THE EFFECT OF SPECIAL EXERCISES ACCORDING TO THE REIGELUTH MODEL IN LEARNING THE SKILL OF THE FRONT HANDS JUMP ON THE JUMPING TABLE FOR FEMALE STUDENTS

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ABSTRACT

The purpose of the paper is to prepare special exercises according to the (Reigeluth) model in learning the skill of the front hands jump on the technical gymnastics table for female students. And also to identify the advantage of the effect of special exercises according to the model (Reigeluth) in learning the skill of the front hands jump on the technical gymnastics table for female students.

The researchers used the experimental method by designing two equal groups with pre and post-tests due to their suitability to the research problem. The research community identified the students of the second stage - College of Physical Education and the Sports Sciences / University of Kerbala for the academic year (2020-2021), and their number is (45) students. The most important conclusions were that the exercises that were prepared contributed greatly to learning the skill that was studied, and that the devices and tools that were used in displaying and clarifying the performance of the skill to be learned contributed greatly to the formation of a complete perception about the performance of the skill, and the repetitions that were applied in learning The performance of the skill greatly contributed to reducing the time and effort spent in learning the skill.

I. INTRODUCTION:

The world witnessed tremendous information and technological revolution that led to a civilized development that included all fields of mathematical science as well as the most important areas of human knowledge. In light of this rapid scientific progress, scientists and researchers sought to keep pace with continuous progress and invest human energies and wealth, both according to their capabilities, capabilities, preparations, talents and tendencies, as these multiplied. Information is transmitted very quickly. Learning is one of the most important foundations upon which the educational process is built, as it is not limited to a certain age or stage, but rather is a continuous process as long as life exists. As kinesthetic learning is part of general learning, it includes a set of invisible internal processes that lead us to relatively permanent changes in behavior that are included within the established educational curriculum.

Where educational aids and models play an important role in facilitating the learning process, and one of these models is the (Reigeluth) model, as it contains multiple cognitive paragraphs that can be employed in practice through the fragmentation of different movements, especially the complex movements that are characterized by difficulty as it requires the learner to make more effort and time and It was noted that the model has a great role in the process of learning and teaching in many fields, and this model is one of the models that can be used in the mathematical aspect, by linking the exercises with its five steps, and after the connection is made, it will result in educational content through which the learner can learn any skills in a way general and gymnastics skills in particular.

Gymnastics is a kind of beautiful artistic sports in its performance, which requires good physical, skill and psychological capabilities. One semester, which leads to the difficulty of following up or seeing the model presented by the subject’s teachers and the emergence of a discrepancy in the individual differences and the levels of students or learners, and although this method has advantages, it does not help learning and education to
a sufficient degree and enables it to highlight the personality of the learners, so it is necessary. The learner has to learn the scientific and practical (applied) aspects of artistic gymnastics through one of the educational methods and models that simulate the tendencies and trends of the learners.

Therefore, the researchers found the importance of the study in the need to use the educational model (Reigeluth) in the organization, segmentation and sequence of mathematical skills in general and (the skill of the front hands jump on the jumping table device) in particular in order to achieve the objectives of the educational situation and make it easier for those in charge of the educational process to communicate the explanation and presentation of the mathematical skills To the fullest extent to learn the studied skill.

**Research problem:**

Attempting to find educational solutions through the use of special exercises prepared according to a modern educational model, which is (Reigeluth), which aims to simplify the education process by segmenting and detailing the skills for students by applying its steps in sequence with the preparation of special exercises to teach the skill for each stage of it, which helps in their learning skill fast.

**Research objective:**

Preparing special exercises according to the model (Reigeluth) in learning the skill of the front hands jump on the technical gymnastics table for female students.

Identifying the effect of special exercises according to the model (Reigeluth) in learning the skill of the front hands jump on the technical gymnastics table for female students.

**Research methodology and field procedures:**

**Research Methodology:**

The researcher used the (experimental approach) and in the manner of two equal groups (control and experimental) with two tests (pre and post), in order to fit this approach to the nature and problem of the research.

**Community and sample research:**

The research community consisted of (45) students of the second stage of the academic year (2020-2021) in the College of Physical Education and Sports Sciences / University of Kerbala. The sample was chosen in a simple random way, where they were divided into two groups (experimental) and numbered (20) students, while the control group numbered (20) students, and where (5) female students were chosen in the exploratory experiment.

**Field Research Procedures:**

**Identify and describe the research tests:**

**Skill test**

- **Name of the test:** The skill of the front hands jump on the jumping table device.
- **Purpose of the test:** To measure the degree of forwarding jumping skill on the jumping table.

**Tools:** jumping platform, jumping glove, sponge rugs, and camera (1).

**Performance specifications:** The student stands on the starting line in preparation for the performance, and the camera is placed at a distance of (3) meters from one side of the jumping table.

**Degree calculation:** skill is displayed each student's performance on the three arbitrators in the material for the purpose of evaluating gymnastics artistic performance. The researcher arithmetic mean of the three degrees adopted (attempts) note that the final grade (10).

**Exploratory experiment:**

The exploratory experiment is “a mini-experiment of the basic experiment, and it must meet the same conditions and the circumstances in which the main experiment is as possible so that its results can be taken into account” (2) as the exploratory experiment “is the study of a preliminary experiment on a small sample before the researcher tries it with the aim of choosing methods Research and its tools (3), and on this basis, the researcher conducted an exploratory experiment on a group of students of the second stage in the College of Physical Education and
Sports Sciences - the University of Kerbala, whose number (5), were randomly selected from the research community. (Tuesday), corresponding to (9/2) at (9:00 am), the female students in the closed hall of the college.

**Purpose of the exploratory experiment:**
- Determining the difficulties and obstacles that will appear during the implementation of the tests.
- Identifying the appropriate time to conduct the tests and how long this procedure takes.
- Identifying the ability of the sample members to carry out the tests and their suitability for them.
- Identify the necessary devices and tools available and test their suitability to carry out the tests in the main experiment.
- Determining the performance time through tests to be implemented on the experimental group.
- Training the assistant work team.
- Determining the dimensions of the camera and the motion of the applicant on the device.
- The clarity and accuracy of the image.

Through conducting the exploratory experiment, the researcher confirmed the validity of the tests, as well as the understanding and comprehension of the sample for the test and the exercises prepared, as well as the adequacy of the assistant work team.

**Pre-tests:**
The researcher conducted the test on (Tuesday) corresponding to (9/3) at (9) in the morning, and the conditions related to the test were created, such as the place, time and methods of implementing the test, and the test was applied according to the description of each test after preparing all its tools, The performance test of the front hands jump skill was conducted on the jumping table device, where all the test was filmed with a video camera.

**Main experience:**
The main experiment contained a set of exercises that were applied by the experimental group only. The conditions for implementing the main experiment are:

Executing the exercises in the second course of the academic year.

The prepared exercises must be carried out within the time allotted for the curriculum for a period of (8 weeks).

The teacher relied on the information and exercises provided by the researcher to the experimental sample.

**Post-tests:**
The post-tests were conducted for the research sample, who are the students of the second stage, in the same conditions of the pre-test and the same specifications and conditions used in it, and the results were obtained and recorded in forms to be statistically processed for the skill (jumping the front hands on the jumping table device) also in the same way as in the tribal test and on (4/ 5).

**Statistical means:**
The statistical package (SPSS) and other statistical laws were used in processing and extracting the data for the research.

- Arithmetic mean
- Standard deviation
- Levine test
- T-test for independent samples
• T-test for symmetrical samples
• Chi-square (Chi²)
• Correlation coefficient (Pearson)

Presentation and discussion of the results:

Presentation and discussion of the results of the pre and post tests for the control group, the skill of the front hands jump:

Table (1) shows the difference between the pre and post-tests of the members of the control group for the skill of the front hands jump on the jumping table

<table>
<thead>
<tr>
<th>Variables</th>
<th>Test</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>Difference between mean</th>
<th>Difference between standard deviation</th>
<th>T value</th>
<th>Sig level</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>skill</td>
<td>Pre-test</td>
<td>3.0500</td>
<td>0.75915</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>4.4000</td>
<td>0.82078</td>
<td>1.35000</td>
<td>0.13129</td>
<td>10.283</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

Table (1) shows the differences between the arithmetic means and the standard deviations of the pre and post-test for the control group in the (skill) variable. The pre-test and the post-test, respectively, with an amount of (0.75915) (0.82078), the researcher used the T-test and its calculated value was (10.283) at a significant level (0.000), which indicates the existence of significant differences between the two tests (pre and post) in favor of the post-test

Through the results presented in the table that showed significant differences between the tribal and remote tests of the control group in the studied skill (jumping the front hands on the jumping table device) and in favor of the post tests, and the researcher attributes the reason for these differences to the use of equal frequencies for the members of this group in implementing what is required of them during the educational units, which are equal opportunities to obtain a good amount of motor abilities, as repetition is a “semi-stereotyped process without a noticeable change in motor responses” and this may be familiar to them in the educational units followed, which led to Increasing their regularity in implementing vocabulary and its parts and applying the usual exercises used that pertain to the skill in question, as well as the researcher attributes this to the fact that the exercises used by the teaching staff, which contained many movements and gymnastic exercises and the number of repetitions helped in learning (the skill of the front hands jump on the jumping table) Through repetitions, we can learn to fully perform the skill, and many movements and gymnastic exercises can also be used for this purpose.

Presentation of the results of the pre and post-tests of the experimental group for the skill of the front hands jump on the jumping table:

Table (2) shows the difference between the pre and post-tests of the experimental group for the skill of the front hands jump on the jumping table.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Test</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>Difference between mean</th>
<th>Difference between standard deviation</th>
<th>T value</th>
<th>Sig level</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>skill</td>
<td>Pre-test</td>
<td>2.9500</td>
<td>0.88704</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>7.1000</td>
<td>0.78807</td>
<td>4.15000</td>
<td>0.25418</td>
<td>16.327</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
Table (2), show the differences between the arithmetic means and the standard deviations of the pre and post-test for the experimental group at the (skill) variable, as the arithmetic mean value in the pre and post-test was (2.9500) (7.1000), while the standard deviation value of the two pre-tests and the dimension, respectively, by (0.88704) (0.78807), and the researcher used the T-test, and its calculated value came (16.327) at a significant level (0.000), which indicates the existence of significant differences between the two tests (pre and post) in favor of the post test.

Through these results and with the presence of moral differences between the pre-tests and the post-tests of the experimental group in the performance of the studied skill and in favor of the post-tests, the researcher attributes the reason for these differences in learning performance achieved by the group members in the post-tests to their application of special exercises according to the steps of the (Reigeluth) model, which allowed the opportunity for the students to accelerate the learning process (the skill of the front hands jump on the table jumping device), which is one of the complex movements, and the researcher also attributes the reason to the application of special exercises according to the (Reigeluth) model and the application of its steps in sequence, as well as the effectiveness of the exercises especially prepared by the researcher and the gradation in the difficulty of the exercise or movement, as well as applying it appropriately to the abilities of the students, as these exercises serve the skill in question, being based on correct scientific foundations, as well as giving internal and external feedback and building internal feedback to students by applying the model steps sequentially using educational and explanatory aids and modern technology such as (laser Optical, data show screen and vr glasses, music specially composed on any the bottom of the movement and so that there is a high and low sound according to the performance of the skill and using it for excitement and suspense) a service for learning the skill, as well as the researcher attributes that this theory is a philosophy that depends on the speed of the student’s response to the educational situation and aims to activate her role through the link and installation between external and internal ideas and ideas Which has already been learned with the newly learned ideas, where the (Reigeluth) model or the expansionist theory is concerned with organizing a large number of concepts, principles or procedures according to successive procedural steps, and this means that it focuses on organizing complete academic courses, or relatively large educational units, and these The theory depends on the gradual learning of concepts, principles, and procedures from simple to complex, general to specific, and linking internal and external relationships in the educational material(6) As well as greatly enhancing their desire to learn the skill in an unconventional way through the use of modern educational means such as (virtual reality) and innovative aids as mentioned by the researcher above, and among these means (laser light and music) with the performance of movement, whether in skill exercises or when performing The skill is fully considered taking into account the students’ tendencies, desires and the degree of their assimilation, as the basic steps of learning are “that the educational curricula are designed in the light of the capabilities and needs of the students(7). In addition to being keen on increasing their motivation, providing them with immediate feedback, in addition to keeping the information in the memory for a longer period, and as a result of applying the steps of the (Reigeluth) model sequentially, all are advantages that refine the educational process and contribute to the improvement of its contents. Because diversity increases learners’ motivation, and positively affects their attention and integration, and thus makes them more receptive to learning” (8), and the researcher also suggests these results to the use of special exercises that contributed to learning the skill of research in artistic gymnastics. The exercises are considered as “a set of situations The movements performed by the body or some of its parts are practised or performed according to scientific bases and educational principles aimed at building and shaping the body to reach the learner or player to the best possible performance in games, events and life activities (9). It is characterized by educational and training units, and accordingly, some of them find that the exercise of “every structured learning has a quick goal for both the physical and educational aspect and to increase The kinetic (technical) learning method for human beings” as well as it is an effective tool in bringing athletes to the highest levels in terms of excellence in achievement and in various other areas of life (10).”

Presentation and discussion of the results of the dimensional tests of the control and experimental groups for the skill of the front hands jump on the jumping table:

Table (3) shows the difference in the post-tests between the members of the experimental and control groups in the skill of jumping the front hands on the jumping table.
Table (3), shows that the differences between the arithmetic means and standard deviations of the post-tests of the two experimental and control groups in the (skill) variable, as the arithmetic mean value in the post-tests of the control and experimental groups, respectively, reached (4.4000) (7.1000), while the value of the standard deviation was (0.82078) (0.78807), and the researcher used the T-test and its calculated value came to (10.612) at a significant level ((0.000), which indicates that there are significant differences between the post-tests of the two groups (experimental and control) in favor of the group Experimental.

With regard to the emergence of moral differences in skill learning for female students in Table (6), the researcher attributes this also to the application of the special exercises of the (Reigeluth) model and the application of its steps in sequence on a regular basis, which represent (introduction, comprehensive, detail, linkage, structure, summary and last conclusion) in addition to the effectiveness of the special exercises because they contain On modern aids, as well as being a variety of exercises of varying difficulty, making this enhance the factor of suspense and excitement for them and accelerate the process of learning the required skill, which has a great role and a direct impact in improving the level of skillful performance for them until they were able to master it, as (Muhammad Hassan Allawi) emphasized that “the exercises The special-purpose aims to develop and develop all the characteristics, movements and abilities that characterize the type of activity being practiced.” (12) Where the researcher took into account the individual differences between students while giving exercises and feedback.

Thus, the researcher achieves her hypothesis that (special exercises according to the (Reigeluth) model have the advantage of affecting learning the skill of the front hands jump on the technical gymnastics table for female students between the post-tests).

II. CONCLUSIONS AND RECOMMENDATIONS

Conclusions
• The exercises that were prepared contributed greatly to learning the skill that was studied.
• The devices and tools that were used to display and clarify the performance of the skill to be learned contributed greatly to the formation of a complete perception of the skill performance.
• The repetitions that were applied in learning to perform the skill contributed significantly to reducing the time and effort spent in learning the skill.
• The (Reigeluth) model and the steps it contains greatly facilitated and accelerated the process of teaching the performance of the skill and understanding the parts of the movement in an appropriate time and effort.

Recommendations:
Through the results of the study, the researcher reached several recommendations, which are:
• When learning any skill for gymnastics activities, the learner must possess a small level of motor abilities to help learn to perform the skill.
• Appropriate repetitions of the exercises must be applied according to the (Reigeluth) model in learning to perform any skill.
• Researchers should study other models that contribute to facilitating the process of learning the skill as required.

III. REFERENCES

1. Aziza Muhammad Salem: (2005); Exercises and Gymnastics between Theory and Practice, 1st Edition, Cairo, Dar Al-Fikr, p. 112

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