

Developing a Cognitive Test of Sports Legislative Culture For Sports Specialists at Minia University

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Introduction and research problem:

The field of sports is one of the most fertile areas through which the reality and level of individuals can be assessed. Tests in this field are of paramount importance in determining level, which, by their very nature, provides indicators from which both the coach and the player can deduce the extent of their ability and their position relative to their peers. The need for tests, especially standardized ones, has become essential for many phenomena within physical education. In order to create and design tests, it is essential to recognize that the process of designing and creating tests is itself a difficult and delicate matter that requires a high level of experience and skill, as well as a keen sense of the subtleties related to physical, skill, and motor abilities (5:35).

Testing and measurement are scientific tools that help achieve accurate assessment, thereby raising the level of scientific knowledge and performance. Therefore, those responsible for the assessment process in the sports field are in dire need of developing and raising the efficiency and level of their employees scientifically, using appropriate measurement tools based on accurate scientific foundations. Cognitive tests are the most common assessment tool, used for guidance and selection by determining a specific level for testees (1:25).

Sami Melhem (2009) notes the importance of cognitive tests, which are based on basic objectives and whose content encompasses all aspects of the work. The cognitive domain in physical education represents an important pillar, so the target audience must be provided with information and knowledge related to the activity being practiced(7:45).

Cognitive tests are used in the professional field to identify individuals whose abilities match the requirements of the job and employ them, while those whose requirements do not match the capabilities of the job are excluded. They are also used to classify or assign individuals to various jobs or to promote them to higher positions (6:25, 26).

The sports movement is witnessing an increase in interest in the relationship between sports and sports legislation, as the law has become relevant in all fields, whether economic, political or sports. Some believe that laws and legislation are not suitable for the sports field, and that they are far from sports practice except within the framework of the regulatory laws for games, but this topic has become important and vital for sports management and those practicing sports work(10,2022).

Considering sports legislation, we find that there are several pieces of legislation that all those working in the sports field must adhere to. These include the laws of the various games issued by the International Federation for each game, as well as the Sports Law and the internal regulations of sports federations and clubs, which represent the regulatory regulations. This is in addition to the main legislation, which represents criminal and civil law(4:72).

Culture expresses the sum of information an individual possesses in various fields. In gatherings, when individuals discuss various matters and we find an individual speaking with expertise, we say that he is a cultured person. Sports culture is the knowledge and skills an individual possesses in various games and sports. The means used to obtain information and shape knowledge within an individual vary, drawing on past experiences and future needs. Culture is not limited to reading newspapers, books, or writing. Interacting with others and social systems provides an individual with experiences beyond writing and reading, and influences their behavior, develops their thinking, and enhances their culture (2:62).

In light of the rapid and ever-changing development of sports legislation in Egyptian society, beginning with Sports Law No. 71 of 2017, followed by the Guiding Regulations for Sports Bodies and the bylaws of some bodies, the Ministry of Youth and Sports soon issued the Financial

Regulations for Youth Centers (Decision No. 90 of 2021), the Financial Regulations for Sports Bodies (Decision No. 159 of 2021), and the Youth Hostel Regulations. Then, in June 2022, the government submitted a draft law amending some provisions of the Sports Law (Law No. 71 of 2017). In addition, elite sports figures discussed the Olympic Charter, the laws of international federations, the Court of Arbitration for Sport (CAS), and others. All of this contributed to a distorted image among some sports professionals, and for some, even led to a vagueness, to the point that many media professionals, sports journalists, and sports specialists believe there is a major flaw in the sports legislative system.

Enriching legislative culture has always been a key focus of modernizing the legislative system to become a driver of comprehensive and sustainable development. The importance of legislative education lies in its being a solid foundation for familiarizing the target audience with legislation, its scope of application, and its practice to achieve its essential purpose, which serves national trends to create a pioneering, distinguished, and forward-thinking system that keeps pace with future requirements (9, 2021).

Through the researcher's work at the university and his continuous interaction with sports specialists at the university, he noticed that there is a difference in the level of sports legislative culture among them. This was clearly evident in the implementation of some administrative and financial tasks and summit meetings at the university level. If there is an excuse for non-sports specialists, there is no excuse for sports specialists, as they are the protectors of the sports future and the men of tomorrow. In order to verify the actual level of legislative culture among sports specialists, the researcher sought to obtain a test of sports legislative culture, but he was unable to obtain any test of sports legislative culture in the Egyptian environment. Therefore, the idea of this research came to build a cognitive test of sports legislative culture among sports specialists at Minia University.

Research objective:

-To develop a standardized cognitive test of sports legislative culture for sports specialists at Minia University.

Research question:

-What are the axes and phrases of the cognitive test of sports legislative culture for sports specialists at Minia University?

Terms used in the research:**Cognitive test:**

A set of questions or problems designed to assess knowledge, intelligence, or other abilities and characteristics. It implicitly requires answers to a set of pre-prepared questions, based on the examinee's answers(3:17).

Sports legislative culture:

It is the conscious knowledge of the set of legal texts specific to the field of sports, which are issued by the legislative and executive authorities in the country, each within its own area of jurisdiction, in order to regulate the field of sports and give it a legal dimension (8:3).

The researcher defines sports legislative culture as "conscious knowledge of sports legislative texts and how to apply them in relevant situations, and the link between that knowledge and the complementary texts in all sports legislation applicable in the sports sector (operational definition).

Research Methodology:

The researcher used the descriptive analytical approach because it is appropriate for the nature of the research.

Study Community and Sample:

The research community consisted of (43) sports specialists at Minia University. The researcher obtained the research sample using a random sampling method, consisting of (10) ten specialists, representing (23%) of the population.

Sports Legislative Literacy Test: (Prepared by the Researcher)

The researcher followed the following steps to prepare the test:

1-Defining the Test Objective:

The test objective was to assess the level of sports legislative literacy among sports specialists at Egyptian universities.

2-Defining the Test Axes:

After defining the cognitive content of the electronic program and presenting it to experts, three test axes were identified: (legal, financial, and administrative). The researcher then prepared a questionnaire to survey the experts' opinions on the suitability of these axes for the test and determine the relative importance of each axis (Appendix 2). The questionnaire was presented to a group of (10) experts in the field of sports management, each with at least ten years of experience (Appendix 1). The questionnaire was then used to provide their opinions on the suitability of these axes. Based on the experts' opinions, the financial and administrative axes were combined due to the significant overlap between them, as illustrated in Table.(1)

Table(1)
Percentage of Expert Opinions on the Sports Legislative Literacy Test
(n = 10)

n	Axis	Expert Opinion		Percentage	Relative Importance
		Agree	Disagree		
1	Legal	10	-	100%	60%
2	Financial Administrative	10	-	100%	40%

Table (1) shows that the percentage of expert opinions on the axes reached (100%), while the relative importance of the axes was (60%) for the legal axis and (40%) for both the financial and administrative axes.

3- Formulating the Test Questions:

The researcher developed a set of questions (in the form of legislative situations) for each of the test axes. The total number of questions reached (50), divided into two axes: (legal, financial, and administrative), with (30) questions for the legal axis and (20) questions for the financial and administrative axis. All questions were true/false, with corrections only for incorrect situations. The following was taken into account:

- Each item should measure a specific learning outcome.
- It should be appropriate for the age of the sample.
- It should be comprehensive, accurate, scientifically and linguistically formulated, and clear.

4-Test Instructions:

The researcher ensured that the test instructions were written in simple, clear, and concise language, as much as possible, to avoid affecting the responses of specialists. The freedom to write the name was also provided, and the name was replaced with a code consisting of (8) numbers and letters to address different measurements. A practical example was also provided to demonstrate correct answering of the questions, and it was necessary to read the statement carefully before determining the response.

5-Initial Form of the Test: (Appendix 3)

The initial form of the test was prepared, ensuring that the vocabulary was varied and included the greatest possible amount of information on the two axes (legal, financial, and administrative) under study. The total number of items reached (50). The initial form of the test was presented to a group of experts in the field of sports management (Appendix 1), with no less than (10) years of experience. This was done to provide feedback on the appropriateness of the test vocabulary, scientific accuracy, linguistic formulation, comprehensiveness of the information for the educational content of the electronic program, and clarity of the instructions. Based on the experts' instructions, the wording of some questions was modified.

6- Test Correction:

Table (2)
Test Correction Method

wrong question		The correct question	Choose the correct answer
Correct the error	Determine that the position is wrong		
degree	degree	Two degrees	degree

7-Test Item Analysis:

After presenting the cognitive test in its initial form to the experts, the researcher made adjustments based on the experts' opinions, including modifying or rephrasing some items. He then conducted a pilot study on (10) sports specialists from the study community, outside the primary research sample, for the following objectives:

- To determine the appropriateness and clarity of the questions, linguistic formulation, and instructions for the community members.

- Test time calculation: This was done by calculating (time of the least respondent + time of the most respondent) / 2. This resulted in determining the test time, which was (60) minutes.
- Calculating the ease, difficulty, and discrimination coefficients for the test items.

Table(3)
Ease, Difficulty, and Discrimination Coefficients for the Items
in the Cognitive Test of Legislative Culture (n=10)

n	Ease Coefficient	Difficulty Coefficient	Discrimination Coefficient		Ease Coefficient	Difficulty Coefficient	Discrimination Coefficient
1.	0.5	0.5	0.6	26.	0.6	0.4	0.8
2.	0.65	0.35	0.7	27.	0.55	0.45	0.5
3.	0.7	0.3	0.4	28.	0.5	0.5	0.6
4.	0.65	0.35	0.5	29.	0.65	0.35	0.5
5.	0.6	0.4	0.8	30.	0.6	0.4	0.4
6.	0.7	0.3	0.6	31.	0.75	0.25	0.3
7.	0.65	0.35	0.5	32.	0.7	0.3	0.6
8.	0.7	0.3	0.6	33.	0.6	0.4	0.8
9.	0.4	0.6	0.6	34.	0.6	0.4	0.6
10	0.65	0.35	0.7	35.	0.6	0.4	0.8
11	0.7	0.3	0.4	36.	0.55	0.45	0.5
12	0.7	0.3	0.6	37.	0.65	0.35	0.7
13	0.7	0.3	0.6	38.	0.6	0.4	0.8
14	0.55	0.45	0.5	39.	0.5	0.5	0.6
15	0.4	0.6	0.8	40.	0.55	0.45	0.7
16	0.7	0.3	0.4	41.	0.7	0.3	0.6
17	0.4	0.6	0.6	42.	0.55	0.45	0.7
18	0.75	0.25	0.5	43.	0.6	0.4	0.8
19	0.7	0.3	0.4	44.	0.7	0.3	0.4
20	0.7	0.3	0.6	45.	0.55	0.45	0.5
21	0.7	0.3	0.4	46.	0.6	0.4	0.6
22	0.7	0.3	0.4	47.	0.5	0.5	0.8
23	0.7	0.3	0.6	48.	0.6	0.4	0.8
24	0.65	0.35	0.5	49.	0.6	0.4	0.4
25	0.7	0.3	0.6	50.	0.65	0.35	0.5

Table (3) shows the following:

- The ease and difficulty coefficients for the legislative literacy test questions ranged between (0.25% - 0.75%), thus the test contains questions of varying ease and difficulty to suit different levels.
- The test has a high discriminatory power, with discrimination coefficients ranging between (0.40% - 0.80%), making the test a valid

tool for assessing the level of legislative literacy among sports specialists.

8-Scientific Coefficients for the Sports Legislative Culture Test:

❖ Validity: (Internal Consistency)

To calculate the validity of the test, the researcher used internal consistency validity by applying the test to a pilot sample of (10) sports specialists from the research community and outside the primary research sample. Correlation coefficients were calculated between the score of each question and the total score for the axis to which it belongs, as well as the correlation coefficients between the score of each question and the total score for the test. The following tables (4, 5, 6) illustrate the results, respectively:

Table(4)
Correlation coefficients between the score of each question in the Sports
Legislative
Culture Test and the total score for the axis to which it belongs (n=10)

Legal axis						Financial and administrative axis			
n	R	n	r	n	r	n	r	n	r
1.	.771**	11.	.811**	21.	.787**	31.	.652*	41.	.926**
2.	.907**	12.	.829**	22.	.643*	32.	.667*	42.	.890**
3.	.811**	13.	.724*	23.	.884**	33.	.811**	43.	.872**
4.	.830**	14.	.763*	24.	.780*	34.	.853**	44.	.860**
5.	.758*	15.	.811**	25.	.909**	35.	.841**	45.	.781**
6.	.875**	16.	.821**	26.	.831**	36.	.792**	46.	.822**
7.	.830**	17.	.769*	27.	.697*	37.	.846**	47.	.913**
8.	.737*	18.	.822**	28.	.684*	38.	.863**	48.	.841**
9.	.754*	19.	.811**	29.	.769*	39.	.747*	49.	.692*
10.	.845**	20.	.814**	30.	.676*	40.	.825**	50.	.828**

The tabular value of (r) at a degree of freedom of (8) and a significance level of (0.05) = 0.632.

Table (4) shows the following:

-The correlation coefficients between the score of each question in the legal axis and the total score of the axis ranged between (0.643-0.909), which are statistically significant coefficients, indicating that the axis enjoys a good degree of validity.

-The correlation coefficients between the score of each question in the financial and administrative axis and the total score of the axis ranged between (0.652-0.926), which are statistically significant coefficients, indicating that the axis enjoys a good degree of validity.

Table (5)
Correlation coefficients between the score of each question in the
sports
legislative literacy test and the total test score (n=10)

Legal axis					Financial and administrative axis				
n	R	n	r	n	r	n	r	n	r
1.	.742*	11.	.808**	21.	.764**	31.	.640*	41.	.891**
2.	.868**	12.	.806**	22.	0.637*	32.	.660*	42.	.883**
3.	.801**	13.	.704*	23.	.876**	33.	.778**	43.	.853**
4.	.806**	14.	.749**	24.	.738**	34.	.831**	44.	.822**
5.	.736*	15.	.801**	25.	.891**	35.	.831**	45.	.736*
6.	.851**	16.	.801**	26.	.818**	36.	.750*	46.	.819**
7.	.806**	17.	.757*	27.	.670*	37.	.842**	47.	.906**
8.	.722*	18.	.805**	28.	.644*	38.	.858**	48.	.831**
9.	.726**	19.	.801**	29.	.756**	39.	.713*	49.	.681*
10.	.825**	20.	.807**	30.	.641*	40.	.818**	50.	.780**

Table (5) shows the following:

The correlation coefficients between the score for each question in the Sports Legislative Literacy Test and the total score for the test ranged between (0.637-0.906). These are statistically significant correlation coefficients, indicating that the test has a good degree of validity.

Table (6)
Correlation coefficients between the score for each axis of the Sports
Legislative Literacy Test and the total score for the test (n=10)

Legal axis		Financial and administrative axis	
R	.979**	r	0.974**

Table (6) shows the following:

The correlation coefficients between the score for each axis of the Sports Legislative Literacy Test and the total score for the test were (0.974-0.979), which are statistically significant correlation coefficients, indicating a high degree of validity for the test.

❖ Reliability:

The researcher calculated the test's reliability using Cronbach's alpha coefficient. The test was administered to a random sample of (10) sports specialists from the study population and outside the primary study sample. Table (7) shows the results.

Table (7)
Cronbach's alpha coefficient for the Sports Legislative Literacy Test (n = 10)

Variable	Alpha coefficient
Legal axis	0.977
Financial and administrative axis	0.972
Total score	0.974

Table (7) shows the following:

Cronbach's alpha coefficient values for the sports legislative culture test axes ranged between (0.972-0.977), while the alpha coefficient for the test as a whole reached (0.974), which are statistically significant coefficients, indicating a high degree of test reliability.

9- Final Form of the Sports Legislative Culture Test: (Appendix 4)

After verifying the scientific coefficients of the test's validity and reliability, the researcher developed the final form of the test (50) questions, and application instructions were also developed.

Exploratory Studies:

The exploratory study: The aim was to verify the form of the test form, the clarity of the instructions, and the quality and ease of the linguistic formulation of the phrases. This study was conducted on (3) sports specialists from the study community and outside the primary sample.

Statistical Coefficients Used:

- Percentage.
- Pearson's Correlation Coefficient.
- Cronbach's alpha coefficient.
- Difficulty Coefficient and Discrimination Coefficient.

The researcher settled on a significance level of 5%. He also used SPSS Statistics 27.0 to calculate some statistical coefficients.

Research Results:

From the results of Tables (1-7), it is clear that the cognitive test is suitable for measuring the cultural level of sports specialists at Minia University regarding sports legislation. The clarity of its phrases and their varying degrees of ease and difficulty were verified to suit different levels. The results also demonstrated the test's ability to distinguish between different levels of specialists, taking into account individual differences and distinguishing between high, low, and intermediate levels in knowledge of sports legislation. The researcher verified the test's scientific coefficients, using two types of validity: arbitrator validity (the arbitrators agreed on all axes and questions for each axis), and internal consistency validity. Correlation coefficients were calculated between the score of each question and the total score for the axis to which it pertains, as well as correlation coefficients between the score of each question and the total score for the test. Correlation coefficients were also calculated between the score of each axis and the total score for the test. All were statistically significant at a significance level of 5%, indicating that the test enjoyed a good degree of internal consistency. The test's reliability was verified using Cronbach's alpha coefficient, and the results showed a high degree of reliability. The test's objectivity was also verified, with a fixed scoring key used so that those who answered correctly to the correct question received two marks, while those who answered incorrectly were divided into two parts. Those who answered incorrectly received one mark for considering the incorrect position and another mark for correcting the error in the question. Thus, the correct answer to the incorrect question also received two marks. Thus, the validity of the test has been verified and it is now ready for application to the research community.

Conclusions:

- The cognitive test of sports legislative culture under study has a high degree of validity, reliability, and objectivity.
- The cognitive test under study is suitable for measuring the cognitive level of sports legislative culture among university sports specialists.

Recommendations:

- Work to circulate a sports legislative culture test at Egyptian universities to verify the level of sports legislative culture among their sports specialists.
- Attention should be paid to developing cognitive and skill tests for sports specialists at Egyptian universities.

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Abstract:

The study aimed to develop a cognitive test of sports legislative culture for sports specialists at Minia University. The researcher used the descriptive-analytical approach due to its suitability for the nature of the research. The research population consisted of (43) sports specialists at Minia University. The researcher obtained a random sample of (10) specialists. The study standardized a cognitive test consisting of two axes: the legal axis, consisting of (30) questions, and the financial and administrative axis, consisting of (20) questions. The study concluded with a set of results, the most important of which are: The cognitive test of sports legislative culture under study has a high degree of validity, reliability, and objectivity. The cognitive test is valid for measuring the cognitive level of sports legislative culture among sports specialists at the university. The study recommended circulating a sports legislative culture test at Egyptian universities to verify the level of sports legislative culture among their sports specialists.

Keywords: cognitive test, sports legislative culture, sports specialists.

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