Using of Learning Technology for some Vocabularies of Athletic Approach for Second Class of Faculty of Physical Education

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ABSTRACT

The aim of present study is instruction technology using for some vocabularies of athletic approach for second class of faculty of physical education. 20 students from University of Karbala second class of faculty of physical education were participated in current study and they were divided in 2 groups (experimental and control), each group involved 10 students. Researchers used experimental research design due to it is suitable to the nature of the study aim. Teaching programs were conducted on November 25, 2012 to December 22, 2012, 4 weeks a period of teaching, 2 hours a week, 8 teaching units in total. Experimental group used teaching approach with multiple instruments whereas control group used usual daily approach. Results of study showed a significant improvement in teaching level for long jump stages of experimental group in T test (5.228, 5.582, 3.201, 8.908, and 8.870). No significant improvement in teaching level for long jump stages of control group in T test (2.443, 3.132, 2.540, 2.201, and 2.712). Study concluded that advanced instruction instruments resulted in develop of arms, legs, head, and trunk clearly for stages of long jump in experimental group.

Keywords: Instruction technology, Vocabulary, Athletic, Second class, Multiple instruments.

1. Introduction

Motor learning is one of principle sciences in physical education because of its importance in learning and acquisition of new motor skills, as well as maintains learning process in faculties of physical education that includes teacher, student, and curriculums. Learning is defined officially by(UNESCO/ISCED 1994) that "Learning is any permanent change in behavior, acquaintance, knowledge, comprehension, viewpoints, skills or abilities that cannot be ascribed to physical growth or development of inherited behavioral patterns". Motor learning is a process of developing, receiving, recognizing, acquiring and expanding our horizons.

Questions such as: what are the basic methods of learning, what are the necessary instruments for learning to take place, etc. have been investigated with by many Scientifics in the past years? Learning technology is the extensive range of information, communication and associated technologies that can be used to support assessment, teaching, and learning (www.almdares.net).A very broad range of teachers in private and public sector education have learning technology as anessential part of their knowledge in teaching skills to the students (Ban Mohammad., 2000).

Learning technology in physical education is the study and ethical practice of facilitating skills learning, which is the improving performance by generating, using and managing appropriate technological processes such as computer technology (Richey, 2008). The term of learning technology is regularly related with instructional and learning theory. Learning technology involves other systems used in the process of improving athletic abilities. Learning technology includes hardware, software, in addition to internet applications but there is still discussion on what these terms important to athletics (Mohamad et al., 2009).

Technology in physical education is most basically and comfortably defined as arrange of tools that might prove helpful in advancing student learning. Newer tools such as computer are beginning to draw serious attention for their learning potential in physical education (Ban Mohammad., 2000). In a study to investigate the effect of computer programs using to enhance learning in physical education, the results showed a gap in conception the appropriate uses of computer in a learning skills (Haider, 2012).Similar to learning a new task, special learning by using computer technology is vital to improving the athletic skills. The current physical education curriculum tends to guide teachers in training students to be independent problem solvers (Aumer, 2009).

The study by Ahmad (2009) notes that the use of computer programs are adequate enough in order to promote the much-needed skills required to teach and apply technology in the physical education. Similar to having a computer in the classroom is an asset to any teacher. With a computer in the classroom, teachers are able to show a new skill, present new material (Lawrence, 2002). Even though numerous studies related to computer using in physical education no study has investigated on using of learning technology for some vocabularies of athletic approach for second class of faculty of physical education in Iraq.

2. Methodology

Researchers used experimental research design due to it is suitable to the nature of the study aim.

2.1 Participates

20 students from University of Karbala second class of faculty of physical education were participated in current study and they were divided in 2 groups (experimental and control), each group involved 10 students.

2.2 Steps of learning program preparation

1- Determine of main lines of program:

Researchers prepared main lines of learning program and designed filmed strategies and program paragraphs as well as readable texts when commenting on the skills as following.

- Determine general form for program and doing lines on paper.
- Determine important points for each skill.
- Writing teaching texts that are appeared on program.
- Select a suitable person who will perform the skill.
- Select text reader.
- Choose figures which are background for program pages.

2- Specimen filmed

Long jump specimen was chosen to perform filmed process. Researchers were achieved the filming at University of Baghdad\ closed hall of faculty of physical education on September 6, 2012 and September 18-19, 2012.

3- Photographic and video filming

3 cameras were placed in different directions.
- left side of player movement far away 6.50 m through last steps and jump up.
- Wright side of player movement far away 6.50 m through last steps and jump up.
- In front of player far away 15 m.

4- Comments recording

Comments of learning programs were recorded by using recorder. Recording process included some of fixes through repeat-recorder some of paragraphs. Then sound was converted in to easy files we can deal with in main program.

5- Texts print stage

Skills texts were printed and then placed within learning program.

6- Movies treatment

By using Media Studio Pro Ver.8 and Xilinx soft AVIMPEG Converter programs, researchers achieved movies treatment and the purpose of this treatment is:
- Montage processes and delete some of undesired pictures.
- Merge movies that were filmed by 3 cameras.
- Convert movies into following types:
PAL (25 fps).
MPEG files
24 bite, 325×88,25 fps. Frame-based.
(Video data rate; 1150 kbps).

(Video CD –PAL)4;3.
Audio data rate : 224 kbps.
MPEG audio layer 2, 44. 1 KH , stereo.

7- Program design stage

Multimedia Builder 4.9.8 was used to design and prepare learning programs because it is the best show programs and distinguishes small size and can deal with it easily figure (1). Learning programs were designed with multi shows window to transferee from page to page easily and then reach to show window required.

Figure 1. Main show window

Figure 2. Show Main Page

8- Main page

There are number of keys at main page such as when press Athletics key as shown in figure (2) will enter to long jump page and hear word of welcome to long jump learning program but when press long jump key will appear skills page as shown in figure (3).
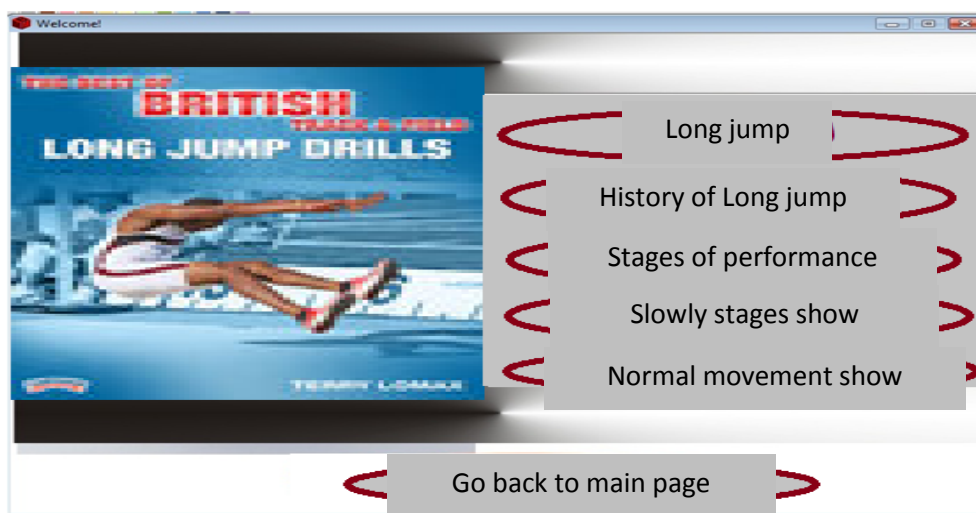

Figure 3. Show long jump page

In this page shows six keys as following

- History of Long jump.

- Stages of performance.

- Slowly stages show.

- Normal movement show.

- Go back to main page.

Presses any of these keys results in appear of require tasks.

2.3 Tests and pre filming

Researchers were showed two learning units before starting of pre-tests.

2.4 Main experiment

Teaching programs were conducted on November 25, 2012 to December 22, 2012, 4 weeks a period of teaching, 2 hours a week, 8 teaching units in total. First experimental group used teaching approach with multiple instruments whereas second group used usual daily approach.

2.5 Post-tests

Post-tests conducted on December 26, 2012.

2.6 Retention and learning level measurement

After achieve of post-tests. Researchers conducted retention test on January 7, 2012 with a time period of 12 days between them and they used following equation.

$$\text{Lost percentage} = - \frac{\text{Amount of lost} \times 100}{\text{Amount of development}}$$

2.7 Statistical Analysis

SPSS was used to analysis results of present study.

3. Results and Discussion

Significant developments were showed in variables of present study at the freedom degree 9 and P (0.05) between pre and post-tests for experimental group as shown in table (1), where T value for arms, legs, torso, head and full movement were 5.228, 5.582, 3.201, 8.908, and 8.870 respectively.

Table (1)
Showed pre and post-tests for experimental group

Variables	Measure unit	Mean	SD	T value	Error level	Significant
arms	Degree	3.267	0.624	5.228	0.023	S
legs	Degree	3.500	0.627	5.582	0.000	S
torso	Degree	4.233	1.322	3.201	0.015	S
head	Degree	2.517	0.282	8.908	0.000	S
full movement	Degree	4.250	0.479	8.870	0.040	S

Freedom degree (9).Significant at error level ≤ (0.05).

No significant developments were showed in variables of present study at the freedom degree 9 and P (0.05) between pre and post-tests for control group as shown in table (2) but significant different was appeared in legs movements, where T value for arms, legs, torso, head and full movement were2.443, 3.132, 2.540, 2.201, and 2.712respectively.

Table (2)
Showed pre and post-tests for control group

Variables	Measure unit	Mean	SD	T value	Error level	Significant
arms	Degree	0.543	0.222	2.443	0.053	No S
legs	Degree	0.994	0.317	3.132	0.024	S
torso	Degree	0.527	0.207	2.540	0.055	No S
head	Degree	0.886	0.402	2.201	0.065	No S
full movement	Degree	2.554	0.941	2.712	0.081	No S

Freedom degree (9).Significant at error level ≤ (0.05).

Significant differences were showed in long jump performance because of advanced learning instruments which participated on development of arms, legs, torso, and head movements in which teaching process responsible confirms that correct performance of these movements result in developing final degree of performance. Teachers expend their time in confirmation the correct joining among movements of these parts in good way and then result in developing of performance degree in post-tests. Important positive reflects can be achieved by using the technical performance repeat during practical lessons as well as using learning instruments such as computer leads to make learning process more easy for students will watch the skills accurately, in addition to slowly show which give a chance to identify parts of movement.

Exercise repeats are one of the most important instruments on improving learners gradually furthermore automatic of skill performance connects to accuracy and mastery of skill (Safwat, 1985). Student with high levels makes fast decisions without going back to thinking and the movement will be streamline as well as student in this level decreases speaking with himself and increase confidence and improve learner ability to correct his errors (Ban., 2000). Results of present study agreement with each Ahmad (1976) and Safwat and Yousef (1985) studies, they confirmed the important of feedback with watching performance figure in arising skill level, moreover the role of vision devices as an updated instrument to increase skill performance level in some of sports. In similar results of other studies investigated the important of video as up to date teaching method to improve skill performance level in some of sports (Seham, 1980; Madiha., 1988).

Long jump activity depends generally on skill evaluation degree, so methods of multimedia that were used by researchers to experiment group resulted in achieving many advantages in the supply of the feedback required and appropriate with what is required to achieve the demanded motivation to practice the skill required and repeat and correct it. However, experiment group was better than control group in learning performance level especially body parts movements which participate in performance. Istilah (1990) showed that learning instruments give more freedom and less time to the learners to achieve the tasks and then increase number of attempts and supply feedback. Significant developments were showed in variables of present study at the freedom degree 18 and P (0.05) between post-tests for experimental and control groups and in favor of experiment group as shown in table (3), where T value for arms, legs, torso, head and full movement were 3.669, 10.332, 6.114, 8.579, and 4.086 respectively.

Table (3)
Showed post-tests for experimental and control groups

Variables	Measure unit	Experiment group		Control group		T value	Error level	Significant
		Mean	SD	Mean	SD			
arms	Degree	4.767	0.699	3.303	1.053	3.669	0.022	S
legs	Degree	7.575	0.275	3.163	1.728	10.332	0.016	S
torso	Degree	7.133	1.470	3.385	1.267	6.114	0.000	S
head	Degree	6.89	0.688	2.553	1.444	8.579	0.000	S
full movement	Degree	8.19	1.014	3.758	1.151	4.086	0.028	S

Freedom degree (18). Significant at error level ≤ (0.05).

Developments were occurred in experimental group due to intensity of motivations of students through learning which resulted in high mastery of skill performance. Al Talib and Al Wears (1993) confirmed that achievement level is proportional directly to the degree of motivation. Researchers see that multimedia has been used on learning of long jump skill of experimental group resulted in integration and linked movements of body parts that participate in performance of skill. Hypermedia can be used as entrance to the learning system, it is depended on teacher ability to understand and display the instruments which want to use them and working to achieve integration between them and control in time of displaying, then doing interactive between them and learner in teaching environment.

Zainal (2000) referred that hypermedia using, stable picture and other technical instruments are one of the more advanced methods because of they are mixed many forms of teaching medias which help students to use their senses on learning. Numerous studies have not investigated on importance of using these technical in teach serving, results of present study showed that hypermedia using leads to improve long jump skill, so researchers recommended using such as those instruments in learning of sport games. Table (4) shows means of pre and post and retraining tests of long jump skill performance for experimental group where the amount of lost percentage was 16.235%, this means there was development in studied skill.

Table (4)
Shows means of pre and post and retraining tests for experimental group

Skill	Experimental group			Partial retrain	Lost percentage
	Pre mean	Post mean	Mean of free retrain		
Long jump	3.94	8.19	7.5	0.69	%16.235

Table (5) shows means of pre and post and retraining tests of long jump skill performance for control group where the amount of lost percentage was 120.25%, this means there was improvement in studied skill.

Table (5)
Shows means of pre and post and retraining tests for control group

Skill	Experimental group			Partial retrain	Lost percentage
	Pre mean	Post mean	Mean of free retrain		
Long jump	2.76	3.303	2.65	0.653	%120.25

4. Conclusion

Study concluded that advanced instruction instruments resulted in develop of arms, legs, head, and torso clearly for stages of long jump in experimental group. Moreover, learning program leaded to motor performance integration of total required skill which resulted in development final degree of performance in experimental group. No significant improvement was showed in motor performance level of control group.

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