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The Effect of a Proposed Instructional Design According to Keegan's Structures Strategy on Learning Some Basic Skills in Artistic Gymnastics

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ABSTRACT

The present research aimed to identify the design of a proposed educational program according to the strategy of Keegan's structures in learning some basic skills in artistic gymnastics, as well as to show the importance of the impact of the proposed educational program.The research problem was that there is a clear omission of methods that are based on the role of the learner and effective participation in the educational process, and through the experience of the researchers, they noticed a lack of interest in using the educational methods used to learn some basic skills in artistic gymnastics. The research sample included the players of the junior gymnastics team aged (11-13) years, who numbered (14) players , and they were divided into two experimental groups Each group was controlled by (7) players, and the experimental method was used, and the researchers applied the proposed instructional design according to the strategy of Keegan's structures to the experimental group, and through the results, the researchers concluded that the proposed instructional design has a positive effect with statistical significance in learning some basic skills in artistic gymnastics. The need to emphasize the dissemination of the results of the current research in order to benefit from it in the preparation of educational programs and other events.

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Importance of the research:

Gymnastics activities differ from other types of sports in their physical and mental requirements because they need a distinctive preparation during the learning of skills, as well as they require mental and motor compatibility, as well as the stages that these movements go through in terms of their sequence and the difficulty of the growing movement in them in the various stages of their learning, which are described as closed skills, they need learning and training programs with extreme precision. Hence, the importance of the current research lies in the preparation of a proposed educational design according to the strategy of Keegan's structures in Learn some basic skills in artistic gymnastics.

Research Problem:

. The researchers have noticed through their field experience that learners suffer from weakness in learning artistic gymnastics skills and do not have enough experience, as well as the differences in the ages of learners, they need to diversify their teaching methods, find educational alternatives, use modern technologies, as well as pay attention to the factor of individual differences, so we as researchers must study the methods and the extent of their impact and choose the best and appropriate method for the learned skill, as each skill has its own specificity in learning.

Research Objectives:

1. Design a proposed educational program according to Keegan's strategy of learning some basic skills in artistic gymnastics.
2. Knowing the effect of the proposed educational program according to the strategy of Keegan's compositions in learning some basic skills in artistic gymnastics.

Research Hypotheses:

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

Research Areas:

- **Human field:** Junior gymnastics team players aged (11-13) years.
- **Temporal Domain** : Period from 10/2/20 24to 22/5/2024.
- **Spatial Field** : The hall of the Training Center of the Gymnastics Federation.

2- From the research and its field procedures:

2-1 Research Methodology: The experimental method was used in the method of two equal groups to suit the nature of the research problem.

2-2 Research Sample: The sample was selected from the players of the junior gymnastics team aged (11-13) years, and they were selected by the deliberate method as the vocabulary of the stages of basic skills in artistic gymnastics is given according to the program of the technical committee of the International Gymnastics Federation in the sequence of giving the skills, and the players who are involved under these ages and those who are qualified to perform these skills were selected and the number of them was (14)) players. The test values were then arranged from lowest to highest for the purpose of dividing them into two groups by odd numbers in one group and even numbers in another group, so that each group contained (7) players. In order to avoid factors that affect the results of the experiment, the research sample was equalized

Table (1) shows the homogeneity of the parity of the members of the research sample

Testing the Differences	Torsion coefficient	Experimental Group		Torsion coefficient	Control Group		Unit of Measurement	Measurements	t
		on	Going to		on	Going to			
0.05	0.247	1.24	144	0.297	1.28	139	Poison	Length	1
0.07	0.542	0.033	40	0.549	0.021	37	kg	Weight	2
0.27	1.22	1.07	151	1.49	1.88	148	month	Age	3

* At a degree of freedom (12) and a significance level of (0.05)

Table (2)
Shows the equivalence between the experimental and control groups in the ground motion series

Significance of the differences	Value (v)		Collection Officer		Collection Experimental		Variable
	Tabular*	Calculated	±	Going to-	±	Going to-	
Insignificant	2.78	1.001	0.001	5.942	0.577	6.667	The first motor sentence
Insignificant	2.78	1.824	0.542	5.658	0.412	6.542	The second motor sentence

* At a degree of freedom (12) and a significance level of (0.05).

2.3 **Means of data collection:**

2.3.1 Devices and tools: floor movement mat , projector , camera

2.4 **Field research procedures**

- **Test Name: First Kinetic Sentence Test**

Purpose of the test : To measure the player's ability to perform the first motor sentence

Tools used : Floor Movement Mat

Performance Specifications: The player takes the standby mode and then performs the first motor sentence.

Registration : The first motor sentence has been evaluated by a committee of arbitrators, and it has been agreed that the final grade will be (10) marks .

- **Test Name: Second Kinetic Sentence Test**

Purpose of the test : Measure the player's ability to perform the second motor sentence

Tools used : Floor Movement Mat

Performance Specifications: The player takes the standby mode and then performs the second motor sentence.

Registration : The second motor sentence has been evaluated by a committee of judges, and it has been agreed that the final grade will be (10) marks .

2-5 Exploratory Experiment:

It was conducted on 14/2/2024 on (5) players from outside the research sample to identify the following:

- Knowing the extent to which the sample individuals comprehend the test vocabulary .
- Knowing the validity of the tools used .
- Consider the time required to perform the tests.
- Overcoming the mistakes and obstacles that accompany the experience .
- Knowing the efficiency of the assistant work team in conducting tests and recording results.
- Knowing the validity of the place to conduct the exams and implement the curriculum.

2-5 Pre-Test:

The pre-test for the experimental and control research groups was conducted at twelve o'clock on Wednesday, 16/2/2024 in the hall of the Training Center of the Gymnastics Federation.

Implementation of the proposed educational program:

The proposed educational program included (12) educational units and (90) minutes per week for the experimental group, and the steps of preparing the educationalmodules prepared by the researchers for the experimental group consisted of the following:

- Identify the learner's level and mental preparations
- Determine the type of skill and performance required of the learner.
- Identify the steps needed to perform in order to achieve the end goal.
- Breaking down each skill into small steps that make up it so that the learner can perform it
- Immediate knowledge of the result of the skill performance of motor sentences by the learner.
- Walk in learning according to the learner's personal ability.
- Relying on the learner's self-assessment.
- The evaluation of the player's performance is live on a first-to-one basis.
  The proposed educational program prepared by the researchers has been applied.

2-6 Post-Test:

The post-test was conducted on the research sample on 16/5/2024 at ten o'clock, as the researcher was keen to create the conditions for the choice in terms of time and place, and the same assistant work team in the pre- and post-tests, tools and devices in order to stabilize the variables as much as possible, and the researcher photographed the pre- and post-test and presented it to the evaluators and then compared them.

2-7 Performance Evaluation :

A group of evaluators specialized in the game of artistic gymnastics was relied on to evaluate the skill performance of the motor sentences of each player from the research sample when performing the motor sentences on the floor movement mat in artistic gymnastics, for the purpose of extracting the final evaluation score.

2-8 Statistical Methods :

The researchers used the SPSS statistical package to extract and discuss the research results.

Table (3)

Shows the results of the pre- and post-tests of the experimental group

Significance Level	T calculated	Average spreads	Post-testing		Pre-test		Unit of Measurement	Variables	t
			on	Going to	on	Going to			

D	4.22	1.873	0.88	8.542	0.577	76.66	Degree	First Motor Sentences	1
D	3.15	1.278	1.23	7.820	0.412	6.542	Degree	Second Motor Sentences	2

The grandfather T-test value was 2.09 under the significance level of 0.05 and a degree of freedom of 6.

Table (4)

Shows the results of the pre- and post-tests of the control group

Significance Level	T calculated	Average spreads	Post-testing		Pre-test		Unit of Measurement	Variables	t
			on	Going to	on	Going to			
D	3.05	0.489	0.72	6.431	0.001	5.942	Degree	First Motor Sentences	1
D	3.09	1.124	0.99	6.782	0.542	5.658	Degree	Second Motor Sentences	2

The grandfather T-test value was 2.09 under the significance level of 0.05 and a degree of freedom of 6

Table (5)

Shows the results of the post-test of the two research groups

Significance Level	T calculated	Average spreads	Control Group		Experimental Group		Unit of Measurement	Variables	t
			on	Going to	on	Going to			

D	2.63	2.111	0.72	6.431	0.88	8.542	Degree	First Motor Sentences	1
D	3.44	1.038	0.99	6.782	1.23	7.820	Degree	Second Motor Sentences	2

* Grandfather T = 2.09 under the significance level of 0.05 and with a degree of freedom of 12

3-2 Discussion of the Results:

Through the presentation and analysis of the results for the two groups, the research showed that there are significant differences in favor of the experimental group in all skills, and the researchers attribute the reason to the curriculum prepared by them, because the strategy of Keegan's structures created a healthy climate full of activity and effectiveness that helped the players to build their knowledge through their bilateral and association discussions, and the role of the coach in it is enhanced and stimulating the players' motivation to think and generate information, and this is what Abed Al-Moneim emphasizes: (2014: 58) (Whereas, "Education according to Keegan's strategy is the creation of models that take into account the initial and final response of the learner, and are graded according to a detailed plan that allows the evaluation of the strategies applied during the process"), and the researchers emphasize that this design allows players to have equal opportunities to participate among team members in exchanging information, deviating from the usual routine, organizing and cohering experiences, and maintaining the impact of their learning, which enabled them to retrieve information and not forget it.The proposed design also helped to diagnose previous experiences and link them to new learning according to the steps of the proposed design, which contributed to the development of fluent and flexible thinking and giving multiple and diverse responses through various activities with diversity in structures while performing the skills required by the players.

4.1 Conclusions

In light of the objectives of the study, within the framework of the scientific method used, and through the data and information obtained from the study sample and the presentation and discussion of the results, the researcher concluded:

1- There are significant differences between the two research groups and in favor of the experimental group, which indicates that the proposed educational program according to Keegan's strategy in learning some basic skills in gymnastics had a great and positive impact.
2- The application of the proposed educational program according to Keegan's composition strategy makesthe players feel satisfied and pushes them towards better learning , enthusiasm and desire

4-2 Recommendations

1- The researchers recommended that the proposed educational program should be used according to the Keegan Structures strategy to learn other sporting events .
2- It is necessary to conduct research according to the strategy of Keegan structures for different age stages.

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