

# Effect of Age and the Pretest Score on Critical Thinking and Using Concepts Maps in Learning the Skill Scoring of Football for Students

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## Abstract

The world has witnessed in recent decades rapid developments, including all areas of life, prompting the nations to strive to keep abreast of these developments and build their societies, and became human is the main objective of those developments. Through the overlap of a variety of factors, including the method chosen in the process of teaching and the specific way of teaching, and the characteristics of individuals<sup>2</sup> of cognitive methods, which vary from individual to other, as a result of individual differences identified, and took a lot of changes and development. These developments were the result of the technological development that covered all fields of life, scientific and practical in general and in particular<sup>3</sup> the sports field. Mind mapping technology has an impact on football scoring skills for first-stage students. Taking notes using concepts mapping technology helped the members of the expericoncepts group to plan their ideas fully. The technology used in the current research (concepts maps) has contributed to the development of the dynamic program of the members of the expericoncepts group, through the processes of remembering, retaining and reviewing concepts mapping.

**Keywords:** Pretest score, critical thinking, concepts maps, Skill scoring

## Introduction

The learning process in this field is characterized by different characteristics from the other fields. Because of the privacy of the lesson itself, and this difference has increased the responsibility of the teacher of physical education, as he is the primary responsible for producing a practical lesson successful, and according to the latest foundations and mechanisms developed, and on this basis must be the teacher to be efficient and successful and<sup>4</sup> able to keep pace with this development, must To be constantly updated on the latest strategies and methods and means, such as modern concepts maps, which if used correctly in the lesson of physical education to give very large results at the level of education.

The use of means by appropriate teaching methods is very important to facilitate the process of teaching and learning at the same time, it brings the idea to the learner on the one hand, and makes it able to absorb the educational material on the other hand, it facilitates the work of the teacher in terms of shortening the effort and time required to deliver the information easily and in the shortest possible<sup>5</sup> time through the means of education, especially if it works to occupy the mind and the thinking of the learner, the matter that occupies the interest of most teachers of physical education at the moment is how to employ the right information in the mind of the learner by choosing the most appropriate strategies and methods to facilitate the learning process, and the result obviously difference between individuals due to individual differences, there is no particular method or

one particular way benefit everyone to get them to one level of learning. where the football game is one of the group games that have attracted the attention of many of the amateur and has become the leading in terms of deployment in many countries of the world, as this game depends on the basic skills as a base on which to base it, and to progress in this game must master all skills, This is the first step towards achieving a high level of learning <sup>7</sup> Based on all of the above, the importance of the current research in the attempt to use (concepts maps), which is one of the most important educational means that work to receipt some information and ideas of skill after the formulation of concepts map to the learner as an interesting way to work and the importance of their impact in learning Skill scoring football for students.

Hence it will researcher will Kicks off on a serious and new applied scientific experiment in this field to learn about the effect of using concepts maps in learning the Skill scoring football for students.

### Methodology

The researchers used the expericoncepts approach and the design of the control and expericoncepts groups to suit the nature of the problem to be solved “The expericoncepts method is the closest method of research to solve problems in the scientific way is an attempt to control the variables and all the basic factors except one variable or more researchers are changing it in order to determine and measure the impact of scientific”<sup>(1)</sup>.

this).

### Community & Research Sample:

The researchs community consists of students of the first stage - Faculty of Physical Education and Sports Sciences – Al- Ain Private University in Thi -Qar for the academic year 2018 - 2019 (80) students divided into two divisions (B, C).

The sample of the research is “part of the original research community chosen by the researcher in different ways and includes a number of individuals from the original community” <sup>(2)</sup>. So the researcher choose his research sample by random way, (C) was chosen to represent the control group and (B) to represent the expericoncepts group, and (A) is for female students. The researchers conducted the exploratory experiment on (10) students from the research community and without the research sample.

After the procedures of homogeneity and equivalence, the researcher conducted a field experiment on the sample of the main experiment consisting of (40) students representing the people (B, C) and 20 students from each division, and the proportion of the sample of the community of origin is (50%), and for homogeneity and equivalence The researcher excluded a number of respondents, teachers, students of good skill level, and students who did not attend the pre test. (Table 1 shows

Table (1) shows distribution of search sample

Classes	Total number	Samples	Excluded	Chosen Samples	Percentage
B	40	Sample of main experiment	20	20	50%
C	40	Sample of main experiment	10	20	50%
		Sample of reconnaissance experiment		10	12.5%
research community	80	Sample of main experiment		40	50%

Homogeneity of the research sample:

In order to adjust some variables that affect the accuracy of the results of the search. In order to return the differences in the effect only to the independent variable, It is necessary to ensure the homogeneity of the research sample in some variables. Therefore, the researcher used the law of difference coefficient between the sample and as shown in Table (2).

**Table (2) shows Homogeneity of the sample**

No.	Variables	Measure Unit	Arithmetic mean	Standard deviation	Difference coefficient
1	Age	Month	242.22	15.77	6.5%
2	Mass	Kg	68.15	3.83	5.16%
3	Length	Cm	169.70	4.99	2.49%

Table (2) shows that the values of the difference coefficient for all the research variables and the control and expericoncepts groups were less than (30) indicating the homogeneity of the sample

**Equivalence of the research sample:**

For the purpose of ascertaining the equivalence of the control and expericoncepts groups in some variables, the researcher performed equivalence by using law (t-test) of the independent samples as shown in Table (3).

**Table (3) shows sample Equivalent research sample**

Tests	Measure Unit	Control group		Expermental group		T value	Sig	significance type
		M	Sd	M	Sd			
Age	Month	240.85	15.14	244.70	15.84	0.87	<b>0.91</b>	Not significant
Mass	Kg	68.65	3.23	67.65	4.38	0.82	<b>0.84</b>	Not significant
Length	Cm	169.05	4.98	169.85	4.62	0.52	0.80	Not significant
Scoring	Degree	8.23	1.66	7.82	1.94	0.74	0.92	Not significant

**\*significance level ≤0.05**

**Exploration Experience:**

The exploratory experiment is a “practical training for the researcher to identify for himself the negatives and positives that may be encountered during the test and the main experiment to avoid them

The researchers procedure the exploratory experiment on Sunday (18/11/2018) at 10:30 am on the same sample without the research sample and the community of origin (10) students and the presence of researcher and the teacher of the article The aim of this exploratory experiment Come :

- Identify the obstacles and errors that accompany the test process when applied.

- Ensure that the testers understand the test method and master its requirements.

- Ensure the efficiency of the assistant staff. Annex (3)

- Recognize the validity of the instruments used in the tests.

- Configure the main experiment requirements.

- Scientific foundations

### **The scientific basis of the test.**

Each of the tests must have the scientific basis for the tests so that a good test can be produced and the results can be adopted. Therefore, the researcher found the honesty coefficient, Stability and objectivity of the test.

### **Test Honesty :**

Honesty is one of the indicators that must be found in the test used in the measurement of any mathematical characteristics and phenomena. The “true test” is a test that accurately measures the object to be measured and does not measure anything in its place or addition.

### **Test stability:**

In order to extract the stability coefficient of the tests, the principle of constant testing is to be applied “which produces the same results or the same results if applied more than once in similar conditions”. This is done under similar conditions. And the interval between the first test and the second (7) days where the first test was procedure on Sunday, 18/11/2018 at nine o’clock in the morning and was returned on Sunday 25/11/2018 at nine o’clock in the morning, explains Ibrahim Salameh “The method of retesting from The most simple way is also characterized by a specific clutch of cohesion

because of the associated error. The researcher extracted the coefficient of persistence by means of the correlation coefficient (Pearson) between the results of the first test and the results of the second test and extracted the correlation. Indicates that tests are of high moral significance, indicating that the test has a high degree of stability as shown in Table (4).

### **Test objectivity:**

In order for the test to be successful, it must have a high degree of objectivity, and since the tests used are based on simple, clear, easy to understand and non-interpretive terms, the researchers did not extract objective coefficients.

### **v Test scoring balls:**

- Objective of the test: measuring accuracy of scoring.

- The necessary tools: a football field, a condition to determine the area of correction for the test and put (5) balls in specific places of the penalty area.

- Method of performance: The player stands behind the ball number (1) and when the signal is given, the ball is aimed at the goal, and then repeat the correction of the ball (2) and so on until the end of the correction of ball (5)

- Score goals: The score is calculated by the total scores obtained by the player from the five balls that each score corrected score in each region where the ball goes to the division lines are calculated within the highest area and considers that the score outside the goal limits are 0, For testing (25) degrees.

### **Pre Tests:**

Before procedure the pro test under study, the researchers and the teacher gave the students two unite definitions of scoring skills, the nature of the concepts maps, how they were designed, used, and useful.

Then the researchers procedure the tribal tests on Tuesday, 27/11/2018. The study skill (scoring accuracy) of the two groups was procedure at the Sumer Sports Stadium of the Youth and Sports Directorate in Thi- Qar and the presence of the lesson teacher and the auxiliary team.

**Post-tests:**

After the completion of the curriculum, the researchers procedure post tests of the skill in question on the sample of the two groups on Wednesday (5/2/2019) at Sumer Sports Stadium of the Directorate of Youth and Sports in Thi-Qar, where researchers were keen to be the same or similar conditions In terms of the place and style in which the pre test was procedure , as well as the same auxiliary team.

- 1 - the arithmetic mean
- 2 - the difference coefficient
3. Standard deviation
4. Pearson correlation coefficient
5. Law (t) for non-independent samples
5. Percentage

**3.7 Statistical means:**

The researchers used the SPSS statistical file to process and extract research data. The laws used in the research were as follows:

**Results**

**Table (4) Shows the arithmetic means, the standard deviations and the calculated t value of the football scoring skill of the control and expericoncepts groups in the pre and post tests.**

Groups	Statistical processing Skill	Measure Unit	Pre testing		Post testing		T value	Sig	Type
			M	Sd	M	Sd			
Expericoncepts	Scoring	Degree	7.82	1.94	18.89	2.61	12.32	0.000	Significant
Control	Scoring	Degree	8.23	1.66	15.47	2.03	6.62	0.000	Significant

**\*significance level  $\leq 0.05$**

Table (4) shows that the value of the arithmetic mean of the accuracy of the scoring skill in the expericoncepts test of the expericoncepts group is 7.82 and the standard deviation is 1.94. In the post test, the mean value is 18.89 and the standard deviation is (2.32) While the value of (t) calculated was (12.32) and the level of significance (0.000), indicating that there are significant differences between the pre-test and the post-expericoncepts group and for the benefit of the post-test.

The value of the arithmetic mean of the accuracy of the scoring skill in the pro test of the control group is (8.23) and the standard deviation is (1.66). In the post-test, the mean value is (15.47) and the standard deviation is (2.03) while the calculated value t is (6.62) (0.000)

indicating significant differences between the pre and post tests of the expericoncepts group and for the post-test.

The researchers attribute the progress of the expericoncepts group to the fact that the use of concepts maps in teaching gives a kind of diversification in teaching methods and contributes to the involvement of a greater number of senses in learning, making learning meaningful, in addition to the interaction <sup>8-12</sup> that took place among the class members during the unit and discuss the task Educational institutions that have an impact on their understanding of the educational material and this has led to an increase in their learning better.

**Table 5). Shows the arithmetic means, standard deviations and the value of (t) of the scoring skill of the control and expericoncepts groups in the post tests**

Statistical processing Skill	Measure Unit	Expermintal		Control		T value	Sig	Type
		M	Sd	M	Sd			
Scoring	Degree	18.89	2.61	15.47	2.61	3.873	0.000	Significant

\*significance level  $\leq 0.05$

Table (5) shows that the value of the arithmetic mean for the accuracy of the scoring skill in the expericoncepts test of the expericoncepts group is (18.89) and the standard deviation (2.61) in the post test of the control group, the mean (15.47) and the standard deviation (2.61) ) Was calculated at (3.873) and at a significance level (0.000) indicating significant differences between the control and expericoncepts groups in the post tests and in favor of the expericoncepts group.

### Conclusion

Mind mapping technology has an impact on football scoring skills for first-stage students. Taking notes using concepts mapping technology helped the members of the expericoncepts group to plan their ideas fully. The technology used in the current research (concepts maps) has contributed to the development of the dynamic program of the members of the expericoncepts group, through the processes of remembering, retaining and reviewing concepts mapping.

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**Conflict of Interest:** None to declare.

**Ethical Clearance:** All experimental protocols were approved under the University Thi-Qar and all experiments were carried out in accordance with approved guidelines.

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