A D</th>
<th>S D</th>
<th>A</th>
<th>S</th>
<th>Test</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporeal</td>
<td>0.000</td>
<td>36.24</td>
<td>0.97</td>
<td>7.10</td>
<td>0.77</td>
<td>7.22</td>
<td>Pre</td>
<td>Control group</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>incorporeal</td>
<td>0.000</td>
<td>51.43</td>
<td>0.88</td>
<td>9.89</td>
<td>0.89</td>
<td>7.54</td>
<td>Pre</td>
<td>Experimental group</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (2) shows the results of the cognitive achievement test for the effectiveness of discus throwing between the experimental and control groups in the pre- and post-test, where the results showed a significant difference in favor of the post-test of the experimental group in the post-test, where the arithmetic mean of the pre-test was (7.54), with a standard deviation of (0.89) While we find the arithmetic mean for the post-test (16.45) with a standard deviation of (0.95), while the mean differences appeared (9.89), and when calculating the calculated (t) value, we find that it reached
(51.43) and when comparing the error level of (0.000) which is smaller than the significance level (0.05). This indicates the emergence of significant differences between the pre and post tests in favor of the post test. As for the control group, the arithmetic mean of the pre-test reached (7.22), with a standard deviation of ability (0.77), while we find the arithmetic mean of the post-test (13.87) and with a standard deviation of ability (1.12), while the mean differences appeared (7.10) and when calculating the calculated ((t) value we find (36.24) ) And when comparing the level of error of (0.000) which is smaller than the level of significance (0.05), which indicates the emergence of significant differences between the two tests.

3 -1-1 Presenting the results of the cognitive achievement test for the effectiveness of discus throwing between the two groups

Experimental and control in the post test and their discussion:

Table (3)

<table>
<thead>
<tr>
<th>Indication of differences</th>
<th>Mistake percentage</th>
<th>T value</th>
<th>A D</th>
<th>S D</th>
<th>A</th>
<th>S</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>incorporeal</td>
<td>0.000</td>
<td>8.33</td>
<td>0.34</td>
<td>3.12</td>
<td>1.12</td>
<td>13.87</td>
<td>control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.95</td>
<td>16.45</td>
<td>Experimental</td>
</tr>
</tbody>
</table>

Table (3) shows the results of the two research groups in the cognitive achievement test for the control and experimental groups in the post test, as the arithmetic mean of the control group became (13.87) with a standard deviation (1.12), while the experimental group reached the arithmetic mean (16.45) and standard deviation (0.95), while The mean differences appeared (3.12) with a standard deviation of (0.34). When calculating the calculated (t) value, we find that it reached (8.33) and when compared with the level of error of (0.000), which is smaller than the significance level (0.05), and this indicates a significant difference between the two groups and in favor of experimental group.
3 - 2Presenting and discussing the results of the technical performance test for the effectiveness of discus throwing between the experimental and control groups in the pre and post test.

Table (4)

It shows the statistical parameters of the technical performance test for the effectiveness of discus throw for the two groups

The control and experimental in the pre and post test

<table>
<thead>
<tr>
<th>Indication of differences</th>
<th>M</th>
<th>T</th>
<th>A</th>
<th>S</th>
<th>D</th>
<th>A</th>
<th>S</th>
<th>Test</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>incorporal</td>
<td>0.000</td>
<td>33.12</td>
<td>0.62</td>
<td>4.66</td>
<td>0.54</td>
<td>1.35</td>
<td>pre</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.49</td>
<td>6.13</td>
<td>post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>incorporal</td>
<td>0.000</td>
<td>37.36</td>
<td>0.59</td>
<td>4.98</td>
<td>0.52</td>
<td>1.54</td>
<td>pre</td>
<td>experimental</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.67</td>
<td>6.78</td>
<td>post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (4) shows the results of the technical performance test for the effectiveness of discus throw for the control and experimental groups in the pre and post-test, where the results showed a significant difference in favor of the post test for the experimental group, where the arithmetic mean of the pre-test reached (1.54), with a standard deviation of ability (0.52), while we find the arithmetic mean For the post-test (6.78), with a standard deviation of (0.67), while the mean differences were (4.98), and when calculating the calculated (t) value, it was found that it reached (37.36) and when comparing the level of error of (0.000) which is smaller than the significance level (0.05), which indicates that The emergence of significant differences between the pre- and post-tests, in favor of the post-test. As for the control group, the arithmetic mean of the pre-test reached (1.35), with a standard deviation of ability (0.54), while we find the arithmetic mean of the post-test (6.13) and with a standard deviation of ability (0.67), while the mean differences appeared (4.66) and when calculating the calculated (t) value we find (33.12). And when comparing the level of error of (0.000) which is smaller than the level of significance (0.05), which indicates the emergence of significant differences between the two tests.
3-2-1 Present the results of the technical performance test for the effectiveness of discus throw between the experimental and control groups in the post test and discuss them:

Table (5)

It shows the statistical parameters of the technical performance test for the control and experimental discus effectiveness in the post test.

<table>
<thead>
<tr>
<th>Indication of differences</th>
<th>M percent</th>
<th>T value</th>
<th>A D</th>
<th>S D</th>
<th>A</th>
<th>S</th>
<th>groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>incorporeal</td>
<td>0.000</td>
<td>2.95</td>
<td>0.18</td>
<td>0.50</td>
<td>0.49</td>
<td>6.13</td>
<td>control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.78</td>
</tr>
</tbody>
</table>

Table (5) shows the results of the two research groups in the technical performance of the control and experimental disc throw effectiveness in the post-test, as the arithmetic mean of the control group became (6.13) with a standard deviation of (0.49), while the experimental group reached the arithmetic mean (6.78) and with a standard deviation (0.67). While the mean differences appeared (0.50) with a standard deviation (0.18), and when calculating the calculated (t) value, we find that it reached (2.95) and when compared with the level of error of (0.000), which is smaller than the significance level (0.05), and this indicates the existence of a significant difference between the two groups. For the benefit of the experimental group.

Presenting and discussing the results of the achievement test for the effectiveness of discus throwing between the experimental and control groups in the pre and post-test.

Table (6)

It shows the statistical parameters of the achievement test for the effectiveness of discus throw for the control and experimental groups in the pre and post test.
Table (6) shows the results of the achievement test for the effectiveness of discus throw for the control and experimental groups in the pre and post-tests. The results showed a significant difference in favor of the post test for the experimental group, where the arithmetic mean of the pre-test reached (5.15), and with a standard deviation of ability (0.48), while we find the arithmetic mean of the test The dimensionality was (13.98) with a standard deviation of (1.09), and when calculating the calculated (t) value, we found that it amounted to (35.12) and when comparing the level of error of (0.000) which is smaller than the significance level (0.05), which indicates the emergence of significant differences between the pre and post-tests in favor of the post test. As for the control group, the arithmetic mean for the pre-test was (5.11) and with a standard deviation of (0.32), while we find the arithmetic mean for the post-test (8.77) and with a standard deviation (0.73), while the mean differences appeared (3.35) and when calculating the calculated (t) value we find (18.32) and when comparing the error level (0.000), which is smaller than the significance level (0.05), which indicates the emergence of significant differences between the two tests.

3-3 -1 Present the results of the achievement test for the effectiveness of discus throw between the experimental and control groups in the post test and discuss them:

Table (7)

It shows the statistical parameters of the achievement test for the effectiveness of discus throw for the control and experimental groups in the post test.

<table>
<thead>
<tr>
<th>Indication of differences</th>
<th>M percent</th>
<th>T value</th>
<th>A D</th>
<th>S D</th>
<th>A</th>
<th>S</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>incorporeal</td>
<td>0.000</td>
<td>20.69</td>
<td>0.31</td>
<td>6.66</td>
<td>0.77</td>
<td>8.77</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>experimental</td>
</tr>
</tbody>
</table>

| Table (6) shows the results of the achievement test for the effectiveness of discus throw for the control and experimental groups in the pre and post-tests...
Table (7) shows the results of the two research groups in the achievement test for the effectiveness of discus throw in the post-test, as the arithmetic mean of the control group became (8.77) with a standard deviation of (0.77), while the experimental group reached the arithmetic mean (13.98) and standard deviation (1.09), while it appeared that the mean of the differences is (6.66) with a standard deviation of (0.31), and when calculating the calculated t-value, we find that it reached (20.69) and when we compare it with the level of error of (0.000), which is smaller than the significance level (0.05), and this indicates the presence of a significant difference between the two groups and in favor of the group. Experimental.

3-4 Discuss the results

Through the results of Table (3), significant differences appeared between the control and experimental groups in the post-tests and in favor of the experimental group, and the study organizers believe that this development for the members of the control group sample is the result of the good method used by the professor of the subject and his presentation of information in an easy way that contributed to the development of the members of the control group. The students' commitment and desire to learn and their cooperation in performing the skill correctly. As for the experimental group, there was a significant significant difference in favor of the post-test, and the study authors attribute that development as a result of using the Murder strategy because it contributes greatly to increasing the amount of information and knowledge obtained by the student. Contribute to achieving the research objectives. This was confirmed by (Hamid Abdel Salam, 1975) that the use of modern methods increases the student's ability to acquire knowledge and increases his speed in acquiring information, and the student is able, as much as possible, to understand the increasing sources of knowledge, as well as his tendency to specialized reading. In addition, the study organizers tried to deviate from the norm in presenting the lesson of athletics, as the topics of the lesson were presented in an organized and gradual manner, from generalities to particulars, which contributed to the students' receiving and absorbing information, which led to their distinction in raising their achievement level. This was confirmed by (Talaat Hassan, 1981) that the degree of change in cognitive achievement depends on the nature of the situation in which a person obtains information, its sources, style and degree of mastery.
Through the results of Table (5), significant differences appeared between the control and experimental groups in the post tests in favor of the experimental group, as the arithmetic mean of the control group became (6.13) with a standard deviation of (0.49), while the experimental group reached its arithmetic mean (6.78) and deviation (0.67), while it appeared The average difference is (0.50) when calculating the calculated t-value and comparing it with the error level of (0.020), which is smaller than the significance level (0.05), and this indicates a significant difference between the two groups and in favor of the experimental group. The study authors attribute the reason for the development of the members of the control group to the nature of the educational exercises that are performed in many repetitions, which contribute to the formation of a motor program in the brain about the mechanism of performance, which in turn works to correct performance and trim excess movements, which is beneficial to the development of artistic performance. As for the experimental group, there was a significant significant difference in favor of the post-test. The reason for this is attributed to the strategy used, which contains selected exercises in a good scientific way, which ensures the achievement of the correct performance in a smooth manner, taking into account the number of repetitions in line with the levels of students and their individual differences. Training and practice on developing a specific skill leads To increase experience and develop in muscular and physical ability, so practice is one of the most important variables in the process of teaching simple or complex.

**Resources**


1. Bahaa Hamouda: Developing the ability to solve problems among first-year secondary students using the cognitive strategy (m.u.r.d.e.r.) based on information processing and processing, Master's thesis, Ain Shams University, College of Education, 2005.


6 - Buthaina Abdel-Khaleq Ibrahim Al-Bayati; The educational bag and its impact on cognitive achievement and skill performance in some field and field activities: PhD thesis, College of Physical Education for Girls, University of Baghdad, (2005.)


Appendix (1) Discus Throw Cognitive Achievement Test Form

<table>
<thead>
<tr>
<th>Fill following blanks with appropriate answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- The number of technical stages of throwing the disc and the sequence</td>
</tr>
<tr>
<td>1_____________2__________________________</td>
</tr>
<tr>
<td>3_____________4__________________________5_____________6_____________</td>
</tr>
<tr>
<td>2- Holds the disc The reach of the disc to the farthest distance depends on three biomechanical principles : 1_____________2__________________________</td>
</tr>
<tr>
<td>3_____________</td>
</tr>
<tr>
<td>3- By ___ the four fingers, and ___ is placed on the surface of the disc and rests on the opposite side on the ___</td>
</tr>
<tr>
<td>4- The shooter stands in the ready position ____ and his back ____</td>
</tr>
<tr>
<td>5- The competitor leads ____ from the weights before starting _____ as he moves ____ in the direction of the movement of the hand holding the disc.</td>
</tr>
</tbody>
</table>
6. The stage of ____ plays a major role in acquiring the ____ needed to launch the disc further ____ and it is _____ in the triple jump.

7. The stage passes _____ by two types of pivot, each of which is repeated twice and in the following sequence _____ then _____ then a period of _____ to return to ____ but on the other leg and then follow it _____ in preparation for throwing and thus the contestant has completed ____ to face the throwing sector.

8. At the beginning of the stage____, the contestant is based on ____ to provide the largest ____ to help in the throwing process.

9. The disc is released from the thrower's hand the moment the body reaches ____., with a ____ and ____ movement.

10. The weight of the disc for men is ___ kg, and its weight for women is ___ kg.

11. The throw is considered a failure if it is ______.

12. The contestant does not leave the circuit until after ____ and must leave from ___ of the circuit.

13. If the number of contestants is 8, each contestant is given ____ attempts, but if the number of contestants is more than 8, each of them is granted ___ and the first eight contestants are given ____ additional attempts.

14. __________ is solved by referring to __ and if the even score continues, return to __ and so on until the even score is broken.

15. Mention four exercises, the first is a pinch-feeling exercise, the second is an introductory exercise, the third is a basic exercise, and the forth is an auxiliary exercise.