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مجلة علمية محكمة تصدرها كلية التربية البدنية وعلوم الرياضة



Using the Programmed Learning Method in Learning the Technical Performance of the Long Jump Effectiveness among First Stage Students

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ABSTRACT

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The long jump is one of the events of the arena and field games in which the artistic performance plays a prominent and distinctive role, and as is known, this event consists of several different movements in a row and linked to each other in order so that through its performance, the achievement of this event is achieved, except that the result is achieved at the farthest horizontal distance, and these movements are the approximate running, getting up and up, flying, and landing, and the teacher must follow up the students and correct their mistakes, and all this is not done randomly, but relying on Modern devices and machines used in kinetic analysis to determine good performance.

Due to the effective role of modern teaching methods in bringing about the learning process during the lessons of the arena and field in general, and through their use in learning the effectiveness of the long jump in particular, this role will contribute to the education process more effectively, in addition to correcting the incorrect movements of this event, as teaching is still limited to the method of the command, as it is done under the clear control of the teacher, which observed the weakness of teaching the technical stages of this event, and from this point of view, in this study, the method was used. Programmed education in learning the technical performance of the long jump effectiveness among female students of the first stage. In light of the above, the importance of conducting this research contributes to encouraging physical education teachers to use modern teaching methods and increasing their awareness of the importance of using them, as the research aimed to know the use of the two methods of programmed and followed (command) education in learning the technical performance of the effectiveness of the long jump among female students of the first stage, and the research assumed that there are statistically significant differences between the pre- and post-tests of the two groups as well as between the post-tests of the two groups in learning the technical performance of the effectiveness

It was concluded that the educational curriculum in the programmed method contributed to the development of the technical performance of the event as well as more effective than the command method used.

Introduction and Importance of the Research:

Scientific progress and technological development are one of the most important distinguishing features of the modern era, and what results in large numbers of learners makes the educational process face important issues, foremost of which is the development of teaching methods and methods and the use of modern methods for the purpose of achieving the desired educational goals. It enhances students' self-confidence and indicates their motivation to learn and think, and for this reason, the teacher must possess modern teaching methods and methods that enable him to deliver the scientific material in the minds of students efficiently and achieve educational goals with the least possible time and effort (9: 6).

In schools, sports are almost non-existent, and if it is practiced in the old commanding way, which is far from scientific concepts, we do not forget that the teacher is the main laboratory for emptying the players of championships, and we do not forget the mass killings of sports stadiums to hold educational classes on the ground of these stadiums because of the large number of students, and since we are living in the age of science and information, the age of technology and the era of scientific progress, if we want to catch up with the advanced world in the fields of sports, we must respect science and take into account its reasons and theories in the field of sports. The field of sports talent, its development and keeping pace with the world in the field of competitive sports. (5 :9).

The long jump is one of the events of the arena and field games in which the artistic performance plays a prominent and distinctive role, and as is known, this event consists of several different movements in a row and linked to each other in order so that through its performance, the mechanical goal of this event is achieved, which is the result at the farthest horizontal distance, and these movements are the approximate running, rising, flying, and landing, and each of them needs high efficiency in applying the mechanical conditions that accompany the performance of these The teacher must follow up on the students and correct their mistakes, and all this is not done randomly, but relying on modern devices and tools to determine good performance.

The curriculum must also contain exercises with the physical qualities required to develop a good connection between the stages of performing this event, and due to the effective role of modern teaching methods in bringing about the learning process during the lessons of the arena and field in general, and through their use in learning the effectiveness of the long jump in particular, this role will contribute to the education process more effectively. From this point of view, the importance of conducting this research in studying the use of the programmed teaching method in learning the technical performance of the long jump effectiveness among female students of the first stage has emerged, and in light of the above, the importance of conducting this research contributes to encouraging physical education teachers to use modern teaching methods and increasing their awareness of the importance of using them.

Research Problem:

The more appropriate this means, the more economical the learning and teaching process will be in time and successful in delivery, in addition to the multiplicity of modern methods in the educational process, but teaching is still limited to the method of education followed (imperative), as this method is done with the clear control of the teacher over the contents of teaching to a great extent, which reflects the negative aspect, and since the learning methods are considered One of the things that plays an important role in the success of the educational process, which is achieved through the interaction between the teacher, there is a weakness in teaching the stages of the long jump effectiveness to female students as they are beginners, and one of the obstacles that prevent their development is the lack of a special educational curriculum to develop these stages in the field of education and teaching this event, so a question arises in which the research problem lies: which is the best method of programmatic teaching or the method of learning the technical performance of the long jump effect, and to answer these Question: This study was conducted:

Research Objectives:

- Knowledge of the use of programmed teaching and applied learning methods in learning the technical performance of the long jump effectiveness among first-stage female students
- Identify the differences between programmed and applied learning methods in learning the technical performance of the long jump.

Research Hypotheses:

- There are statistically significant differences between the pre- and post-tests of the two groups (experimental - and control) in learning the technical performance of the long jump effectiveness.
- There are statistically significant differences between the post-tests of the two groups (experimental and control) in learning the technical performance of the long jump effectiveness.

Programmed Learning:

Programmed learning is a method of self-learning in which the student learns self-paced at his own pace by interacting with a program that provides him with information in small steps called frames, and this information is presented in a programmed book or an educational machine, and the curriculum plays the role of directing towards specific goals through experiences that require specific responses to various questions, and the student's motivation is increased through the continuous process of reinforcement that achieves feedback for him through his immediate knowledge of the results of his response (2:228).

Method and Tools:

The researcher chooses the appropriate method imposed by the nature of the problem to be studied, so the research problem dictated the use of the experimental method by designing two equal groups, the first experimental and the second control.

Research Population:

The research population consists of (130) female students in the first stage of the College of Physical Education and Sport Sciences / University of Baghdad for the academic year (2024-2025), numbering (130) female students distributed into (A, B, C, D).

As for the research sample, it consisted of students of two divisions who were randomly selected from among (4) divisions, and after a number of sample members were excluded due to their heterogeneity, then they were randomly divided by lottery into two groups equal in number, namely the experimental group (20) students and the control group (20) students. and specialists from the field of athletics and learning (Appendix 1), the most important of which were determined and then the process of parity between the two groups was carried out in the following tests (10 m running test from the flying position, the test of the achievement of the effectiveness of the long jump) as in Table (1).

Table (1) shows the parity between the two research groups

The tabular value of (v) at the error ratio (0.05) and in front of the degree of freedom (20+20-2=38)

Exploratory Experiment of the Educational Curriculum:

This experiment was conducted on the (6) female students of the first stage by selecting a number of exercises in different educational units, and the aim of this experiment was:

- ❖ Ensuring how to use the educational curriculum in the style of programmed instruction and the extent of the students' response.
- ❖ Ensuring the appropriateness of the timing of the parts of the educational modules and the possibility of implementing them, and identifying difficulties and their solutions

One of the results of this experiment was to form a clear picture for the researcher about the nature of the work and how to apply it.

Tests used in the research:

First: Test of running 10 meters from flying mode (49:7)

Significance	SIG Value	T value	SIG Value	F value	Standard deviation error for spreads	Difference in arithmetic means	Control Group		Experimental Group		Variables	t
							on	Going to	on	Going to		
Insignificant	1.000	0.000	1.000	0.000	0.025	0.000	0.080	2.618	0.0809	2.618	Run 10m	1
Insignificant	1.000	0.000	1.000	0.000	0.026	0.000	0.082	2.686	0.082	2.686	Long Jump	2
*Under the significance level of 0.05 and a degree of freedom (38)												

Test Purpose: Speed Measurement

Test instruments: stopwatch – whistle – legal running field

Performance Description: The tester stands on the starting line from the bird position and when the whistle is heard, start as fast as possible to reach the finish line.

Registration: The tester is given one attempt to record the time it took to travel this distance as the clock is stopped at the finish line.

Second: Achievement Test for the Effectiveness of the Long Jump (22:4)

Purpose of the test: Knowing the distance achieved

Test instruments: Legal long jump hole with approach field – tape measure

Performance Description: The tester stands in the field of approximation running and performs approaching, then climbing from the board, flying, and then landing in Al-Jufra.

Registration: The distance is measured from the nearest footprint left by the tester's body in the landing area to the edge of the internal climb plate near the landing area in a straight and perpendicular line on the landing pad, measured in meters and its parts by measuring tape, and 3 attempts are given and the best of them is calculated.

Pre-Tests:

After giving two introductory lectures by the teacher of the course on the stages of the long jump effectiveness (approaching, close running, rising, climbing, flying, and landing).

In the presence of the researchers, and after the students had a clear picture of this performance, the researchers supervised the conduct of the pre-tests for the two groups

Significance	SIG Value	T value	Standard Error of Mediation	P.A.	P.S.	Post-testing		Pre-test		Variables	t
						on	Going to	on	Going to		
Moral	0.000	243.669	0.0010	0.0045	0.250	0.079	2.868	0.0809	2.618	Run 10m	1
Moral	0.000	64.140	0.0046	0.0207	0.297	0.077	2.983	0.0823	2.686	Long Jump	2
*Under the significance level of 0.05 and with a degree of freedom (19)											

(experimental and control) and each student was given (3) attempts, according to the law that stipulates that "if the number of players is more than (8) contestants, each contestant will be given (3) attempts" (3:22).

After that, the best attempt obtained by each student was selected in order to treat it statistically.

Key Experience:

The educational curriculum was implemented after presenting it to a group of experts with specialization in the field of arena, field and learning (Appendix 2) to express their opinions and observations about the curriculum in terms of:

- 1- Ensuring the validity of applying the educational curriculum to female students.
- 2- The chronological division of the parts of the educational unit and the exercises that have been developed.

The educational curriculum designed by the researchers was applied by teaching each group in one way within the duration of one education, Appendix (1), and the only difference in the application of the educational curriculum is in the learning style within the applied part in the main section of each group.

Post-tests:

After completing the implementation of the educational curriculum, the researchers conducted the post-tests of the research sample for the two groups (experimental and control) in the presence of the assistant work team (Appendix 3) in the athletics track at the College of Physical Education and Sport Sciences / University of Baghdad with the same conditions and temporal and spatial conditions and testing tools that were used in the pre-tests.

View Results:

Table (2)

Shows the arithmetic medians and standard deviations of the pre- and post-tests of the experimental group in the test of running 10 m from the flying position and the achievement of the long jump

Table (3)

Shows the arithmetic mean and standard deviations of the pre- and post-tests of the control group in the test of running 10 m from the flying position and the achievement of the effectiveness of the long jump

Table (4)

Shows the arithmetic medians and dimensional standard deviations of the experimental and control groups in the test of running 10 m from the flying position

Significance	SIG Value	T value	Standard Error of Mediation	P. A.	P. S.	Post-testing		Pre-test		Variables	t
						on	Goin g to	on	Goin g to		
Insignificance	0.75	0.326	0.002	0.001	0.001	0.080	2.617	0.080	2.618	Run 10m	1
Insignificance	0.18	1.370	0.001	0.004	0.001	0.080	2.684	0.082	2.686	Long Jump	2
*Under the significance level of 0.05 and with a degree of freedom (19)											

Significance	SIG Value	T value	SIG Value	F value	Standard deviation error for spreads	Difference in arithmetic means	Control Group		Experimental Group		Variables	t
							on	Goin g to	on	Going to		
Moral	0.000	9.904	0.988	0.000	0.025	0.251	0.080	2.617	0.079	2.868	Run 10m	1

Moral	0.000	11.9 68	0.7 27	0.1 23	0.024	0.299	0.0 80	2.684	0.07 7	2.983	Long Jump	2
*Under the significance level of 0.05 and a degree of freedom (38)												

And the achievement of the long jump

Discussion:

In Table (2), the results of the pre- and post-tests of the experimental research group in the test of running 10 meters of the flying position and the achievement test for the effectiveness of the long jump showed the significance of the differences, which indicates the interaction of the sample (the experimental group) with the programmed method and increasing the strength of motivation by giving them the responsibility of teaching themselves, which makes them remember what they have learned more deeply, as the student learns more quickly if there is an immediate reinforcement for each step of the lesson (9:121). The programmed instruction for the students was gradually from easy to difficult and with short steps, as she remembers, "dividing the educational material into small and short steps leads to easy understanding of it, which increases the chances of success and reduces the chances of failure (135:10).

As for Table (3), the results of the pre- and post-tests of the control group in the test of running 10 meters from the flying position and the achievement test for the effectiveness of the long jump showed that there were insignificant differences as a result of following the prescribed curriculum that follows the command learning method, which does not provide an opportunity for the student to review what he has learned through feedback.

In Table (4), we note through the analysis of the statistical data obtained using the (T.test) test in the test of running 10 m from the flying position for the effectiveness of the long jump, it became clear that the differences were significant between the experimental group that used (the programmed learning method) and the control group that used (the followed learning method) and in favor of the experimental group, and the reason for the superiority of the experimental group used (the programmed learning method) was indicated that this method helps in practicing the motor skill and corrects it and with attempts This leads to an increase in the acceptance of this method by learners with great enthusiasm and motivation, because the new teaching method plays a great role in facing learning difficulties and the ability to correct mistakes, as well as the exchange of knowledge that occurs between the students of the groups in an atmosphere of cooperation, and thus increases the student's motivation towards the learning process.

In the case of (4), we note through the analysis of the statistical data obtained using the (T.test) test, in the achievement of the effectiveness of the long jump, it was found that the difference was significant between the experimental group that used (the programmatic learning method) and the control group that used (the "followed learning method") in favor of the experimental group, and the researcher attributes these differences to the fact that the use of (programmed learning method) affected the increase in the learners' achievement in skill compared to the group that learned by the (command) method of followed learning, and that the reason for this is due to The optimal investment of the time of repetition of the skill performed by the learner, in addition to the immediate reinforcement that the student receives from the educational curriculum during the performance, means that the reinforcement strengthens the response and increases its repetition again in the presence of the stimulus. This improvement is also due to the educational attitude being a cognitive attitude. Programmed learning is mainly based on the segmentation of educational experiences and presenting them to the student in a form that is responsive and easy to understand. This means that the movement needs to be aware of before it is performed. The more correct the perception, the more correct the behavior that the student will come up with, and the effectiveness of the long jump, being a motor activity, requires awareness and understanding of these movements. The educational curriculum using programmed learning led to the clarity of the skills through

explaining the skill, illustrations, excitement of the student, and providing continuous reinforcement of the student's responses during learning, and thus the improvement occurred, and the programmed education provides the opportunity for the student to learn at the appropriate pace for him and according to his abilities, which makes her compete with herself and not with her peers, and arouses her attention throughout the period of education, which is lost by the control group, as well as the interest of programmed education in the individual more than the interest in the group, which leads to greater improvement for individuals. Experimental group.

that programmed education is superior to traditional education in improving performance and shortening learning time . (8: 121)

Conclusions:

In light of the results obtained through the analysis of data and statistical treatments on the results of the sample, the research objective was achieved and the conclusions drawn by the researcher were as follows:

- ✓ The educational curriculum using the programmatic learning method is an effective method in developing technical performance and achievement for the effectiveness of the long jump.
- ✓ The educational curriculum using the programmed learning method is more effective than the (commanded) learning method in learning the technical performance and achievement of the long jump effectiveness.

Recommendations:

Based on the discussion of the results and the conclusions that could be concluded from the analysis and statistical treatment, the following most important recommendations were reached:

- ✓ When conducting the learning process, teachers must ensure the technical aspects that serve the level of achievement because of their impact on the development of the student's level of achievement.
- ✓ The need to master the approximate run, especially the last three steps, well, because it constitutes an effectiveness for getting up and a key factor in achieving good achievement.
- ✓ Teachers and coaches should use video photography in field tests for students and players in order to identify weaknesses and errors through analysis and confirmation of indicators related to the technical aspects that serve achievement.
- ✓ Conduct a similar study on another event and game.

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Attachment (1)

Questionnaire form to take the opinions of experts and specialists in learning and teaching methods on a model of the curriculum programmed to teach the technical performance of the long jump

Dear Professor-----

In order to conduct the research tagged "Using the Programmed Learning Method in Learning the Technical Performance of the Long Jump Effectiveness among the Students of the First Stage", and due to your experience and know-how in the field of scientific research, teaching methods, and arena and field games, please give your opinion about a sample of the paragraphs of the programmed educational curriculum dedicated to teaching the long jump effect.

Regards

Programmed Learning Stages of the long jump

First // The Approach Stage in the Long Jump Event

The student should perform the approach stage (close run) at a good level.

- ❖ Approach is a stage of the technical performance of the long jump effectiveness.
- ❖ Running should be in a straight line
- ❖ The student must work on increasing the speed in the approach stage.
- ❖ The last three steps of approach should be codified so that the third step before ascension is short and the last step is short
- ❖ The student's center of gravity should decrease in the approach stage

Second // The stage of improvement in the effectiveness of the long jump

The student should perform the stage of raising a good level

- ❖ Working to make the body vertical at the moment of elevation
- ❖ Note that the step of elevation must be placed on the board
- ❖ Try to have the center of gravity of the body above the elevation foot completely and that the elevation process is done quickly with the weight of the free leg bent from the pelvic joint and the knee.
- ❖ The elevation man must be fully elongated to be made with a 65-70 angle of ground.
- ❖ Moving the arms forward and up, work until the torso rises upwards and becomes moderate

Third // The Flight Stage in the Long Jump Event

The student must perform the flight stage at a good level.

- ❖ The free leg swings after the lift as it stretches from the hip joint down to perform the first step.
- ❖ Move the ascending leg bent from the hip and knee joint until the thigh reaches a position parallel to the floor to perform the second step.
- ❖ In the last half, the free man moves from behind with his bent.

- ❖ To maintain balance, the arms move with the shoulders outstretched, a movement that is compatible with the movement of the legs.
- ❖ Flight Traffic Walk in the Air

Fourth // The Downward Stage in the Effectiveness of the Long Jump

The student should perform the relegation phase at a good level.

- ❖ In the last half of the air-walking steps you should exaggerate the advanced leg lift upwards until it is as parallel to the ground as possible.
- ❖ The other man must catch up with the advanced man in preparation for the landing
- ❖ Notice that the stem is in its vertical position
- ❖ Before the heels touch the jump hole, the torso should be bent forward slightly with the arms moving back.
- ❖ When the heels touch the jump hole, the knees should be bent considerably so that the body's center of gravity moves forward with the arms raised forward

Attachment (3)

Names of experts and specialists in motor learning, teaching methods, arena and field

Workplace	Jurisdiction	Name and Scientific Title
College of Physical Education and Sport Sciences for Girls / University of Baghdad	Learn Square and Square	Prof. Dr. Aseel Jalil Kata
Faculty of Physical Education and Sport Sciences / University of Baghdad	Bayou Square and Square	Prof. Dr. Ihab Dakhil Hussein
Faculty of Physical Education and Sport Sciences / University of Baghdad	Learn to move your gymnastics	Prof. Dr. Susan Saleem
Faculty of Physical Education and Sport Sciences / University of Baghdad	Arena and Field Training	Prof. Dr. Haider Faeq Al-Shammaa
Faculty of Physical Education and Sport Sciences / University of Baghdad	Teaching Methods	Prof. Dr. Ali Jalal