

# Modern Cognitive Competence and its Relationship to the Creative Teaching Practices of Physical Education Teachers in Salah al-Din Governorate

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**Abstract:** The study aimed to identify the relationship of modern cognitive efficiency with the creative teaching practices of physical education teachers in Salah Al-Din Governorate, where the research community consisted of (145) teachers of physical education. It was randomly constructed from the study population, which consisted of (100) teachers, and its validity and reliability were confirmed. And the use of the scale of creative teaching practices that was designed by (Al-Aswad, 2014) after the procedures of scientific transactions on it, and the results showed that there is no significant correlation between the modern cognitive efficiency and the creative teaching practices of physical education teachers in Salah al-Din Governorate. So, the researcher concluded the lack of physical education teachers in the governorate Salah Al-Din for the cognitive efficiency that helps them to teach and creative practices, and the researcher recommended the need for physical education teachers to keep pace with the recent developments and developments related to the concepts of cognitive efficiency in sports modernity.

**Keywords:** cognitive efficiency, teaching practices, creativity, physical education teachers, Salah Al-Din, physical education.

## 1. Introduction

Preparing and training teachers according to modern cognitive developments that raise them to the level of improving the quality of education is one of the most important features of contemporary educational innovations. Physical education is responsible for developing his skills in the fields of physical education and its sciences, developing information and modern and advanced methods, and keeping pace with them in line with achieving the goals of the educational and educational process. Cognitive competence is a set of abilities and skills that constitute the cognitive infrastructure, the level of awareness and the degree of skill with which an individual can use various types and forms of knowledge, especially linguistic, mathematical and communicative knowledge (Al-Khasawneh and Al-Zoghbi, 2007: 21). That progress in the world at the beginning of the third millennium is based on accurate and modern scientific knowledge, and sports and other areas of life need science and knowledge to reach the highest levels. From a scientific point of view, progress in the sports field needs advanced technology, and this does not necessarily mean the ability to use modern equipment and training but it depends on creativity in employing it in the optimal sports field and because of its positive benefit to athletes.

Therefore, the importance of the research lies in shedding light on modern cognitive efficiency and its relationship to creative teaching practices through the behaviors and attitudes that were presented in the scale and revealing areas of weakness, defect and success to identify successful practices in classroom management of physical education lessons in different stages.

### 1. 1 The Problem of the Study

The era in which we live, which is called the era of the explosion of knowledge and the abundance of information brought about by the communications revolution in various fields of knowledge, including sports knowledge, so many studies emphasized the need to measure the modern cognitive competence of workers in various fields, including the sports field, to identify the extent to which teachers of education possess Through the researcher's experience in the educational field and his follow-up to the activities of physical education in the schools of Salah al-Din Governorate and his meeting with many physical education supervisors, he noticed that many teachers are not interested in modern cognitive aspects, but are satisfied with what they studied on the study benches within the study plans for that period with Many of them did not follow the recent developments and developments in the concepts of cognitive competence in sports modernity, and this is related to creative teaching practices in its various axes. Therefore, the researcher decided to conduct a scientific study to find out the truth about what teachers possess of knowledge in sports modernity and creative teaching practices, and to identify the relationship between them among physical education teachers in Salah al-Din Governorate, so that the research problem crystallizes through questions For the following: What is the degree to which physical education teachers in Salah al-Din Governorate possess modern cognitive competence? What is the relationship of modern cognitive efficiency with the creative teaching practices of physical education teachers in Salah al-Din Governorate?

## 1. 2 The Aim of the Study

To identify the modern cognitive competence and its relationship to the creative teaching practices of physical education teachers in Salah al-Din Governorate.

## 1. 3 The Hypotheses of the Study

1. Physical education teachers in Salah al-Din governorate lack modern cognitive competence.
2. There is no relationship between modern cognitive efficiency and creative teaching practices among physical education teachers in Salah al-Din Governorate.

## 1. 4 The Areas of the Study

1. The human domain: physical education teachers for the academic year 2021-2022.
2. Time range: for the period 2/15/2022 to 4/15/2022.
3. Spatial domain: middle and middle schools in Salah al-Din Governorate.

## 2. Defining the Terms

Cognitive competence: It is the set of facts, information, skills, mental abilities, and experiences that the individual possesses through education or experience, in order to provoke, mobilize and employ them in order to confront a problem or educational situation and solve it in a specific situation.

The procedural definition: It is the total score obtained by a physical education teacher in Salah al-Din Governorate after answering the scale prepared for that.

Teaching practices: a set of behaviors, procedures and activities carried out by the teacher during his teaching, which is represented in lesson planning, lesson implementation, and performance evaluation (Karnes & Bean, 2009: 179).

## 3. Research Methodology

The researcher adopted the descriptive approach for its suitability and the nature of this study.

### 3. 1 Research Community and Sample

The research community consisted of physical education teachers in Salah al-Din governorate for the academic year 2021-2022, who numbered (145) teachers of physical education, and the construction sample consisted of (100) teachers and (40) teachers for the application sample, and they represented (96.5%) of the research community.

### 3. 2 Research Tools

#### 3. 2. 1 Modern Cognitive Competency Scale

To achieve the objectives of the research, it requires preparing a special scale for this purpose, which was prepared within the following steps:

1. Analyzing the content of the following sources (Tameleh, 2002) (Hussain, 2017) (Al-Khasawneh, 2007) (Shawkat, 2014) (Gokhasha, 2012) (Al-Fadhli, 2011) (Mishaal, 2010) to determine the axes of the modern cognitive competency scale, which were four axes: (Teaching Methods, Mathematical Training Science) Sports laws, physical health and first aid) and writing (12) paragraphs for each of those axes, using a multiple-choice test for four alternatives.
2. The questionnaire was presented to a number of specialists in the field of physical education to demonstrate its validity to measure modern cognitive efficiency. Multiple with four alternatives, the final version of the paragraphs was ten paragraphs for each of those axes.
  - The science of sports training consists of (10) paragraphs.
  - Teaching methods consist of (10) paragraphs.
  - Sports Laws consisting of (10) paragraphs.
  - Physical health and first aid and consists of (10) paragraphs.

One score will be given for each correct choice, so that the maximum final score is (40) and the minimum is (zero). Table (1) shows the scores that can be obtained from applying the scale.

**Table (1):** The degrees obtained from the application of the modern cognitive competency scale for physical education teachers

Scale fields	Great End	Minor End
The science of athletic training	10	Zero
Teaching methods	10	Zero
Sports Laws	10	Zero
Physical health and first aid	10	Zero
Total marks	40	Zero

It is noted from Table (1) the degrees that can be obtained through a measure of the modern cognitive efficiency of physical education teachers.

#### 3. 2. 2 The Construction Validity of the Modern Cognitive Competency Scale

The construction validity of the modern cognitive competency scale was conducted according to two methods:

A. The two extreme groups discriminating power of clauses: The discriminatory strength of the statements or the validity of the distinction refers to the ability of the statement to distinguish to the ability of the statement to distinguish between individuals with higher levels and individuals with lower levels in relation to the trait measured by the statement, and this is considered evidence of the validity of the construct, as the two groups were arranged in descending order to determine the highest 50% less than 50 To find this kind of honesty, the researcher followed the following steps:

- Applying the scale to a construction sample of (100) teachers of physical education in Salah al-Din Governorate for the period from February 15, 2022 to February 28, 2022.
- Finding the score of each phrase and then extracting the total score for each form from the construction sample forms.
- Determining the size of the two extreme groups with (50) applications for the upper group and (50) applications for the lower group.
- Finding the value of (T) for each of the scale expressions for the two extreme groups, and it was found that all the paragraphs had the ability to distinguish between the upper and lower groups, as the sig value reached the smallest 0.05, which indicates that the paragraphs enjoyed the sincerity of distinction.

B. The internal consistency coefficient method of the scale: It is to find the relationship between the test items and the total score of the individual, which is a criterion for the construction validity of the scale (Al-Khikani and Al-Jubouri, 2017: 117), and the correlation coefficient of the degree of each phrase was calculated with the total score of the scale, as well as its relation to the domain to which it belongs. Sig) > (0,05) for all items, which indicates the homogeneity of the scale or its internal consistency.

### 3. 2. 3 The Stability of the Modern Cognitive Competency Scale

The reliability coefficient of the scale was extracted by the split-half method through the construction sample forms of (100) and the scale statements were divided into two halves between the scores of the half of the test, as this value reached (0.906), which constitutes the degree of stability of the half of the test or to obtain the coefficient of total reliability, the corrective (Spearman Brown) equation was used, as the stability according to this equation reached (0,950). The stability of the scale was also calculated by testing and re-testing through the stability of the scores obtained by teachers after an interval of two weeks using the test-retest method by applying it to a survey sample of the research community outside the study sample, which numbered (10) teachers, and using Pearson correlation coefficient and the results showed the values of the reliability coefficients for the scale domains and on the total degree of the scale as in Table (2).

**Table (2):** Values of the stability coefficients using the Pearson correlation coefficient

Fields	Pearson correlation coefficient
The science of athletic training	0.79
Teaching methods	0.84
Sports Laws	0.81
Physical health and first aid	0.88
Total marks	0.83

The overall reliability coefficient of the cognitive competency scale according to the Pearson correlation equation was (0.83), which is an acceptable value for the purposes of the study, and the reliability coefficients for the domains ranged between (0.79 - 0.88). The scale in its final form consists of (40) items, including (10) items for each of the scale's axes. It is of the type of multiple choices. One score was given for the correct answer and zero for the incorrect answer, so that the total score was between (0-40). The researcher relied on the scale of teaching practices. The creativity that was designed by (Al-Aswad, 2014) in all its scientific and procedural steps, which consists of (22) paragraphs representing the five axes of the scale, as shown in Table (3).

**Table (3):** Distribution of the creative teaching practices scale on the axes

Axles	Number of Items
Creative setup	3
Creative teaching methods	6
Creative classroom interaction	4
Teaching aids	3
Creative calendar	6
The total	22

### 4. Scientific Coefficients of the Scale

For the purpose of ensuring the scale's readiness for application, the researcher calculated the apparent validity of the scale to achieve the objectives of the research, as the honest scale is the one that actually expresses and measures

the attribute, trait, direction or willingness that was set to measure it (Al-Assaf, 1995: 23). So, the scale items were presented in the form of a questionnaire Gentlemen with experience and expertise in the field of teaching methods, management and organization, psychology, measurement and evaluation, and after reviewing them, all paragraphs obtained the approval of experts by 80% or more, thus achieving the apparent validity of the scale to achieve the objectives of the research. As for the stability of the scale, it was verified by the researcher by the method of alpha-Cronbach coefficient, which is a method used to find the reliability of the questionnaire phrases whose answers require multiple choice. The researcher investigated the possibility of adopting a scale of creative teaching practices for physical education teachers in Salah al-Din Governorate.

### 5. Main Experience

After the researcher prepared two scales of modern cognitive efficiency and creative teaching practices following the scientific foundations and verifying their conditions in terms of honesty and reliability, it was applied to the research sample, which numbered (40) teachers for the period from 15/3/ 2022 to 15/4/ 2022 and data was collected in preparation for submission for statistical treatment. The researcher used to process the data on the statistical package (SPSS).

**Table (4):** Arithmetic averages and standard deviations of all fields of modern cognitive competence of physical education teachers in Salah al-Din Governorate

Test areas	SMA	Standard deviation
The science of athletic training	4,02	1,62
Teaching methods	4,08	2,13
Sports Laws	3,85	1,90
Physical health and first aid	5,74	1,85
The arithmetic mean and the general standard deviation	17,69	7,50

The results showed that the general average of the degree of physical education teachers' possession of modern cognitive competency came with a score of (17,69), compared to the maximum score on all test items (40) items, and the field of sports training science got (4,02) out of (10) degrees and a domain Teaching methods scored (4.08) out of (10) degrees and the field of sports laws at (3.85) out of (10) degrees, and the field of physical health and first aid got (5.74) out of (10) degrees, and all of these The values represent teachers' possession of a very low degree in modern cognitive competence and in all fields of study, and this gives an indication of the lack of interest of physical education teachers in modernity and lack of knowledge of everything new in sports sciences and failure to keep pace with new developments and lack of developmental courses in sports modernity, and this result is consistent with many studies and research, whose study indicated a low theoretical and scientific knowledge outcome among the graduates of the Faculty of Physical Education, and thus prove the imposition of the research, which includes the lack of physical education teachers of modern cognitive competence in Salah al-Din Governorate. Table (5) shows the arithmetic mean, standard deviation, and the correlation coefficient between the scores of the modern cognitive competency measures and the creative teaching practices of physical education teachers in Salah al-Din Governorate.

**Table (5):** The arithmetic mean, standard deviation, and the correlation coefficient

Variable	Arithmetic Mean	Standard Deviation	Computed Value	(T) Sig	Level of Significance
Modern Cognitive Competence	17,69	7,50	0,82	0,033	insignificant
Creative Teaching Practices	13,34	3,08			

Table (5) shows that the arithmetic mean value of modern cognitive efficiency is (17.69), while the standard deviation is (7.50). As for the creative teaching practices, the arithmetic mean (13.34) and the standard deviation (3.08) and the (sig) value is greater than the significance level value (0.05), which indicates that there is no correlation between modern cognitive efficiency and creative teaching practices of physical education teachers in Salah al-Din Governorate. The lack of participation of teachers in the training courses held by the Preparation and Training Department in the Directorate of Education, all of this affected their teaching practices.

### 6. Conclusions and Recommendations

The study concludes that:

1. Cognitive competence is an intellectual product in the form of mental abilities that help individuals to work within specific contexts, whether they are mental skills or motivation.
2. Weakness of creative teaching practices among the study sample.

3. The lack of follow-up by a section of physical education teachers on recent developments in the concepts of modern cognitive competence in sports modernity and the lack of training courses in the modern cognitive competence of teachers.
4. The lack of physical education teachers in Salah al-Din governorate with modern methods in their teaching curriculum.

In light of the results of the study, the researcher recommends the following:

1. The need for physical education teachers to keep pace with recent developments related to the concepts of cognitive competence in sports modernity.
2. The necessity of holding training courses to raise the awareness of physical education teachers of the cognitive competence in sports modernity for all those with years of experience and academic qualifications.
3. The need to review the curricula of physical education and work to update them to keep pace with all that is new in sports sciences.
4. Conducting more studies related to the importance of physical education teachers possessing cognitive competence in sports modernity to obtain more results.

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