

The effectiveness of using concept maps upon some learning outcomes in volleyball for experimental preparatory sportive students

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The Introduction and research problem:

The acquisition of skills in volleyball depends on the safety of the method which used to help the learner to acquire and the fitting of available educational aids and the extent of the interaction between the as intermediary education and the qualified teacher , hence the awareness and understanding of the pupil to the significance information of basic skills in volleyball one of the most important steps which is based upon access to mastery of these skills performance

The concept maps are considered one of the important applications towards the OZBEL theory where describes the chained relations between the concepts of a knowledge branch that derived from the hierarchy construction for this branch .and these concepts is organized in a sequential manner so that it is

placed the main concept (the most general and comprehensive) in the top of the map and then there under the subparagraph concepts (less general) in the next levels with the presence of links showing the relationships between them (5: 128) (6: 297) (10 : 438).

Through the researcher's exploratory studying targeted the identify of performance skills and knowledge level of the experimental preparatory sportive students , it's turned the students shortage towards the skillful and knowledge targeted level in the relation with the number of lessons which allocated in the curriculum, as demonstrated these severe confused of students between some of the concepts , terminology , definitions and topics related to volleyball curriculum , which has increased the attention of the researcher in the search for teaching method may take into

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account the delivery of knowledge , scientific information and practical skills for students to reduce the educational failures that negatively affect the learning outcomes in volleyball

Objective of this research:

The research aims to identify the effectiveness of using concept maps upon some learning outcomes (knowledge acquisition and performance skills) in volleyball for experimental preparatory sportive Through :

1- Building an educational program by using concept maps in volleyball for experimental preparatory sportive students.

2 -Building a knowledge test in volleyball for experimental preparatory sportive students

Research hypotheses:

1- There are statistically significant differences between the mean scores before and after measurements of the sample under discussion in the cognitive achievement in volleyball in favor of the post measurement.

2- There are statistically significant differences between the mean scores of measurements before and after the sample under discussion in

the level of performance skills of some basic skills in volleyball (Forearm pass- Under hand pass- Underarm serve- Overarm serve) in the favor of the post measuring

Plan and procedures:

Research Methodology:

The researcher used the experimental method by the experimental design for one group by the tow measurements pre and post for its relevance to nature the search.

The Society and the research sample:

The research community Included the schoolgirls of first grade prep school at AL HAMARAA experimental prep school sports (girls) for the academic year (2012 - 2013) Asyut Governorate, their number (42) schoolgirl, divided into (26) Specialization Volleyball, (16) schoolgirl Specialization basketball, the research sample depends on the intentional manner by (20) Volleyball Specialization schoolgirl where excluded the students who practices of the game in the clubs and their number reached (6) students.

Homogeneity of the sample:

The researcher conducted the homogeneity test among the members of the research sample in key variables growth rates (age , height, weight) , mental abilities (IQ) , some physical abilities and

achievement test cognitive under discussion and some skill tests in volleyball, Table 1 shows the heterogeneity of the sample under Search in the light of research variables.

Table (1)

The arithmetic mean , standard deviation , median and coefficient for sprains , capacity growth rates of mental and physical abilities , knowledge acquisition and skill tests to sample n = 20

The verities		Measure unit	SMA	Standard deviation	Mediator	Coefficient sprains
Growth variables	age	year	12.21	0.25	13.09	1.44
	Length	cm	148.84	2.34	147.00	1.08
	Weight	kg	47.68	6.93	48.50	-0.35
Brainpower	Intelligence	degree	31.06	2.73	30.50	0.62
Physical abilities	Running18m from higher point	second	7.37	0.19	7.50	0.97
	Transitional kinetic response nelson	second	1.22	0.94	1.30	1.03
	Shuttle various dimensions running	second	17.57	1.28	16.13	0.63
	Bend the trunk from the standing in the front	cm	4.00	1.71	4.00	-0.57
	Shot put 2 kg	m	1.56	0.10	1.58	-0.05
	broad Leaping from the stability	m	1.45	0.22	1.30	1.50
	Leaping into numbered circles	second	12.67	0.97	12.10	-0.26

Follow Table (1)

The arithmetic mean , standard deviation , median and coefficient for sprains , capacity growth rates of mental and physical abilities , knowledge acquisition and skill tests to sample n = 20

The verities		Measure unit	SMA	Standard deviation	Mediator	Coefficient sprains
	Straighten out the overlapping circle	degree	7.40	0.95	7.00	0.88
Cognitive achievement	Cognitive achievement	degree	4.06	1.39	4.00	0.13
Skill tests	Forearm pass	numbers	4.13	0.87	2.00	0.45
	Under hand pass	numbers	2.91	0.7	2.00	0.37
	Underarm serve	degree	5.06	0.84	5.00	0.21
	Overarm serve	degree	4.7	0.72	4.00	0.23

It is clear from Table (1) that all coefficients sprains of the variables under consideration confined between ± 3 suggesting of the values fairness and homogeneity of the sample

The methods of data collection:

To collect data for research the researcher used the following:

First: IQ test of Ahmed Zaki Saleh (1)

Second: physical tests

Third: cognitive achievement test (prepared by the researcher)

Fourth: skill tests

Fifth: the tutorial programs using concept maps (prepared by the researcher (Educational situation and teaching strategy)

To achieve the goals it's required from the researcher to build an educational situations that you will pass by the students and design concept maps for each skill and study the place of execution and the tools used, based on this:

-The researcher met with students(the sample) before starting the application to explain and clarify how to implement the modules and explain how to use concept maps for each skill , the role of the teacher and the learner , and then answering all student's questions.

-At the beginning the researcher extradite the concept maps sheets to pupils of the experimental group and explain

to them what's inside , the students begin the practical application under the supervision and follow-up of a teacher with a retro feeding .

The first exploratory study:

The researcher conducted the first exploratory experience during the period from Monday 09/16/2012 to Monday 09/23/2012 in order to experience the tools , devices and to identify the difficulties that may face a researcher at the implementation and regulation of transactions for the tests under scientific research (intelligence , physical tests The skills and knowledge acquisition), and this study has achieved its objectives

The second exploratory study

The researcher conducted the second survey by the teaching of 2 lessons prior to the basic experience of the experimental group under discussion, in order to workout concept maps and make sure of the pupil's understanding how to use tutorial program by the concept maps under discussion, it had been held on Wednesday and Thursday 26, 27/9/2012 , and was results reach the final form of these maps to be applied under discussion,

-Basic experience pre and post measurements under discussion

The pre measurement:

The pre measurements were made of the experimental group in cognitive achievement test and skill tests in volleyball, on Monday, 24/09/2012.

-The basic experience:

The basic Experience has been applied on the experimental group and took (4) weeks, from Saturday, 29/9/2012 to Thursday, 10/25/2012, for a period of 4 weeks, four units have been implemented through (16) lessons.

By four weekly lessons to each skill, and each lesson takes (90 minutes)

The post measurement:

The post measurements were made of the experimental group in cognitive achievement test and tests skills in volleyball under discussion, and on Saturday, 27/10/2012.

Statistical processors:

The use of statistical software packages SPSS statistical treatments and represented in

- SMA
- Intermediate • standard deviation.
- correlation coefficient

•coefficient ease and difficulty
 • . Test "T" to denote differences

•coefficient of discrimination

-Results and discussion:

Results:

Table (2)

Significant differences between pre and post measurements of the experimental group Cognitive achievement in volleyball n = 20

The tests	The unit	Pre Measurement	Post measurement	Average differences	The standard deviation of the differences	Value T
Cognitive achievement	degree	4.15	38.46	34.31	1.99	63.39

Value of (t) Tabulated at 0.05 = 1.69

It Is clear from the Table (2) the presence of statistically significant differences between the mean scores metrics pre and post in the cognitive achievement of the experimental group for

measuring dimensional, where the value of the "T" calculated is greater than the value of the "T" spreadsheet at the abstract level "0.05."

Table (3)

Significant differences between pre and post measurements of the experimental group Performance skills in volleyball n = 20

The tests	The unit	Pre Measurement	Post measurement	Average differences	The standard deviation of the differences	Value T
Forearm pass	NO	4.53	11.84	7.31	1.78	29.49
Under hand pass	NO	3.96	10.59	6.63	1.45	33.56
Underarm serve	degree	5.12	26.12	21.00	1.36	48.57
Overarm serve	degree	4.90	25.34	21.56	1.78	49.03

Value (v) at the level of tabular 0.05 = 1.69

it is clear from Table (3) the presence of statistically significant differences between

the mean scores metrics pre and post the performance level of skills (under discussion)

under the experimental group for measuring dimensional , where the value of the "T" calculated is greater than the value of the "T" tabular at the level of " 0.05. "

Discussion the results:

It Is clear from Table (2) that there are significant differences between the two measurements pre and post experimental group in cognitive achievement and for measuring dimensional as the value (t) calculated is greater than the value of (t) Tabulated at 0.05 level for post measuring and this means the advantage of pupils of the experimental group sample of the research in cognitive achievement.

the researcher attributes these positive and effectiveness to the nature of the concept maps , which provided opportunities for pupils to shift from negative to positive in learning , allowing operate freely and independently users of these maps and the guidance of educational , technical , legal , tactical , illustrative , knowledge and the volume of work , whether by repetitions or by the time- and private information with the skills to be learned under discussion, and the addition of the full

details of the educated skill in terms of the division of skill to the stages of learning whether technical or educational And the other , and each stage contains educational graded steps from easy to difficult to reach the learner to perform the skill full , as well as the tools used, and technical guidance must be considered at each step , and provide feedback for learners , it has a great impact by using concept maps on the level of knowledge achievement

Indicates by "**Gabber Abdel Hamid**", 2002 (3) that the map is a cluster of concepts or the texture of information helps the learner to understand the concepts and relationships between ideas.

And these results are matching with the results of the study by "**Fadia Saad**" (2002) (8), and the study of "**Shi Chang Hsiu**" (2008) (12), and the study of "**Ahmed Zaki Osman**" (2009) (2), where they pointed out that the concept maps affect positively on the investigation side knowledge of the learners more effectively , and thus it was achieved the first hypothesis of the research , which states "the presence of statistically significant

differences between the mean scores before and after measurements of the sample under discussion in the cognitive achievement in volleyball in favor of the post measurement.

As can be seen from Table (3) that there are significant differences between the two measurements pre and post experimental group in the performance level of skills (under) and for measuring dimensional as the value (t)calculated is greater than the value of (t) Tabulated at 0.05 level for the benefit of measurement posttest this means the advantages of the pupils of experimental group research sample, suggesting that teaching concepts maps have a positive impact on the level of performance skills in volleyball.

The researcher returned these positive and effectiveness to the concept maps that are characterized as contribute significantly to increase how and what kind of information and knowledge that has been collected by students where it was organizing information in a logical sequence from public to private and from easy to difficult, resulting in increased

absorption and collection of schoolgirls for the part to be taught in each lesson

It also attributes a reason beyond the experimental group success to be used for mapping concepts under which information is provided in conjunction with the means illustrations her and that lead to the correlation between the information provided in multiple forms of (texts , drawings and images), which was able to absorb the information through the involvement of more than one sense of the senses learner, where he sees each of "**Fouad Ibouhtab , Seyed Mohammad Khairallah , Aziz Hanna Daoud**" (1988) (7) that the use of more than one sense during the education is instrumental in the learning process.

This is consistent with the results of a study of **Mason (13), Lamia Mohamed Morsy (9), Oran acai (2007) (14), Adel Ramadan Bakhit Hashim (4), Mohamed Ramadan Ahmed (2011) (11)** where pointed out that the use of concept maps helped in the supply of educated a great deal

of feedback , which contributed to fix the errors and thus improve the results level skills , and the steps involved in concept maps to help organize information in memory due to the sequence in the process of absorbing information and retrieve when you need it , and thus be achieved imposition of the second search , which provides for the existence of statistically significant differences between the mean scores of measurements before and after the sample under discussion in the level of performance skills of some of the basic skills in volleyball (Forearm pass- Under hand pass- Underarm serve- Overarm serve) in favor of the post measurement .

Conclusions:

In the light of the objectives , hypotheses and research sample , and through statistical data processors , the researcher reached the following conclusions:

-the Maps concepts contributed in effectiveness and on some positive learning outcomes (knowledge - skills) under discussion.

-the Maps concepts contributed in effectiveness and by positive participation in the educational process which has improved the level of achievement of knowledge and skills in volleyball.

The Recommendations:

In light of the outcome of the search results, and the conclusions that have been reached, the researcher recommends the following:

- 1- The need to use concept maps to teach basic skills content in volleyball experimental preparatory sportive students
- 2- Conducting similar studies and similar activities of different sports and a variety of stages and ages of basic education by using the concept maps.
- 3- The need to include strategies for mapping concepts

in the field of sportive teaching at the experimental sports school and teaching volleyball in particular

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