An Educational Program using Micro-Teaching Strategy to learn some Ground Movements in Artistic Gymnastics

Mohamed Rahim Ghawi[a]– Qaisar Abd El Sada Zeregi[b]

[a] *Al Mostanseria University / Faculty of Political Sciences / Sport Unit*

[b] *Al Mostanseria University / Department of Student & Artistic Activities*

Mohamed Rahim : mhmed120@yahoo.com

Qaisar Abd El Sada : acaeasr@yahoo.com

Abstract

The study aims to prepare an educational program using micro-teaching method to learn some ground movements using artistic gymnastics. The researchers proposed that there are statistically significant differences between results of pre- and post-tests of both groups (empirical and control groups) for the empirical group. The sample of the study included 24 students at the fifth primary grade among students of Baghdad-Al Rasafa 3rd Educational Directorate. Results of tests showed that micro-teaching is effective in learning some ground movements using artistic gymnastics. The researchers recommended that is necessary to use micro-teaching to learn motor skills in general and ground movements in gymnastics in particular.

Keywords: Educational program, micro-teaching strategy, ground movements in gymnastics

1. INTRODUCTION

The world in which we are living is characterized with rapid changes and is renewing concerning additions and changes that happen to knowledge as they help build human society. Educational process contributes greatly to raise the scientific standard in thought, application, methodology and content because the concern in science and the educated people leads to advance in building intact human society to become a real power in achieving mental, intellectual, scientific, economic, social and political changes. A lot of educational and psychological studies agreed on the existence of individual differences among students even those who are at the same age, at the same social setting and even the twins who were created from the same sperm, living inside one uterus and one abdomen. Those differ among themselves at the level of mental, physical and psychological abilities. Facing this reality, we cannot direct education to a group of student using the same way. Education should be variable dealing with students as close individuals and groups instead of dealing with them as one group. Therefore, the modern theory focused on the role of students and made it the center of educational process, while it said that the role of teachers has to be easy, organized and guiding which cannot be done unless there is variability in teaching and education methods. Hence, the significance of the study comes in the use of micro-teaching strategy in learning some ground movements using artistic gymnastics.

Problem of the Study:

The problem of the study lies in lack of using modern methods in learning motor skills in general and gymnastics skills in particular. This led to weak learning y middle stage students by learning ground movements which form a great obstacle in developing and improving movements in gymnastics. Therefore, the researchers decided to use one of the modern methods in learning motor skills to answer the following question:

- Did the educational program by using micro-teaching helps in learning some ground movements using artistic gymnastics for middle stage students?

Objectives of the Study:

1- Preparing an educational program using micro-teaching strategy to learn some ground movements using artistic gymnastics.
2- Identify the effect of the educational program on learning some ground movements using artistic gymnastics.

2. METHODOLOGY & FIELD PROCEDURES OF THE STUDY:

The nature and goals of the study determine its methodology. A methodology is "the manner followed by individuals in order to reach certain goals" (Akram Khataiba, 1997: 19). Both researchers used the empirical method using two equal groups (empirical and control groups) as it is consistent with achieving goals of the study.

Population & Sample of the Study:

The population of the study was selected using purposive method represented by students of primary middle secondary grade from secondary male advanced stage among students of Baghdad-Al Rasafa 3rd Educational Directorate for the year 2014 / 2015. They are 140 students divided into 4 sections. As for the sample of the study, it was selected randomly using poll. Students were 35 with a percentage of 25% from population of the study. Since there were two physical education teachers, both researchers decided to divide the sample of the study into two equal groups using double numbering. The empirical group obtained even numbers and the control group obtained odd numbers. The number of students was (12) for each group. The exploratory group was (6) students after eliminating five students because they did not complete procedures of the study, so members of the sample were 24 students.

Sample Homogeneity:

The researchers made sample homogeneity for the variables: (length, mass and age) through the use of skewness coefficient as shown in table (1):

Table (1) sample homogeneity for the variables: (length, mass and age):

Variable	Number	Mean	S.D	Median	Skewness
Length / cm	24	142.8	2.920	143	0.205
Mass / kg	24	37.11	2.981	38	0.895
Age / month	24	137.1	3.98	135	1.582

Table (1) asserts that skewness values were all less than 3± and all measurements achieve normal curve. This shows sample homogeneity. After that, the researcher conducted equalization between both groups of the study to adjust variables that affect the results of pre-tests.

Sample Equalization:

The sample of the study was divided into empirical and control groups using double numbering method with a poll. In order to avoid bias of division for any group and to keep scientific subjectivity, equalization was made in results of pre-tests between both groups to adjust the variables which affect results of the study as shown in table (2):

Table (2): Sample equalization in results of pre-tests for the empirical and control groups

S	Statistical Treatment / Tests	Measure Unit	Empirical Group		Control Group		T Counted Value	Significance
			Mean -	S.D ±	Mean -	S.D ±		
1	Frontal roll squat	Degree	1.666	0.778	1.916	0.900	0.728	Insignificant
2	Frontal roll open	Degree	1.416	0.670	1.833	0.577	1.634	Insignificant
3	Back roll squat	Degree	1.083	0.668	1.333	0.651	0.928	Insignificant

(*) freedom degree = 22 at significance level (0.05) T-test tabulated value = 2.074 (Van Dalin 652.1993)

Field Procedures of the Study:

Determining Skills:

The researchers selected some ground movements related to gymnastics based on educational goals and items of the course for sport activities related of first middle grade students prepared by the public directorate of education for developing courses with the opinion of a group of experts to determine some ground movements of gymnastics according to their importance that are consistent with the subject of the study.

Setting Tests:

After determining ground movements, the researchers selected consistent options based on rules of gymnastics by making each student perform each selected movement three times, photograph performance, present it to a group of experts, grade each movement and finally list it in a special form for evaluating the performance of each student.

Pre-tests:

Pre-tests were performed on Wednesday 25/02/2015 at eight o'clock am for both empirical and control groups. The researchers fixed circumstances related to pre-tests and their conduction method to maintain the variables that may affect results of post-tests.

Main Trial (Educational Program):

Both researchers prepared an educational course according to requirements of micro-teaching methods based on educational references of teaching methods related to physical education. After scientific preparation, the program was presented to a group of experts and specialists in the field of physical education to legalize it by the manner that serves the subject of the study and to be applicable on the sample of the study to learn ground movements. There were 12 educational units divided into 4 weeks (3 units each week) after the approval of the school's management.

After performing pre-tests, the educational program was applied in the first educational unit on 02/03/2015. The main empirical group was divided into two groups. Each group is 6 students teaching only one movement for both groups with focus on implementation stages (preparation, training and follow-up) and giving the feedback to be used by implementing the special motor duty (movement application, movement criticism and movement reapplication). The duration of the educational unit is 15 minutes and then preparation of a discussion seminar about the educational unit that was recorded and given a final grade for the performance of each study through comparison with model performance.

Post-tests:

After application of the educational units of the program, post-tests were conducted on Monday 06/04/2015 for all tests and for both groups. The researchers considered provision of the same circumstances to avoid the effect of variables on results of tests.

3.   DISCUSSING RESULTS OF PRE AND POST-TESTS FOR BOTH GROUPS:

Table (3): Arithmetic means, Standard Deviations S.D, means difference, standard error of differences and T counted value for results of pre- and post-tests of the empirical group.

S	Statistical Treatment / Tests	Measure Unit	Pre-tests		Post-tests		Means Difference	Standard Error of Differences	T Counted Value	Significance
			Mean -	S.D ±	Mean -	S.D ±				
1	Frontal roll squat	Degree	1.666	0.778	6.916	1.164	5.250	0.410	12.78	* Significant
2	Frontal roll open	Degree	1.416	0.670	6.583	1.083	5.166	0.321	16.057	* Significant
3	Back roll squat	Degree	1.083	0.668	5.333	0.492	4.250	0.278	15.252	* Significant

(*) T-Test tabulated value = 2.201, significance level 0.05 and freedom degree 11

Table (3) shows that there is an improvement in performance of the empirical group in learning all ground movements under study. The researchers attribute the reason for improving performance of the empirical group to the effectiveness of the prepared training program using micro-teaching strategy in the learning of empirical group's students of ground movements in artistic gymnastics. The educational programs greatly helped students learn ground movements through video projections of recorded lessons as it helped students to fix correct performance, avoid mistakes as well as interaction of students with each other with teachers by preparing discussions about motor duty, model performance and determine errors which led to enhance relations, increase self-trust of students and trusting their teachers in addition to prepare suitable educational atmosphere. Moreover, feedback facilitated learning, especially at planning and implementing motor duty for a second time for the same movement, trying to avoid errors and trying to solve them through noticing model work of performing the movement which promoted fixing correct performance and overcoming mistakes by students and the ability to enhance learning. This was asserted by (Safwat, 1983) that the best method of feedback in micro-teaching is to watch students' performance, analyzing their performance and planning to teach once again (Mohamed Youssef Safwat, 1983: 20). As for Singer, 1976, he found that "the learner watching his performance and then watching model performance make him avoid errors in following attempts as it is considered an effective method to discover mistakes and correct them" (Singer, R.N:1976 .P 316).

4. DISCUSSING RESULTS OF PRE AND POST-TESTS FOR THE CONTROL GROUP:

Table (4): Arithmetic means, Standard Deviations S.D, means difference, standard error of differences and T counted value for results of pre- and post-tests of the control group.

S	Statistical Treatment / Tests	Measure Unit	Pre-tests		Post-tests		Means Difference	Standard Error of Differences	T Counted Value	Significance
			Mean -	S.D ±	Mean -	S.D ±				
1	Frontal roll squat	Degree	1.916	0.900	5.250	1.138	3.333	0.355	9.381	* Significant
2	Frontal roll open	Degree	1.833	0.577	4.416	0.668	2.583	0.792	11.285	* Significant
3	Back roll squat	Degree	1.333	0.651	3.833	0.717	2.500	0.904	9.574	* Significant

(*) T-Test tabulated value = 2.201, significance level 0.05 and freedom degree 11

Table (4) shows results of the control group in learning ground movements in artistic gymnastics as the table shows the improvement in the control group's performance in learning ground movements, but this improvement was in a little percentage. It was compared with learning the empirical group's learning. The researchers attribute this improvement logically as a result of the control group's performance of some exercises related to ground movements of gymnastics and as a result of the continuous repetition of ground movements during application of the educational course prepared by the physical education teachers and within the prepared educational methods.

5. DISCUSSING RESULTS OF PRE AND POST-TESTS FOR THE CONTROL GROUP:

Table (5): Arithmetic means, Standard Deviations S.D, means difference, standard error of differences and T counted value for results of pre- and post-tests of the empirical and control groups.

S	Statistical Treatment / Tests	Measure Unit	Empirical Group		Control Group		T Counted Value	Significance
			Mean -	S.D ±	Mean -	S.D ±		
1	Frontal roll squat	Degree	6.916	1.164	5.250	1.138	3.546	* Significant
2	Frontal roll open	Degree	6.583	1.083	4.416	0.668	5.895	* Significant
3	Back roll squat	Degree	5.333	0.492	3.833	0.717	5.970	* Significant

(*) T-Test tabulated value = 2.074, significance level 0.05 and freedom degree 22

Table (5) shows that there are significant differences in results of post-tests for the empirical and control groups for the sake of the empirical one and at all tests. The researchers attribute these differences to the effectiveness of the prepared educational program using micro-teaching strategy. Both researchers benefited from the positive sides of this method in learning process by implementing all educational units due to a scientific and correct planning as Thamer Mohsen & Sami Al Safar: 1988, 19 refer that "scientific training is the optimal method that should be followed by the teacher in making students adapt to face challenges as well as acquire experience that enables them to solve problems facing them. Mohamed Mahmoud Al Heela: 1999, 64 asserts that during implementation of the educational program effectively, a student's general performance is greatly enhanced. Then, students are able to acquire extra benefit in developing new learning about how to learn skills. The teacher used the method of explanation and presentation which greatly helped to facilitate learning. Dhafer Hashem: 2002, 120 asserts that in order to make learning start a correct one there must be explanation, presentation and training on correct performance and focusing on it till fixing and fixing performance. In addition, the use of feedback continuously to enhance performanvce helped enhance learning as feedback plays a great role in students' learning whether feedback during implementation of movement or after implementation through evaluation of performance by student to himself or through students who assess their colleagues. This was asserted by (Schmide & Wrisberge: 2000 .p282) as he said that "feedback increases individual's energy, motivation, promotion of correct performance and avoid wrong performance". Scott, 582000 found that the student's trust will increase through evaluation of colleague students in discussion sessions. There was a notable improvement in acquiring self-trust. This was reflected on performance and presenting good model for application. In addition, a student's knowledge of his performance will increase

learning movements especially if evaluation comes through students who participate in the same performance of the movement, especially in small numbered groups as a single person performs, who is the student, and his performance is monitored by other partners.

6. RECOMMENDATIONS:

1- Using micro-teaching strategy in learning ground movements of artistic gymnastics.
2- Conducting similar studies of micro-teaching strategy and various age categories for all games.
3- The researchers recommend the directorate of sport education and activity to provide requirements of all sport games, especially artistic gymnastics.

7. REFERENCES:

- Akram Khataiba (1997: "**Contemporary Courses of Physical Education**", 1st Edition, Amman, Dar Al Fikr Press.
- Thamer Mohsen & Sami Al Safar (1988): "**Basics of Training in Football**", Al Mawsel, Dar Al Kotob Directorate Press.
- Mohamed Youssef Safwat (1983): "**The Effect of using Micro-teaching for Warm-up and Training at the Level of Students' Efficiency at the Practical Education**" – 4th Scientific Conference for Physical Education Research Studies, Helwan University.
- Dhafer Hashem Al Kadhemi (2002): "**The Effect of Overlapping Teaching Method in Education & Development through Organizational Spatial Selections of Tennis Learning Setting**", PhD Thesis, Faculty of Physical Education, Baghdad **University**
- Van Dalin (1993): "**Research Methods in Education & Psychology**", Translated by Mohamed Nabeel Nofal et al, 10th Edition, Egypt, Anglo Library.
- Mohamed Mahmoud Al Heela (1999): "**Educational Design: Theory & Practice**", 1st Edition, Amman, Dar Al Maisara Press.
- Schmide & Wrisberge(2000): **Motor learning & performance il** , Human, Kinetics book.
- Scotte, B. A. (2000). **Enhancing student trust through peer** – **assessment in physical education**, Journal of Physical Education, vol.
- Singer, R. N. (1976). **Physical education foundation**, 2nd Ed, Hort Renhart, Winiston, New York.