THE EFFECT OF A PROPOSED ELECTRONIC GUIDE IN TEACHING SOME GROUND MOVEMENTS IN GYMNASTICS IN SECONDARY STAGE USING VARIOUS (PARTIAL-COMPLETE-MIXED) LEARNING METHODS

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Abstract

This study aims to determine the effect of applying a proposed electronic guide using computer in learning some ground movements in gymnastics in the secondary stage by employing electronic presentation means to present explanatory educational programs including images and video tapes according to various learning methods (partial, complete and mixed methods) and then determine the best method to apply the proposed electronic guide. The study was conducted on 122 students (68 males + 54 females) of the secondary stage. Results showed that the proposed electronic guide has as a positive effect on learning dome ground movements in gymnastics for the secondary stage and using the proposed electronic guide according to the partial method is better than its use according to complete or mixed methods. The researcher recommends applying the proposed electronic guide in learning ground movements in gymnastics in secondary stage according to partial method and providing electronic models aiming to integrate electronic education by teaching physical and sport education due to its importance in helping teachers explain movements during lessons and students to perceive movements.

Keywords: electronic education, ground movements, gymnastics, skills education methods.

INTRODUCTION

Electronic education is one of the modern trends in the teaching and learning system in physical and sport education depending on using modern communication mechanism including computers, networks, multimedia including sounds, images, diagrams, research, electronic libraries and internet websites whether remote or in the term (Abdallah Al Moussa, 2002, 24). It is a mean supporting the educational process and transforming it from prompting to creativity, interaction and skill development. It combines all electronic forms of teaching, learning, publication and entertainment by adopting computers, storage media and networks. The employment of electronic presentation means of giving lectures and presenting educational sessions aims directly to raise the level of the sport educational process, operate its activities, facilitate its tasks and achieve its goals. Physical and sport education in any society should contribute to develop knowledge and efficiencies that enable the youth to develop their social abilities such as working in a team, solidarity, tolerance and sportive spirit in a multi-cultural framework (Yehia Mohamed Ahmed Elgamal, 1989, 91) in addition to create balance among mental and physical activities throughout the educational career (Audiger Francois, 2000, 31). Among the most important of these activities is gymnastics that is considered one of the individual necessary sports for humans at all age stages, especially junior stages which require modern teaching techniques from technical and aesthetic aspects of skills.

Adel Abdelbasir (2004) says that gymnastics has great educational benefits ad values that help learners develop their psychological and mental characteristics so they acquire daring, overcoming their fears, taking decisive decisions, self-confidence, perseverance, ability to innovate and achieving satisfaction (Adel Abdelbasir, 2004, 100-101). Therefore, we should consider this activity and teach it in the secondary stage due to correct methods and using modern technological methods that are consistent with the current situation and help us understand technical aspects of skills, sequencing stages of learning and analysis due to explanatory models treated and simplified for learners through finding detailed e-learning programs that facilitate educational process for teachers and learners.

Problem of the Study:

Gymnastics is one of the main sports that prepare students at all aspects being one of the main sport that help individuals develop their physical and psychological characteristics (Abdelmonem Soliman Barham, 1995, 45) and qualify them practice all other

sports by acquiring freedom of movement starting from movement originality till movement innovation, good will development, body control and giving it aesthetic characteristics in performance (Saeb Attia Ahmed & Ibrahim Khalil Mourad, 1985, 112). Mohemd Shehata, 1992 asserts that ground gymnastics include many varied skills that require various physical and psychological characteristics. Therefore, it becomes especially important (Mohamed Ibrahim Shehata, 1992, 72). This makes it necessary for us to consider teaching this sport activity inside our educational institutions depending on using electronic and explanatory educational models including video images and tapes through which performance can be perceived and applied correctly. Mohamed Mahmoud Abdelsalam says that teachers should be able to present a satisfactory model for the skill that is needed to be learnt and manage to explain it completely using certain means of explanation and models (Mohamed Mahmoud Abdelsalam, 2002, 34).

Through reviewing different technical aspects, educational stages and the most significant means of teaching ground movements, it became clear to us that there is a difficulty in explaining and understanding the technical stages of these movements. Next, we attempted to search for a modern method that helps both teachers and learners in learning ground movements in gymnastics due to modern educational and technological means through proposing an electronic guide to teach ground movements in gymnastics at the secondary stage, know the extent of its effect and the latest method for teaching movements due to the proposed electronic guide. Accordingly, the following question was posed:

- What is the best way to learn ground movements in gymnastics using the proposed electronic guide? Partial or mixed methods?

Objective of the Study:

- Determining the latest ways of learning ground movements using the proposed electronic guide, partial, complete or mixed methods.

Hypothesis of the Study:

- Using an electronic guide due to partial method is better than using it due to complete or mixed methods in teaching some ground movements in gymnastics at the secondary stage.

Related Studies:

- A study by Almoatasem Bellah Wahib Mahdi (2012): "The Effect of Hypermedia on learning some Basic Skills on Ground Movement Ring in Artistic Gymnastics" aimed to prepare hypermedia to learn some basic skills on ground movement ring in artistic gymnastics. This study was conducted on a sample of the Institute for Teachers Preparation in Diala governorate (24 students divided between two control and empirical samples). The researcher followed the empirical method. Findings of the study proved that the use of hypermedia, adoption of correct scientific method of learning technologies by presenting movement details has a positive effect on learning some skills at the ring of ground movements in artistic gymnastics.
- A study by Nasima Mahmoud Waly (2006): "The Effect of using Varying Methods of Video Tapes on Learning Serve Receiving and Reception Skills in Volleyball", as the researcher used the empirical method in a sample of 132 female students of the second year, Faculty of Physical Education for Girls – Alexandria. She applied the test of serve directed from above and serve reception test. The sample of the study was divided into three groups:
- First empirical group: 44 female students using slow motion video.
- Second empirical group: 44 female students using normal motion video.
- Third empirical group: 44 female students using fast motion video with cuts and focusing by slow motions. Findings of the study showed that the third group was superior over the other groups at performance level.

1. METHODOLOGY & FIELD PROCEDURES OF THE STUDY:

The researcher used the empirical method. The sample of the study was collected from the first year secondary students at Abu Bakr Belqayed Secondary School at Ber Al Jeer – Wahran for the study year 2014 / 2015 (122 students: 68 males + 54 females) distributed on three divisions selected randomly. The first section was taught using partial method, the second section using mixed method and the third section using complete method.

Basic Study:

Pre-tests were conducted in the period from 04/01/2015 to 08/01/2015 with the aim of discovering the initial level of students' performance.

Study sessions: in the period from 11/01/2015 to 19/02/2015 (05 sessions in which 05 skills were taught): forward round bouncing, standing on shoulders, jumping up with half-round, standing overhead and lateral wheel. Previous skills were taught using the electronic guide and presentation of educational situations using computers and visual display device as each skill was projected based on the learning method for each department through defining it, its technical aspects and educational stages by

depending on sequential educational situations explained by video pictures and clips with normal and slow motions. In evaluating the performance of movements, we depended on evaluating executive and aesthetic aspects due to a strict framework of evaluating ground movements.

Post-tests: these tests were conducted in the period from 22/02/2015 to 26/02/2015 through which the final level of students was evaluated.

Statistical Treatments:

Percentage, arithmetic mean, Standard Deviation S.D, T-Test student and F-Test Fisher

Discussing Findings:

First: Discussion of Pre-tests for the sample of the study:

Table (01): results of contract analysis in pre-tests according to gender:

Gender	Contrast Source	Squares Total	Freedom Degrees	Squares Average	F Value	Significance
MALES	Within groups	2.07	2	1.03	0.22	Insignificant
	Intra-groups	300.36	65	4.62		
	Total contrast	302.7	67	/		
FEMALES	Within groups	0.48	2	0.24	0.08	Insignificant
	Intra-groups	143.82	51	2.82		
	Total contrast	144.3	53	/		

Table (01) showed that 0.22 and 0.08 values are statistically insignificant which means that there are no significant differences among the empirical and control groups in pre-tests and this group is homogeneous at the same levels for males and females.

Second: Discussion of Findings of Pre- and Post-tests on samples of the study

Table (02): results of pre- and post-test analyses for samples of the study with different teaching methods and genders:

Gender	Method	Tests	N	Mean	S.D	T Student	Significance
Males	Partial	Pre-test	22	7.40	1.91	15.78	Significant
		Post-test		15.95	1.21		
	Mixed	Pre-test	23	7.08	2.17	24.11	Significant
		Post-test		14.91	1.64		
	Complete	Pre-test	23	7.00	2.19	25.11	Significant
		Post-test		14.39	1.97		
Females	Partial	Pre-test	18	4.55	1.75	16.58	Significant
		Post-test		14.05	1.86		
	Mixed	Pre-test	18	4.77	1.30	19.13	Significant

		Post-test		13	1.23		
	Complete	Pre-test	18	4.61	1.78	15.98	
		Post-test		12.38	1.20		

Table (02) shows that for males, the values: 15.78, 24.11 and 25.11 are significant at level 0.01 which means that there are significant differences for the sake of post-tests which refers that using the proposed electronic guide had a positive effect on learning the proposed ground movements for males by different learning methods whether in partial, mixed or complete methods. In addition, table (02) also shows that for females, the values: 16.58, 19.13 and 15.98 are significant at level 0.01 which means that there are significant differences for the sake of post-tests which refers that using the proposed electronic guide had a positive effect on learning the proposed ground movements for females by different learning methods whether in partial, mixed or complete methods.

Third: Discussion of Results of Post-tests for the Sample of the Study:

Table (03): results of contrast analysis in post-tests among samples due to gender:

Gender	Contrast Source	Squares Total	Freedom Degrees	Squares Average	F Value	Significance
MALES	Within groups	28.37	2	14.18	5.00	Significant
	Intra-groups	184.33	65	2.83		
	Total contrast	373.14	67	/		
FEMALES	Within groups	25.59	2	12.79	6.87	Significant
	Intra-groups	115.64	51	2.26		
	Total contrast	141.23	53	/		

Table (03) shows that the T counted value was 5.00 for males, 6.87 for females and significant at level 0.01 which refers that there are significant differences among means. Accordingly, the level of learning ground movements in gymnastics differs by the difference of learning methods for males and females. Therefore, using the proposed electronic guide in learning ground movements in gymnastics interacts more with partial method than in complete and mixed methods for both males and females.

2. DISCUSSING FINDINGS:

Findings of the study are discussed due to the hypothesis of the study: "using the electronic guide according to the partial method is better than its use according to complete or mixed methods in learning some ground movements in gymnastics at secondary stage". Results of table (02) showed that there are statistically significant differences between pre and post-tests in the samples of the study for the sake of post-test which shows that the use of the proposed electronic guide has a positive effect on learning ground movements with all of the applied learning methods (partial, complete and mixed methods). Results of table (3) showed that there are statistically significant differences in post-tests in the samples of the study for the sake of partial method which shows that the use of the proposed electronic guide due to the partial method gives better results than using mixed or complete methods for males and females. This agrees with the study by Almoatasem Bellah Wahib Mahdi (2012) that asserted that using the scientific and correct method in learning technology in learning by presenting details of movement has a positive effect on learning some skills of ground movements in artistic gymnastics. This also agrees with the study of Nasima Mahmoud Waly (2006) in that the use of normal motion videos with cuts and focus in slow motion is better than using the other methods.

The researchers think that the appearance of these findings is attributed to the use of computers that are considered a basic educational means that played a great role in presentation, explanation of educational situations and overcoming some difficulties

in the learning process, especially through the presentation of skills in slow motions, pausing videos on parts of skill performance to focus on their explanation, repeating presentations for multiple times according to the needs and explaining detailed points of performance at certain moments. Moustafa Abdelsamea Mohamed (1999) says that electronic learning via computers contributed in multiple ways to develop many aspects of the education process and facilitate many of its tasks. Mosston (1980) tackles teaching methods that showed that educational situations should be provided with means that facilitate information acquisition and learning speed at the same time in addition to distinction among teachers is shown in how they are able to use variable educational means. Therefore, the hypothesis of the study was achieved.

3. CONCLUSIONS:

Based on results of the study, in the light of objectives and hypotheses of the study, the researchers found the following conclusions:

- The proposed electronic guide has a positive effect in learning ground movements in gymnastics at the secondary stage.
- Using the electronic guide due to the partial method gives better results than using it due to complete or mixed methods in teaching some ground movements in gymnastics at the secondary stage.
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4. RECOMMENDATIONS:

- The importance of using the proposed electronic guide in learning some ground movements in gymnastics at the secondary stage.
- Drawing attention of physical and sport education teachers to the use of e-learning.
- Working on designing electronic programs or the rest of sport course activities and for various studying stages.

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