The impact of programmed education on skill knowledge and learning some floor movements in the artistic gymnastics for students

Dr. Murtadha Mohsin Abed

Abstract
The idea of the research was to prepare an educational program using the programmed education strategy and to know the effect of this strategy on learning some technical gymnastics skills for men. Control and experimental, and the researcher conducted the tribal tests and then gave the educational program, after that he conducted the post tests. The researcher also conducted tests for skill knowledge. The researcher concluded that the experimental group that used you the educational program prepared by the researcher for the blended learning strategy, and this group also had better students in the results. Skilled knowledge, and one of the recommendations recommended by the researcher is the need to use the programmed education strategy as an effective strategy in teaching and teaching undergraduate students.

Keywords: Programmed education, skill, knowledge, learning

Introduction
Introduction and importance of research: Not only teach the athlete to maintain physical ability and endurance, but usually teach him obedience, determination to win, willpower, etc., where the power of thinking, mental development and professional specialization come from the academic learning of the athletes, and accordingly the programmed education strategy in sports leads to the development of Comprehensive for individual athletes. Sports science has developed like other sciences as a result of rapid technological development, which in turn led to the emergence of new methods and methods of education that depend on the use of these technological innovations to achieve the required learning in order to provide learning around the clock for those who want and in the place they want to provide educational content through a combination of written and spoken language Fixed and moving visual elements, effects, and various audio-visual backgrounds are presented to the learner. What distinguishes the strategy of modern education is that it looks at the learners in a new way, as it considers them partners in the educational process, and not passive recipients, on whom educational activities are imposed by the teacher, school or university.

This strategy is considered one of the educational concerns to face this rapid change, technological progress, knowledge explosion, the huge increase in information and the large number of learners in the classroom. It is also considered one of the new strategies in learning and the focus of the educational process. Therefore, the learner should be given the opportunity to choose and determine responsibility for what he wants to learn. The real question must be which educational strategy is more effective in teaching the gymnastics lesson, the traditional education strategy or the new education strategy, such as blended education, for example. Rather, it is in any educational situation that this method is effective and in what other situations is it more effective. Since programmed education may be effective in some situations and less effective in others, and the same speech applies to other learning methods. Therefore, we do not adopt blended learning as a tool that solves education problems. Rather, we look at it as effective auxiliary tools that integrate with other tools in order to teach skill knowledge and some movements. The floor is in the artistic gymnastics for men, hence the importance of our research.

Research problem: As a result of the researcher’s experience as a teacher of gymnastics equipment in the Faculty of Physical Education and Sports Sciences - University of Maysan for more than (15) years, as well as practicing the effectiveness of gymnastics in young age

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stages, and the researcher’s awareness of keeping pace with the technological development in education and the application of modern education strategies and the role of the active learner in it. The application of the blended learning strategy in learning the skills of ground movements is (front rolling, human wheeling, standing on the head) on students of the third stage of the applied sciences branch to know the effect of this strategy on skill knowledge and learning the basic skills on the ground movements that were mentioned above.

**Research aims**
1. Preparing an educational program with a blended learning strategy.
2. Knowing the effect of the program prepared by the researcher on the skill knowledge.
3. Knowing the effect of the program prepared by the researcher in learning some ground movements in artistic gymnastics.

**Research hypotheses**
There are statistically significant differences between the pre and post tests for the control and experimental groups and in favor of the post tests.

There are statistically significant differences between the post tests of the control and experimental groups and in favor of the post tests in the experimental group.

**Research limits**
1-5-1 The human field: Students of the Applied Sciences Branch, third stage, in the College of Physical Education and Sports Sciences/University of Maysan for the academic year 2018-17-2020.
1-5-3 spatial domain: Gymnastics hall affiliated to the Faculty of Physical Education and Sports Sciences/University of Maysan.

**Research methodology and field procedures**

**Research Methodology**
The research used the experimental method for its suitability with the nature of the research problem, as the experimental method gives tangible results on the impact of the blended learning strategy and that “what distinguishes accurate scientific activity is the use of experiment” (Wajia, 1993). For the purpose of obtaining answers to hypotheses in the research, an appropriate experimental design must be used, which is one of the necessary things in experimental research, in addition to that it helps in experimental control” (Aziz, 1990). Therefore, the researcher used in this research the design of the two equal group’s method, one controlling and the other experimental. There are pre and posttests.

**Research Sample:** The research sample was selected, who are students of the Faculty of Physical Education and Sports Sciences - University of Maysan, the third stage of the applied sciences branch, whose number is (32) students. The group is the program prepared for it by the subject teacher, and the second group is the experimental group that uses the educational program with a programmed education strategy, which the researcher has entrusted to it.

2-3 Devices, tools and means of collecting information:
- Ground movements mat.
- HP laptop computer.

- Educational programs.
- Skill measurement form.
- Scientific sources and references.
- Stationery.
- Performance test score release form.
- SPSS statistical program.

**Field Research Procedures:**

**Experimental Experiment:** The researcher applied the research tests on an exploratory sample of (2) students from outside the original research sample in order to verify the following matters.
- Ensuring the appropriateness of the educational units for students and recording test scores.
- Equipment processing.
- Estimation of the time that can be taken by the individual to perform a set of tests.
- Recognize the proper order for conducting the tests so that no test affects another.

**Tribal tests:** The tribal tests on the skills under study were conducted on Wednesday 28/3/2018 in the Gymnastics Hall at the Faculty of Physical Education at the University of Maysan. All performance scores for students were recorded in the special registration form.

**The main test:** Procedures for designing and implementing a programmed learning program:
The educational program consisted of (12) educational units applied during a period of time one month and a half at a rate of two educational units per week. The researcher applied the educational program with the programmed education strategy on the skills under study on Sunday 1/4/2018 on the research sample (the experimental group), while the control group used the program prepared by the subject teacher, and the researcher took into account a set of the following points in the program:
- There are many procedures that we must follow in sequence in order to ensure that we reach the goal of the design of the program, and these procedures are:
  - Defining the topic or skill and its general objectives that can be translated into actionable objectives.
  - To achieve our goal accurately, the characteristics of learners must be defined in terms of their previous experiences and individual differences.
  - Analyzing the characteristics of the scientific subject or skill into its sub-elements and then into main ideas and secondary ideas.
  - Arranging the skill stages according to a sequence that leads to the achievement of the behavioral goal.
  - Inventory of educational aids that are used in the program.
  - Preparing the auxiliary activities that the learner can refer to before and during a study, such as reading the vocabulary of the lesson or the educational unit, or watching a video for him, or an audio recording of the educational material.

**Post-tests:** The researcher conducted his post tests on 15/5/2018, and in order to achieve objectivity in the tests, the researcher was keen to establish the same conditions as the pre-tests for the post-tests.
Skills knowledge tests: After completing the post tests for the skills under research, the researcher conducted skill knowledge tests on the two research groups (control and experimental) and the tests consisted of (10) questions prepared by the researcher and answered by the student regarding skills (front rolling, human wheel, standing on the head). The aim of it was to know the extent to which the student acquired information related to the skills he had learned, and this is what we call (skilled knowledge), then the researcher worked on the comparison between the control and experimental groups.

Statistical means: The researcher used the statistical program SPSS For data processing, the following laws are used:
- Arithmetic mean.
- Standard deviation.
- Law (t) for symmetrical samples.

Presentation and discussion of the results
1. Presentation and discussion of the results of the pre and post tests for the control and experimental groups:

Table 1: Shows the arithmetic means, standard deviations, the calculated (t) value, and the significance of the differences for the pre-tests and for the two groups.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Officer Experimental</th>
<th>Calculated (t) values</th>
<th>Indication level</th>
<th>Indication type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S</td>
<td>P</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>front wheel</td>
<td>2.466</td>
<td>0.516</td>
<td>2.800</td>
<td>0.676</td>
</tr>
<tr>
<td>human wheel</td>
<td>2.533</td>
<td>0.639</td>
<td>2.933</td>
<td>0.703</td>
</tr>
<tr>
<td>stand on the head</td>
<td>2.266</td>
<td>0.593</td>
<td>2.400</td>
<td>0.736</td>
</tr>
</tbody>
</table>

Table 2: Shows the arithmetic means, standard deviations, the calculated (t) value, and the significance of the differences for the pre and post tests of the experimental group.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tribal after me Experimental</th>
<th>Calculated (t) values</th>
<th>Indication level</th>
<th>Indication type</th>
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<tbody>
<tr>
<td></td>
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<td>P</td>
<td>s</td>
<td>p</td>
</tr>
<tr>
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<td>0.676</td>
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<tr>
<td>human wheel</td>
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<td>7.266</td>
<td>0.593</td>
</tr>
<tr>
<td>stand on the head</td>
<td>2.400</td>
<td>0.736</td>
<td>7.066</td>
<td>0.703</td>
</tr>
</tbody>
</table>

Table 3: Shows the arithmetic means, standard deviations, the calculated (t) value, and the significance of the differences for the pre and post tests of the control group.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tribal After me</th>
<th>Calculated (t) values</th>
<th>Indication level</th>
<th>Indication type</th>
</tr>
</thead>
<tbody>
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<td>p</td>
<td>s</td>
<td>p</td>
</tr>
<tr>
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</tr>
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<td>0.593</td>
<td>5.600</td>
<td>0.736</td>
</tr>
</tbody>
</table>

Table 4: Shows the arithmetic means, standard deviations, the calculated (t) value, and the significance of the differences for the post-tests and for the two groups.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Officer experimental</th>
<th>Calculated (t) values</th>
<th>Indication level</th>
<th>Indication type</th>
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<td>P</td>
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<tr>
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<td>human wheel</td>
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<tr>
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<td>7.066</td>
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</table>

Discussion
By looking at Table (3), which shows the progress of the control group in the post-tests on the tribal tests of the skills under study (front rolling, human wheel, standing on the head), where the researcher attributes this progress and difference to the effectiveness of the traditional program that the subject teacher used in teaching those skills. The students of the third stage in the College of Physical Education, which depended on explaining the skill and then displaying the skill and giving a model in order to facilitate the process of educational steps for the educated students, and the effect was clear in the progress of that group through the statistical data by looking at the statistical treatments in Table No. (2), it becomes clear to us the progress of the experimental group that used the program prepared by the researcher, which in turn outperformed the experimental group, and this is what indicates the mechanism of Table (4), where the researcher attributes the reason for this superiority to the effectiveness of the proposed educational program using The blended learning strategy, which gives the ability to learn to each individual according to his inclinations and self-speed, a method that depends on the activity of the learner and control of the educational environment. "The consideration of individual differences and the needs and preparations of the learner is one of the most important characteristics of programmed education, which takes into account the speed of learning, as each learner has his own capabilities and speed" (Maan, 2006) and this is what Maan Ahmed Mahmoud al-Shaalan referred to. Table (4) shows the superiority of the experimental group over the control group in skill knowledge, as it is the student’s ability to remember (recall and recognition) of mathematical information, whether related to conceptual or procedural knowledge as presented.
to him during the teaching and learning process. It is worth referring here to the level of knowledge (recalling knowledge from memory as presented) and this knowledge differs from one individual to another because of individual differences, “as each player must learn from the program regardless of his abilities and inclinations, as the presence of differences between a player and a second player is a difference in the speed of completing the program only, and reaching the goal Finally, the individual differences in abilities between players is an essential element that must be taken into account when planning and implementing educational programs in sports programs” (Nancy, 2021) and this is what the researcher worked on when designing the educational program using the programmed education strategy.

Conclusions and recommendations
Conclusions: In light of the data reached by the researcher, he concluded:
1. The students of the control and experimental groups had an improvement in the level of motor performance of the technical gymnastics skills for men.
2. Programmed education is considered one of the possible and effective solutions in teaching the skills of artistic gymnastics for men.
3. The experimental group members were better than the control group in skill knowledge.

Recommendations
1. The need to use the programmed education strategy as an effective strategy in teaching and teaching undergraduate students.
2. Encouraging learners to program instruction to enhance the learning process provided by traditional methods.
3. The necessity of implementing various educational programs under the supervision of specialists from professors and teachers.

References
3. Nancy Al-Borini. What is the programmed education strategy in sports, the Internet, 2021.