

The Effectiveness of Using Concept Mapping via Power Point Presentations on Developing Cognitive Achievement and Skill Performance of Crawl Swimming on the Belly.

Al-Sayed Abdul Aziz Essa

Department of Curriculum and Instruction, Faculty of Physical Education - Al-Azhar University, Egypt.

Basem Saed Abdel Azim

Department of Curriculum and Instruction, Faculty of Physical Education - Al-Azhar University, Egypt.

Introduction:

Contemporary democratic societies evolve significantly in order to keep up with the rapidly growing rhythm of the time. This is due to the flow of knowledge and enormous technological leap that has facilitated the opening up to the world; so that it would be possible to follow the latest developments, particularly after the fall of barriers and borders among countries. This has been reflected in these societies' education systems; as they have changed their methods and techniques of presenting as well as acquiring knowledge, to ensure access to the learner proficiency and high efficiency in performance in various educational fields.

Thus, there have been almost radical changes in the respective roles of teacher and learner; where it has become imperative for the teacher to employ educational technology for improving the learning process, as well as developing his/her ability to assess the educational situations using the means available to enable him/her to acquire the necessary expertise, which qualifies him/her to live with the requirements of the modern age. This means that the teacher should be familiar with all the particles of the educational process so that he/she could deliver them to each learner. However, teachers often face problems, particularly the individual differences among learners. Hence, the existence of teaching aids becomes a necessity to facilitate the learning process, and to allow greater opportunities for the teacher to complete the teaching process in the right way that includes all aspects of the educational process. (4:40)

Physical Education is one area of applied education that has passed through many phases of scientific research for the development of the educational process. This has taken the form of analysis, synthesis, connectivity and how to retrieve performance from the memory, in addition to the evaluation techniques. This led the workers in the field to keep pace with global progress in terms of methods of presentation of knowledge through innovation of new methods and techniques among which is Concept Mapping.

Therefore, the researchers sought to use Concept Mapping (CM) to take advantage of the growing role of technology in the teaching process in physical education; especially the potential multiple uses of Computer to enrich the learning environment. This is to take place through the provision of CM by means of Power point presentations as an educational technique that would increase the effectiveness of handling and processing information.

CM is a new educational technique consistent with the requirements of modern education, where the educational process is learner centered, and that learner is the main responsible of his/her learning. CM is an effective tool in the representation of knowledge and building upon. Its importance lies in that it reinforces the learner to have a systematic approach in thinking consistent with the nature of scientific thinking. (7: 100)

The psychological origins of CM are based on Ausubel's theory of meaningful learning. This is due to the fact that CM is viewed as a tool to arrange the scientific concepts that relate to a certain subject, and to organize them as diagrams linking concepts together by lines or arrows with lyrics called 'linking words' to clarify the relationships between the various concepts. CM, thus, provides the opportunity to link concepts related to a certain subject in the form of coherent and contiguous structure (13: 297).

Novak (1990) points out that CA is a method for thinking construction. It helps learners look for related concepts in their cognitive structure in order to connect them to the new concepts. This would take place by means of helping them select the suitable linking words, and recognize that main concepts can be involved in the hierarchical structure of the map (26:42).

Moreover, Gaber Abdel-Hamid (1999) argues that CA helps the teacher teach scientific material; as it makes the organizational chart for the lesson clearer and the process of teaching effective by pursuing ideas and sequencing in teaching. (6: 326)

In light of the above, it is evident that CA is of great importance in improving the educational process, it is a good instructional tool used by teachers in planning their

lessons. In addition, it helps them teaching their students how to learn, to select new information and appropriate examples, and how to link between the new skills and concepts with the previous learned similar ones so that learning becomes meaningful.

Swimming is an interesting individual water sports that has variety of kinds and multiple ways. Each of which includes a range of motor skills that help practitioners have integrated the growth within it. It is also on of the subject matters at the Faculty of Physical Education, Al-Azhar University. Given its many and varied skills that must be learnt according to learners' speed in learning, educators have to devote their attention toward teaching these skills as well as organizing curricula containing them to identify key sub-concepts to make the educational process more positive.

Out of the experiences of researchers as teachers, they found that a lot of learners do not perform the basic skills of Crawl Swimming on the Belly in the right way during the learning process, despite the availability of the necessary tools. This may be due to the following factors:

- Employing the traditional method of teaching that depends explaining the skill by the teacher verbally and modeling it without real participation of students, which does not consider individual differences among them.
- Lack of attention to correct the errors that may occur during learning the skills and how to correct them.
- The inability to achieve instructional objectives required; due to limitations of time devoted to teaching, in addition to the negative attitude of students as being negative recipients.

This has led the researcher to attempt to create an appropriate educational environment in addition to benefiting of applications of computer technology in teaching. Despite attempts made by some researchers to use modern techniques in teaching some sports skills, none of them did tackle the CM via power point presentations as a learning technique for the skills of Crawl Swimming on the Belly, which reveals the need to the present study to identify the effectiveness of using CM via Power point presentations on learning Crawl Swimming on the Belly for the students of the Faculty of Physical Education, Al-Azhar University.

Aims of the study

The present study aims to achieve the following aims:

1. To identify the effectiveness of using CM via Power point presentations on developing the

cognitive achievement of Crawl Swimming on the Belly for the students of the Faculty of Physical Education, Al-Azhar University.

2. To identify the effectiveness of using CM via Power point presentations on developing the skill performance of Crawl Swimming on the Belly for the students of the Faculty of Physical Education, Al-Azhar University.

Hypotheses of the study

1. There are statistically significant differences between the average grades of the pre and post measurements for the control group in the cognitive achievement and skill performance of Crawl Swimming on the Belly in favor of the post measurement.
2. There are statistically significant differences between the average grades of the pre and post measurements for the experimental group in the cognitive achievement and skill performance of Crawl Swimming on the Belly in favor of the post measurement.
3. There are statistically significant differences of the average grades of the post measurement between the experimental group and the control group in the cognitive achievement and skill performance of Crawl Swimming on the Belly in favor of the experimental group.

Previous Studies

There have been several studies conducted on the use of CM in physical education, including:

1. Lamia Mahrous (2005) (18) aimed to identify the effect of using cognitive maps on the development of performance skills and cognitive achievement for some skills in basketball. The study was conducted on a sample of (50) 2nd year female students at the Faculty of Physical Education in Tanta. The researcher employed the experimental design with two groups; one experimental and the other control. Results showed that the use of cognitive maps had a more positive impact on both performance skills and cognitive skills of basketball than the traditional method.
2. Mustafa Nasreddin (2008) (22), tried to identify the effect of using CM via computerized power point presentations on learning some Handball skills in a lesson of physical education for preparatory school students. The researcher employed the experimental design with two

groups; one experimental and the other control on a sample of (24) 2nd year students in Port Fouad prep school. One of the most important results of the study was that the use of computerized power point presentations has led to an evident improvement in the performance of the handball skill tests.

3. Ahmed Mowafy (2009) (2) attempted to develop an instructional program using CM for an elective course of teaching methods of intramural sports, and to identify the effect of the program on the skill and cognitive performances. A total number of (45) 3rd year female students at the Faculty of Physical Education, Mansoura University were deliberately selected as the sample of the study. The researcher employed the experimental design with two groups; one experimental and the other control. The results showed that CM had contributed positively to the cognitive, skill and emotional learning outcomes. In addition, CM was more effective in achieving higher results than the traditional method.
4. Mohammed Salem (2010) (21), tried to identify the effect of using CM on learning outcomes in athletics through the construction of CM specific for athletics events curriculum. The experimental design with two groups; one experimental and the other control was employed on a sample of (60) 3rd year students at the Division of Education, Faculty of Physical Education, Helwan University. It was found that using CM in teaching athletics events curriculum had a positive effect on cognitive and skill aspects of achievement.
5. Imad Abu Shabana (2010) (15) sought to identify the effect of using computer-assisted-CM strategy on some motor skills and cognitive achievement in a lesson of Physical Education. The experimental design with two groups; one experimental and the other control was employed on a sample of (60) 6th year pupils at Al-Gamel middle school, Hawally educational district, Kuwait. Results revealed that there was a more positive effect of using CM strategy on cognitive achievement as well as performing some volleyball motor than the traditional method.
6. Magda Fathi (2011) (19) aimed to identify the effect of using CM on learning basic skills of

field hockey. The study employed the experimental approach using experimental design with pre and post measurements on three groups; two experimental groups and one control group. The sample of the study consisted of (45) 1st and 2nd female students at the Faculty of Physical Education, Menoufia University. Results showed the more positive effect of programmed and paper CM in learning motor skills and cognitive achievement than the traditional method.

7. Ibrahim Shalaby (2011) (1) aimed to identify the effect of using constructivist model and CM on learning some Ground Tennis skills. A total number of (36) 3rd year students at Department of Physical Education, Al-Azhar University constituted the sample of the study. The experimental approach using experimental design with three groups; two experimental groups and one control group was employed in the study. Results revealed that CM had a more positive effect than the traditional method on learning some Ground Tennis skills.

Having presented previous related studies and research, it is evident that they were helpful to the present study in terms of; formulating the problem, developing the aims, and determining the sample and the appropriate statistical treatments necessary for validating the hypotheses.

Procedures for the study

Methodology of the study

The study employed the experimental approach using experimental design with pre and post measurements on two groups; one experimental and the other control group, as being the appropriate approach to the nature and limitations of the study.

Population and sampling of the study

A total number of (618) junior (1st year) students, at the Faculty of Physical Education, Al-Azhar University studying at Second Semester for the academic year 2012/2013, represented the population of the present study. From which (70) students were randomly selected and divided into three groups; one experimental group and one control group (each of which consisted of students), in addition to a (20) students' group for the pilot study. Moreover, the researchers controlled some of the variables that may affect the results of the study. Table (1) shows the equivalence between the two groups of the study in terms of some of the variables selected:

Table (1)
Significance of differences between the two groups of the study (the control and experimental)
for the variables of growth and selected physical variables

Serial	Variables studied	Measureme nt unit	Control group		Experimental group		T value
			Mean	Standard Deviation	Mean	Mean	
1	Age	Year	18,42	0,34	18,31	0,47	0,92
2	Length	Cm	174,12	3,21	173,74	2,77	0,44
3	Weight	Kg	72,31	2,42	73,01	2,13	1,06
4	Intelligence	Grade	47,36	6,21	46,97	5,78	0,23
5	Muscular strength of legs	Cm	194,41	7,45	195,19	7,15	0,37
6	Muscular strength of arms	Number	6,14	2,04	6,43	2,62	0,63
7	Speed	Second	3,45	1,17	3,42	1,31	0,08
8	Agility	Second	7,82	1,34	7,28	1,43	1,35
9	The flexibility of trunk	Cm	11,98	5,56	12,43	5,16	0,28
10	Flexibility of the heels	Cm	15,61	2,84	15,13	2,73	0,6
11	Total compatibility	Number	13,73	2,76	14,11	2,88	0,47
12	Circulatory Respiratory Endurance	Second	18,14	3,7	17,76	3,5	0,37

The value of Tabulated "T" at the level (0.05), S.D 48 = 2.01

Table (1) shows that there is no statistically significant difference at the level (0.05) between the control and experimental groups in the variables of growth, intelligence and physical variables in question, which refers to the equivalence of the two groups in these variables.

Table (2)
Significance of differences between the two groups in cognitive achievement and skill
performance of Crawl Swimming on the Belly

Variables studied		Control group		Experimental group		T value
		Mean	Standard Deviation	Mean	Standard Deviation	
skill performance	Movements of arms	7,22	0,64	7,38	0,76	0,8
	Strikes of legs	4,43	0,54	4,52	0,41	0,64
	Breathing	7,66	0,81	7,78	0,63	0,57
	Total compatibility	4,79	0,68	4,93	0,80	0,67
	Overall total	24,1	1,17	24,61	1,31	1,42
cognitive achievement		17,19	2,9	17,64	3,14	0,52

The value of Tabulated "T" at the level (0.05), S.D 48 = 2.01

Table (2) shows that there is no statistically significant difference at the level (0.05) between the control and experimental groups in cognitive achievement and skill performance of Crawl Swimming on the Belly, which refers to the equivalence of the two groups prior to the application of the main treatment.

Tools and instruments of data collection

1. The growth rates:

- Chronological age: by reference to the date of birth (to the nearest year).

- Length: measured by a Restameter (unit of measurement is centimeter).
- Weight: measured by a medical scale (unit of measurement is kilogram).

2. Physical tests and IQ test:

The researchers selected a set of physical tests and IQ test based on a number of scientific applied studies in the area of curriculum and instruction and water sports that have previously utilized the same tests. The scientific quotients were calculated on similar samples with the same chronological age of the sample of the present study. In

addition, Ahmed Zaki Saleh's (1976) test was utilized to estimate the level of intelligence. The physical variables as well as the tests measuring them were determined as follows:

- Muscular strength of legs: Standing Broad Jump test (cm)
- Muscular strength of arms: Hand stand pushup (number)
- Speed: running for 20 m (s).
- Agility: shuttling running 3x 9 m (s).
- Flexibility of the trunk: Trunk twist forward to the bottom from standing position (cm)
- Flexibility of back joints: The extent of sole of the foot flexion (cm)
- Total compatibility: (Skipping) Jump rope (number)
- Circulatory Respiratory Endurance: Harvard Step-Test (number)

3. Assessing the level of skill performance

The researchers developed a questionnaire to assess the level of skill performance for Crawl Swimming on the Belly. It was presented to a set of experts and specialists in curriculum and instruction and water sports specialists (see appendix 1) and included the technical points that must be observed when the learner performs the basic elements of Crawl Swimming on the Belly for ms. The questionnaire was applied by a committee of three staff members at the Faculty of Physical Education (see appendix 2).

4. Assessing the level of cognitive achievement

In light of reviewing many previous studies related to the field of water-sports that utilized cognitive tests to measure the cognitive achievement of Crawl Swimming on the Belly, the researchers adopted a cognitive test prepared by Saad Abdel Gelel (2006) (10) as being appropriate to the aims of the present study (see appendix 3). The test involved the history of Crawl Swimming on the Belly, in addition to some relevant legal aspects and the skill content.

5. Tools and devices utilized:

- A Restameter to measure length to the nearest cm.
- Off hour to the nearest (0.01) of a second.
- Medical scale to measure weight to the nearest kg.
- Computer discs.

- Meter tape measure to the nearest cm. - Computers.
- swimming educational tools.

The pilot study

The researcher conducted the pilot study on a sample of (20) students from the same population, however not being included in the main sample for the following reasons:

1. To validate the appropriateness of devices and tools utilized in the study
2. To organize and coordinate the procedures as well as to identify how to implement the instructional program
3. To ensure the validity and reliability of the tests used.

Scientific Transactions for the assessment of the level of skill performance:

a. Validity of the questionnaire

The researchers used external validity, where the questionnaire was presented to a group of specialists and experts in the field of water sports, and has been approved after implementing all the amendments referred by them in terms of the axes and phrases of the questionnaire, which gave the researchers confidence to the validity of the questionnaire as being developed to measure what was intended to.

b. Reliability of the questionnaire

Reliability of the questionnaire was calculated through its application and re-application with an interval of 10 days between the two applications on a sample of the pilot study. The values ranged between (0.859, 0.962), which indicates a high degree of reliability.

Scientific Transactions for the achievement test

a. Validity of the test

The researchers settled for external validity of the cognitive test after presenting it to a set of professional specialists for an opinion. Later the adjustments were completed in the light of the opinions and observations.

b. Reliability of the test

Reliability of the achievement test was calculated through midterm retail by using Guttman's equation (Ramziaa Al-Ghareb, 1990) (9). The value was (0.82), which shows that the cognitive test is on a high degree of reliability.

CM via Power point presentations

CM via Power point presentations needs well coordination and preparation to get to the expected objectives. Thus the researchers reviewed many studies that dealt with the preparation of CM in different sports, including the studies of Lamia Fawzi (2005) (18), Mustafa Nasreddin (2008) (22), Mohammad Salem (2010) (21), Magda Fathi (2011) (19) and Ibrahim Shalaby (2011) (1).

The researchers also reviewed many scientific literature specialized in water sports, including Osama Salary (1998) (5), Aly Al-Beck (1992) (14), Wafiq Salem (2000) (24) and Adel Fawzi (1996) (11), in addition to analyzing units of Crawl Swimming on the Belly according to the curriculum scheduled for 1st year students at the Faculty of Physical Education, Al-Azhar University in terms of the technical aspects, the manner of performance, the used part of the body in the performance of the skill , the steps of education and some articles of the law and common mistakes. The purpose behind this was to access to the most appropriate method for the designing and preparing the software according to multimedia system through PowerPoint program environment for each educational unit separately , provided that the student control of the track and relay under the supervision of researchers, so that at the end of learning students would achieve educational goals expected by learning through the new method (see appendix 4).

Time plan for the implementation of the main experiment

The researchers developed CM via Power point presentations, which included (10) instructional units that have been implemented in 10 weeks, a period specified for

Presentation and discussion of the results:

First: Presentation of the results

Table (3)

Significance of differences between the pre and post measurements for the control group in cognitive achievement for crawl swimming on the belly n =

variable	Pre-measurement		Post- measurement		Value of t
	Mean	Standard Deviation	Mean	Standard Deviation	
Cognitive achievement	17,19	2.9	22,39	2,47	6,69

The value of Tabulated "T" at the level (0.05), S.D 24 = 1,71

Table (3) shows that there are statistically significant differences at the level (0.05) between the pre and post measurements for the control group in cognitive

teaching crawl swimming on the belly of the 1st year students at the Faculty of Physical Education, Al-Azhar University, by one unit per week, and the time allocated for each unit was (60 minutes) with total (600 minutes) as (10) hours per group, where CM via PowerPoint presentations has been used with the experimental group , while the traditional method was used with the control group.

Pre-measurements

The researchers conducted pre-measurements for the two groups (control and experimental) and found equivalence between them on Wednesday and Thursday, 6, 07/03/2013 AD.

Implementation of main experiment

The researchers used CM via Power point presentations with the experimental group and the traditional method with the control group, in the period from Sunday, 03.10.2013 till Sunday 12/05/2013 AD.

Post-measurements

Post-measurements were administrated to the experimental and control groups in the variables of the study, on Tuesday and Wednesday, 14,15.5.2013 AD.

Statistical treatments:

The researchers used the statistical package (SPSS) for data statistical processing, utilizing the following statistical methods (arithmetic mean, standard deviation, simple correlation coefficient of Pearson, "T" test), they have embraced the level of statistical significance level (0.05).

achievement of Crawl Swimming on the Belly, in favor of the post measurement.

Table (4)

Significance of differences between the pre and post measurements for the control group in skill performance for crawl swimming on the belly

Axes of skill performance	Pre-measurement		Post- measurement		Value of t
	Mean	Standard Deviation	Mean	Standard Deviation	
Movements of arms	7,22	0,64	10,31	1,07	12,14
Strikes of legs	4,43	0,54	6,12	0,79	8,65
Breathing	7,66	0,81	9,04	0,97	5,35
Total compatibility	4,79	0,68	6,11	0,82	6,07
Overall total	24,1	1,17	31,58	1,89	16,48

The value of Tabulated "T" at the level (0.05), S.D 24 = 1,71.

Table (4) shows that there are statistically significant differences at the level (0.05) between the pre and post measurements for the control group in skill performance of Crawl Swimming on the Belly, in favor of the post measurement.

Table (5)

Significance of differences between the pre and post measurements for the experimental group in cognitive achievement for crawl swimming on the belly n =

variable	Pre-measurement		Post- measurement		Value of t
	Mean	Standard Deviation	Mean	Standard Deviation	
Cognitive achievement	17,64	3,14	30,14	2,96	14,39

The value of Tabulated "T" at the level (0.05), S.D 24 = 1,71

Table (5) shows that there are statistically significant differences at the level (0.05) between the pre and post measurements for the experimental group in cognitive achievement of Crawl Swimming on the Belly, in favor of the post measurement.

Table (6)

Significance of differences between the pre and post measurements for the experimental group in skill performance for crawl swimming on the belly

Axes of skill performance	Pre-measurement		Post- measurement		Value of t
	Mean	Standard Deviation	Mean	Standard Deviation	
Movements of arms	7,38	0,76	12,41	1,41	15,38
Strikes of legs	4,52	0,41	7,52	0,87	15,28
Breathing	7,78	0,63	10,34	0,84	11,96
Total compatibility	4,93	0,8	7,27	0,92	9,4
Overall total	24,61	1,31	37,54	1,67	29,84

The value of Tabulated "T" at the level (0.05), S.D 24 = 1,71

Table (6) shows that there are statistically significant differences at the level (0.05) between the pre and post measurements for the experimental group in skill performance of Crawl Swimming on the Belly, in favor of the post measurement.

Table (7)
Significance of differences of the post measurements between the experimental group
and the control group in cognitive achievement for crawl swimming on the belly n = 50

variable	control group		experimental group		Value of t
	Mean	Standard Deviation	Mean	Standard Deviation	
Cognitive achievement	22,39	2,47	30,14	2,56	10,67

The value of Tabulated "T" at the level (0.05), S.D 48 = 2,01

Table (7) shows that there are statistically significant differences at the level (0.05) of the post measurements between the experimental group and the control group in cognitive achievement for crawl swimming on the belly, in favor of the experimental group.

Table (8)
Significance of differences of the post measurements between the experimental group and the control group in skill
performance for crawl swimming on the belly N= 50

Axes of skill performance	control group		experimental group		Value of t
	Mean	Standard Deviation	Mean	Standard Deviation	
Movements of arms	7,38	0,76	12,41	1,41	15,38
Strikes of legs	4,52	0,41	7,52	0,87	15,28
Breathing	7,78	0,63	10,34	0,84	11,96
Total compatibility	4,93	0,8	7,27	0,92	9,4
Overall total	24,61	1,31	37,54	1,67	29,84

The value of Tabulated "T" at the level (0.05), S.D 48 = 2,01

Table (8) shows that there are statistically significant differences at the level (0.05) of the post measurements between the experimental group and the control group in skill performance for crawl swimming on the belly, in favor of the experimental group.

Second, discussion of the results

In light of the research hypotheses and results reached by the study, the researchers discussed them and interpreted as follows:

Table (3) shows that there are statistically significant differences between the pre and post measurements for the control group in cognitive achievement of Crawl Swimming on the Belly, in favor of the post measurement.

The researchers refer these differences to feasibility of the traditional way (verbal explanations and the performance of the practical model) that can not be overlooked, and that offer more new and diverse information on the history of swimming and international law, the technical aspects and stages of performance, in addition to the use of the textbook that provided illustrations, which contributed significantly in learning, especially as it existed with the students to learn through when they wanted to.

Table (4) shows that there are statistically significant differences between the pre and post measurements for the control group in skill performance of Crawl Swimming on the Belly, in favor of the post measurement.

The researchers refer these differences to the traditional way (verbal explanations and the performance of the model) that offer direct contact between the teacher and the learner, which showed positive progress when comparing the scores of the pre and post measurement. the method is based on the teacher as the central pivot through the verbal introduction for the skill and displaying the model and the gradient in teaching the skill with providing feedback and continuous assessment, in addition to the habituation of students to work in this way in learning motor skills other. All this contributed to the formation of an extent of knowledge of learnt skill and to improvement in the skill performance of the crawl swimming on the belly of the control group students.

Thus the first hypothesis has been confirm, which states: "There are statistically significant differences between the average grades of the pre and post measurements for the control group in cognitive achievement and skill

performance of the crawl swimming on the belly, in favor of post measurement.

Table (5) shows that there are statistically significant differences between the pre and post measurements for the experimental group in cognitive achievement of Crawl Swimming on the Belly, in favor of the post measurement.

The researchers refer these differences to using CM via Power point presentations in learning, as a method which works on creating an active and interesting environment to learn, that leads the learner to master what he learns, which increases the effectiveness of learning and motivation to learn cognitive and theoretical concepts as well as information related to crawl swimming on the Belly. This has resulted in the presence of significant differences in post measurement. In this regard Maha Abdel-Salam (1994) (23) indicates that CM helps learners to remember the subject content and their understanding of the organization of the subject in a meaningful way.

This result is consistent with the findings of the results of some studies and research that dealt with the effectiveness of the use of CM on cognitive achievement, including the studies of: Khaled Abdel Ghaffar and a Doaa Mohiuddin (2005) (8) , Lamia Fawzi (2005) (18) , Ahmed Mowafy (2009) (2), Mohamed Salem (2010) (21) and Magda Fathi (2011) (19).

Table (6) shows that there are statistically significant differences between the pre and post measurements for the experimental group in skill performance of Crawl Swimming on the Belly, in favor of the post measurement.

The researchers refer these differences to using CM via Power point presentations in learning, where it enhances the learning process in terms of the presence of several stimuli during the educational activity, in addition to the thrill attractions provided by Computer in the transfer of skills and related concepts in a good manner for students without getting bored or tired. This has helped the students' understanding of the right performance of the skill to crawl swimming on the belly.

This result is consistent with the findings of the results of some studies and research that dealt with the effectiveness of the use of CM on skill performance for different sports, including the studies of Khaled Abdel Ghaffar and a Doaa Mohiuddin (2005) (8), Lamia Fawzi (2005) (18), Mustafa Nasr Eddin (2008) (22) , Ahmed Mowafy (2009) (2) and Ibrahim Shalaby (2011) (1) .

Thus the second hypothesis has been confirm, which states: "There are significant differences between the average grades of the pre and post measurements for the experimental group in cognitive achievement and skill

performance of the crawl swimming on the belly, in favor of post measurement.

Table (7) shows that there are statistically significant differences of the post measurements between the experimental group and the control group in cognitive achievement for crawl swimming on the belly, in favor of the experimental group.

The researchers refer these differences to using CM via Power point presentations in learning - that were used with the experimental group - as it clarify and highlight the concepts and ideas to be learned, as well as the information and concepts necessary for skill , in addition to making the student controls the presentation of this information in accordance with the speed of absorbing it . Thus students get enough time to understand and grasp this information in an interesting way away from boredom or fatigue, and thus increase the collection of knowledge. While the traditional method of using verbal explanations and the performance of the practical model - which was used with the control group students - consider them as merely recipients of information, so that their role in the educational process is negative, this reduces the motivation to learn.

In this respect, Kamal Zaiton (2002) (17) emphasizes that the old view of learning (the traditional way) considers the learner as just a recipient for information, whereas the modern learning considers the learner as a living reactant organism, and that its purpose is the growth and maturity of the child and not to save the information, but to build the learner's knowledge in accordance with his processing style. It considers him the constructor of knowledge not negative recipient.

This result is consistent with the findings of the results of some studies and research that dealt with the effectiveness of the use of CM on cognitive achievement for different sports, including the studies of Lamia Fawzi (2005) (18) , Mohammad Salim (2010) (21) , Imad Shabana (2010) (15) and Magda Fathi (2011) (19).

Table (8) shows that there are statistically significant differences of the post measurements between the experimental group and the control group in skill performance for crawl swimming on the belly, in favor of the experimental group.

The researchers refer these differences to using computerized CM via Power point presentations in learning, which gave the student a chance for correct perception of learnt motor skill and clarified particular skills that can be performed quickly. It also made available to the students a great opportunity to comprehend the sequential stages in the performance of skill seen through

the clear and sufficient time during the presentation of the skill. This is confirmed by Abdul Hameed Sharaf's study (2000) (12) which concluded that the use of computers in learning provides the opportunity for the learner to see the optimal performance of the skills to be learned, which in turn reduces committing errors. This result agrees with the study of Mustafa Nasreddin (2008) (22) which found that CM via Power point presentations has a positive role in bringing about the interaction between the learner and the contents of maps, in addition to helping to progress positively in learning and performing the skill in a better way.

On the other hand, the traditional method did not allow some students to follow the explanation and then made it difficult for them to understand what is required of them, in addition to those who cannot see the skill model properly from all angles, and therefore do not comprehend them with the technical aspects of the performance of the skill to be taught.

This is confirmed by Mohammed Allawi (1994) (20) who concluded that the learner has not had the chance to get adequate vision because the skill pass in front of him quickly without devoting adequate attention and does not leave but some pale impressions, which may lead to the acquisition of learner to wrong performance of the psychomotor skills.

This result is an agreement with the findings of the results of some studies and research that dealt with the effectiveness of the use of CM compared to the traditional method in the skill performance in other sports, including the studies of Lamia Fawzi (2005) (18), Mustafa Nasreddin (2008) (22), Mohammad Salim (2010) (21), Imad Abuchaabana (2010) (15), Magda Fathi (2011) (19) and Ibrahim Shalaby (2011) (1).

Thus the third hypothesis has been confirmed, which states: "There are statistically significant differences between the average grades of post measurement for the experimental and control groups in cognitive achievement and skill performance of the crawl swimming on the belly in favor of the experimental group.

Conclusions:

In the light of the aims of the study and hypothesis, and based on the statistical treatments, and what was indicated by the results, the researchers concluded the following conclusions:

1. Using CM via Power point presentations has a positive impact in the development of cognitive achievement and skill performance to crawl swimming on the belly of the students of the

Faculty of Physical Education, Al-Azhar University.

2. The traditional method has a positive impact in the development of cognitive achievement and skill performance to crawl swimming on the belly of the students of the Faculty of Physical Education, Al-Azhar University.
3. Using CM via Power point presentations is more effective than traditional method in the development of cognitive achievement and skill performance to crawl swimming on the belly.

Recommendations:

In light of the results reached by the study, the researchers recommend the following:

1. using CM via Power point presentations as a method to teach crawl swimming on the belly at the faculties of Physical Education.
2. Developing laboratories of modern technological methods to help teach motor skills at the faculties of Physical Education and to qualify those who are able to use and benefit from.
3. Training stakeholders on how to build and use CM through either theoretical or practical courses.
4. Conducting similar studies using CM via Power point presentations on motor skills in various sports, because of its positive impact on the educational process.

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