

**Predictive ability at the level of performance of sports management in terms of information systems in sports institutions.**

القدرة التنبؤية بمستوى أداء الإدارة الرياضية بدلالة نظم المعلومات في المؤسسات الرياضية.

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**Abstract:** This study aimed to reach the predictive ability of the level of performance sports management in terms of information systems in sports institutions, The researchers used the descriptive method in its correlative and analytical methods, The sample of the study included (35) administrators, The researchers used questionnaire as a tool for study, SPSS 23 programme was used to calculate a set of statistical equations, Finally, a predictive equation was drawn up showing the percentage of information systems contribution to the performance of sports management , Therefore, the researchers recommended the need to pay attention to the technological and information aspect and to emphasize the importance of information systems and to work on their development and development in sports institutions.

**Keywords:** Information Systems, sports management, Sports institutions.

**المخلص :** هدفت هذه الدراسة للوصول إلى القدرة التنبؤية بمستوى أداء الإدارة الرياضية بدلالة نظم المعلومات في المؤسسات الرياضية، حيث استخدم الباحثين المنهج الوصفي بأسلوبه الإرتباطي والتحليلي، أما عينة الدراسة فقد تضمنت (35) إداري، وقد استخدم الباحثين الاستبيان كأداة للدراسة، وقد تم استعمال برنامج spss 23 لحساب مجموعة من المعادلات الإحصائية، وفي الأخير تم التوصل إلى استخلاص معادلة تنبؤية توضح نسبة مساهمة نظم المعلومات في أداء الإدارة الرياضية، وعليه أوصى الباحثين بضرورة الاهتمام بالجانب التكنولوجي والمعلوماتي والتأكيد على أهمية نظم المعلومات والعمل على تنميتها وتطويرها في المؤسسات الرياضية.

**الكلمات المفتاحية:** نظم المعلومات، الإدارة الرياضية، المؤسسات الرياضية.

**- Theoretical chapter:**

**1- Introduction and probematic of the study:**

Sports management is today an important part of the concerns of governments in developed countries and this is because sports management play an effective role in achieving achievements and athletic excellence at the local and international level, it is now dependent on the scientific method in the implementation of its activities and technology Modern in its management, is considered effective management and contribute to the achievement of sports and its development in quantity and quality, so the prosperity and growth of any society depends and is based mainly on the strength and efficiency of its members, so the leader has taken care of the sports work with all that benefits their bodies and helps them to achieve their goals The place. **(Borza Rabah, 2010/2011, p01)**

Sports organizations, like other institutions, face many changes and challenges as a result of technological and economic developments and globalization, which called for the emergence of new concepts in the management of institutions in general, which seek to achieve the goal of survival and continuity in the world of competition, by changing their methods Traditional, which is not commensurate with the challenges faced by institutions, and adopting modern management concepts that enable the institution to deal with the various challenges it faces and overcome them to achieve a better level of performance, especially in the field of globalization, the ict revolution and the Internet.

Information technology is an important and effective tool in improving institutions performance by directly affecting the way work is carried out in the organization by reducing the time needed to carry out activities in the management process, shortening geographical distances and increasing

connectivity. Integration among parts of the Organization, creating memory and information stock helps to continuously develop its business. On the other hand, information technology has brought about continuous and clear changes in the dimensions and characteristics of the organizational structure used by organizations to become a flat form in terms of reducing the number of administrative levels and expanding supervision, increasing internal and external expansion, and activating the degree of staff participation in Decision-making, changing planning methods and controlling all the organization's work, thereby achieving high flexibility in response to increasingly complex external variables. **(Lucas H.C Jr, 1996, p. 9)**

Information systems in many organizations are an important resource in the organization's resources, as they are increasingly important because of the need of different organizations, which is no longer limited to business organizations, but also to non-profit management organizations such as educational and sports organizations, Service facilities such as ministries and others, these organizations, like business organizations, need information systems that enable them to make their decisions on the right basis **(Hosseina Salim, 1998, p128)** and the use of information in decision-making not only makes them more efficient in achieving goals at the lowest costs, but also more effective in Achieving these goals in the best possible way. **(Abu Ramadan Muhammad, 2000, p98)**

#### **1-1- Study questions:**

- **The general question:** Is it possible to predict the performance of sports management through information systems in the sports institutions of the State of Bouira ?

- **Partial questions:**

- Is there a statistically significant correlation between information systems and the performance of sports management in the sports institutions of the State of Bouira?
- What is the percentage of the information system's contribution to the performance of sports management in the sports institutions of the State of Bouira?
- Is it possible to achieve an equation to predict the performance of sports management in terms of information systems in the sports institutions of the state of Bouira?

**1-2- Hypotheses:**

- **General Hypothesis:** The performance of sports management can be predicted through information systems in the sports institutions of the State of Bouira.

- **Partial Hypotheses:**

- There is a statistically significant correlation between information systems and the performance of sports management in the sports institutions of the State of Bouira.
- The percentage of the information system's contribution to the performance of sports management in the sports institutions of the State of Bouira.
- An equation can be found to predict the performance of sports management by the significance of information systems in the sports institutions of the State of Bouira.

**1-3- Significance of the study:**

The importance of the current study is reflected in the prediction of the performance of sports management through information systems in the sports institutions of the State of Bouira through:

A- Helps to know the strengths and weaknesses of the branches of the information system located in the sports institutions of the state of Bouira and their contribution to the performance of sports management.

B- Provide an equation for predicting the performance of sports management in terms of information systems in sports institutions.

#### **1-4- Objectives of the study:**

The main objective of the research is: to predict the performance of sports management through information systems in the sports institutions of the State of Bouira, Under the main objective, the following objectives are included:

- To find out if there is a statistically significant correlation between information systems and the performance of sports management in sports institutions.
- Know the percentage of the information system's contribution to the performance of sports management in the sports institutions of the State of Bouira.
- To find out if an equation can be found to predict the performance of sports management in terms of information systems in sports institutions.

#### **2- The significant terminology of the study:**

**2-1- Information Systems:** An integrated system consisting of a group of individuals, procedures and sources of information, which provides the Department with all the accurate and adequate information it needs about the various activities of the organization and in a timely manner, in order to complete the administrative functions of planning, organization and control Lead and make appropriate decisions efficiently and effectively.( **Adnan Awad Al-Shawabaka, 2011, p107**)

**2-2- Sports Management:** A collection of outstanding activities geared towards the optimal and efficient use of resources and the best investment of time and human resources and with the aim of achieving pre-defined goals, in light of the

constant change that is a challenge to their trends and proof of their ability and good choice For her performance and role in the field of sports. (Jamal Mohammed Ali, 2007, p49)

**2-3- Sports institutions:** are educational sports institutions aimed at preparing young people and caring for young people in the light of the state's policy, and they are essentially on their human resources in providing their services and achieving their goals. ( Samir Abdel Hamid Ali, 1999, p03)

**3- The art condition and similar studies:**

- **The first study:** The Study of Imad Safuk Skins Al-Ruwaili (2014), under the title Of the Role of Human Resources Information Systems in Increasing the Effectiveness of Human Resources Management, Field Study in the Ministry of Interior in the Kingdom of Bahrain, a letter within the requirements of obtaining a master's degree, the study aimed to study the role of information systems Human resources management in increasing the effectiveness of human resources management performance, the researcher used the descriptive method in his correlation and analytical methods, on a deliberate sample of 217 workers, and the researcher used the questionnaire as a tool for study, and using the appropriate statistical method the researcher reached the following results: There is a positive and statistically significant correlation between hr information systems and the effectiveness of the human resources management performance of the Ministry of Interior in the Kingdom of Bahrain. Demographic variables, there are statistically significant differences about the effectiveness of the performance of human resources management of the Ministry of Interior due to some demographic variables.

- **The Second Study:** Sherif Hamza Study (2019), under the title Of Using Electronic Management Elements and Their Contribution to Increasing the Effectiveness of Human Resources Management in Sports Facilities, Field Study

on Sports Facilities of The Province of Mislá, Research Paper published in the Journal of Sports Creativity Volume No. (10) / Issue No. (01) (/June 2019/ page: 402-419, the study aimed to identify the contribution of the use of electronic management elements in increasing the effectiveness of human resources management in sports facilities, the researcher used the descriptive analytical method, and a random sample of 37 administrators, and the researcher used The questionnaire is a tool for study, and using the appropriate statistical method, the researcher reached the following conclusions: the use of devices and equipment contributes to the increased effectiveness of human resources management in sports facilities, and the use of software contributes to increasing the effectiveness of human resources management in sports facilities.

- **The third Study:** Study of Moussa Abdel Nasser and Mohamed Qureshi (2011), under the title Of The Contribution of E-Management in the Development of Administrative Work in Higher Education Institutions, The Case Study of the Faculty of Science and Technology at the University of Biskra, Algeria, a research paper published in the researcher's magazine Issue 09-2011, the study aimed at To find out the extent to which e-management contributes to the development of administrative work in higher education institutions in Algeria, the researcher used the descriptive correlation method, on a simple random sample of 40 workers, and the researcher used the questionnaire as a tool for study, and using the appropriate statistical method to reach Researcher for the following results: There is a positive correlation relationship of statistical significance between the use of devices and equipment and the development of administrative work in the college in question, there is a positive correlation relationship with statistical significance between the use of software and the development of administrative work in the college in question, there is a relationship A positive correlation with statistical significance between the use of

communication networks and the development of administrative work in the college in question, there is a positive correlation with statistical significance between the use of knowledge makers and the development of administrative work in the college in question.

- **The fourth Study:** Sharif Hamza & Madjadi Rabah Study (2019), under the title Of Use of electronic-management elements and their contribution to increasing the effectiveness of functionality in Sports Facilities, Research Paper published in the Journal of Sports Creativity Volume No. (10) / Issue No. (01) (/June 2019/ page: 411-430, the study aimed to identify the contribution of electronic management elements to increasing the effectiveness of the functionality in sports facilities, the researcher used the descriptive analytical method, and a random sample of 37 Employees, and the researcher used The questionnaire is a tool for study, and using the appropriate statistical method, the researcher reached the following conclusions: The use of electronic management elements (hardware, equipment, software, networks) contributes to the effectiveness of the functioning in sports facilities.

- **The practical chapter:**

**1- Followed Methodologies:**

**1-1- Research methodologie:**

The approach means a set of general rules and regulations that are developed in order to reach acceptable facts about the phenomena of interest by researchers in various fields of human knowledge, As the research methods differ in research according to the problem of research and its objectives, as well as the different aspects of the search, researchers can follow different scientific approaches, and from this point of view, due to the nature of our subject of 'predictive capacity at the level of performance of human resources management in the significance of information systems in Sports institutions - Bouira- 'We



decided to rely on the descriptive approach in its correlation and analytical methods to suit the nature of the current study.

**1-2- study variables:**

- the independent variable: in our study the independent variable is **Information systems**.

- the dependent variable: in our study the dependent variable is **Performance of sports management**.

**1-3- The society:** it means all the individuals, events or views of the subject of research or study (**Mohammed Obeidat & others, 1999, p84**), and our society is represented by the administrators of the Directorate of Youth and Sports and the Multi-Sports Complex Court in Bouira.

**1-4- The sample:** The sample of the study included (35) administrators divided by the Directorate of Youth (20) and Sports and the Multi-Mathematics Complex of Bouira (15), They were selected in a comprehensive inventory method.

**1-5- Statistical methods:** Data were processed according to the following statistical methods: Pearson correlation coefficient, Cronbach's alpha, Simple Linear Regression.

**1-6- Tools of the study:**

The researcher has to determine the best tool that suits his research, there is no specific tool that can be preferred absolutely over other tools, and accordingly the process of selecting the tool depends on several factors including the nature of the research and its purpose, from which the goal of our study is to reach the predictive ability of the level of performance sports management in terms of information systems in sports institutions, In line with achieving this goal and ascertaining the hypotheses of the study and what it requires to reach conclusions on which the researcher is based, the two students chose the following tools:

**\* Information systems questionnaire:**

The questionnaire was originally prepared by the researcher in order to measure the level of information systems available to the sports administration, where the questionnaire consists of (48) words distributed on (04) dimensions consisting of the dimension of material requirements contains (10) statements, after the requirements of the software contains (13) words, after the requirements The regulatory contains (15) statements, after human requirements contains (10) statements, which the administrator answers according to a five-step ladder (I strongly agree, Agree, neutral, I do not agree, I do not agree strongly), taking into account when applying the questionnaire the phrases are scattered and not mentioning the dimension to which they belong.

The maximum score for the questionnaire is 240, the minimum score is 48 for the questionnaire as a whole, the maximum of the physical requirements is 50 and the minimum is 10, for the dimension of the software requirements, the maximum score is 65 and the minimum is 13, and for the dimension of the regulatory requirements. The maximum score is 75, the minimum is 15, and for the dimension of human requirements, the maximum is 50 and the minimum is 10.

**Table 01: Dimensional degrees and the degree of questionnaire as a whole.**

	Low	Average	High
Degree of material requirements dimension	23,33 -10	36,66 -23,33	36,66-50
Degree of Software requirements dimension	30,33 -13	47,66 -30,33	65 -47,66
Degree of Regulatory requirements dimension	15-35	35-55	55 -75
Degree of Human requirements dimension	23,33 -10	36,66 -23,33	36,66-50
The degree of the questionnaire as a whole	112 -48	176 -112	240 -176

**Psychometric questionnaire:**

**A- Honesty:** The researchers relied on virtual honesty by presenting it to (10) arbitrators of specialists, as well as on the sincerity of internal consistency (content) which was verified after applying it to the exploratory sample, where They calculated the correlations between the questionnaire statements and the dimension to which they belonged, and between the dimension and The questionnaire as a whole, 'a standard (0.29) was adopted to keep the paragraphs, After the link was made, it was found that all the phrases had a strong correlation coefficient.

**B- Stability:** We have verified the stability of the test in the Alpha Gronbach method.

- Alpha Gronbach method: The stability rate using Alpha Gronbach was 0.928, which means that the questionnaire has a high degree of stability enough to judge the validity of the questionnaire for application.

**\* Sports Management Performance Questionnaire:**

Originally prepared by researcher Emad Safok Skins Ruili 2014 in order to measure the performance of human resources management, the aim of the preparation and adaptation of the questionnaire is to adapt to the sports management in sports institutions, as the questionnaire consists of (47) words distributed over (04) dimensions represented by the dimension of performance quality Contains (12) words, after the effectiveness of the performance contains (14) words, after communication contains (11) words, after decisions contains (10) statements, answered by the administrator according to a five-step ladder (I strongly agree, I agree, neutral, I do not agree, I do not agree strongly), take into account when applying the questionnaire the phrases scattered and did not mention the dimension to which they belonged.

the maximum score of the questionnaire is 235, the minimum score is estimated at 47 for the questionnaire as a whole, for the dimension of performance quality, the maximum score is 70 and the minimum is 14, and for the maximum performance effectiveness the maximum score is 70 and the minimum is 14, and for the dimension of communication the greatest score is 55. The minimum is 11, and for decision-making, the greatest score is 50 and the minimum is 10.

**Table 02: Dimensional degrees and the degree of questionnaire as a whole.**

	Low	Average	High
Degree of Quality of performance dimension	32,66 -14	51,34 -32,66	70 -51,34
Degree of Effective performance dimension	32,66 -14	51,34 -32,66	70 -51,34
Degree of Communication dimension	25,66 -11	40,34 -25,66	55 -40,34
Degree of Decision-making dimension	23,33 -10	36,67 -23,33	50 -36,67
The degree of the questionnaire as a whole	112 -48	176 - 112	235 -176

#### **Psychometric questionnaire:**

**A- Honesty:** The researchers relied on virtual honesty by presenting it to (10) arbitrators of specialists, as well as on the sincerity of internal consistency (content) which was verified after applying it to the exploratory sample, where They calculated the correlations between the questionnaire statements and the dimension to which they belonged, and between the dimension and The questionnaire as a whole, 'a standard (0.29) was adopted to keep the paragraphs, After the link was made, it was found that all the phrases had a strong correlation coefficient.

**B- Stability:** We have verified the stability of the test in the Alpha Gronbach method.

- Alpha Gronbach method: The stability rate using Alpha Gronbach was 0.943, which means that the questionnaire has a high degree of stability enough to judge the validity of the questionnaire for application.

## 2- Exposure, analyses and result exam:

### 2-1- View the results of the relationship between the information system and the performance of sports management:

Table (03) represents the relationship between information systems and human resources management performance.

Variables	Calculated Pearson value	Sig	Statistical significance
Independent Variable: Information Systems	0,980	0,000	Statistically function
dependent variable: Performance of sports management			

Through the results of the statistical analysis shown in table 03, it is clear to us for the relationship between information systems and the performance of sports management came (0,980) with a probability value of (0.000), which is smaller than the indicative level of 0.05, which indicates that it is a statistical function, which means the existence of a positive correlation relationship, A statistically functioning package at the level of indication ( $0.05 = \alpha$ ) between information systems and the performance of sports management in the sports institutions of the State of Bouira.

## 2-2- View contribution ratio values or selection coefficient (interpretation):

**Table No (04) The quality of the reconciliation model of linear regression equation.**

Variables	R	<sup>2</sup> R	Std. error of the estimate	f	Sig
Independent Variable: Information Systems	0.980	0.960	0.789	796.214	0.000
dependent variable: Performance of sports management					

Through Table (04), We note that for the information system, the coefficient of determination (interpretation) was valued at 0.960, That is the information systems indicating the prediction accounted for 96% of the variation in the performance of sports management.

We note that the value of "F" is equal to 796,214, respectively, with a probability of 0.000, which is below the indicative level of 0.05, Which indicates the predictive value of the model.

**Conclusion:** We conclude that the independent change (information systems) has the ability to predict the performance of sports management in the sports institutions of the State of Bouira.

## 3-3- Extract slope equation transaction values:

**Table (05) shows the results of the regression factor of information systems on the performance of sports management.**

Variables	B	Std. error of coefficient Regression	Beta	t	Sig
Constant	-12.321	4.705		-2.619	0.013
Information Systems	1.160	0.041	0.980	28.217	0.000

Through table no (05) we note that the value of the constant is 12,321- (the coefficient of regression x (information systems) is valued (1,160), and

through the values B of the relative contribution and the standard error of values and the T test, Whose probability value was below the level of significance, this indicates that it is statistically significant at the level of indication. 0.05, From there, the linear regression equation comes as follows:

$$\text{Sports management performance} = 12,321 - 1,160 * \text{Information Systems}$$
$$Y = 1,16x - 12,321$$

**Conclusion:** The above-mentioned results indicate the morale of the coefficients (Constant and x) of the simple linear regression, That is, the slope model equation does not pass by the point of origin, and the value of the regression coefficient is not equal to zero, and we conclude that the conditions of the model have been achieved, That is, it is predictable.

**Discussion:**

It is clear from table 03 that the independent variable (information systems) explains 96% of the variable variation (performance of sports management), which is statistically significant, We note that the value of F is equal to (796.214) And therefore a probability of 0,000 which is less than 0.05, So the slope is statistically significant and not equal to zero and therefore there is a relationship between the independent variable and the dependent variable, This is consistent with the results of the Study of **Imad Safuk Skins Rouili (2014)**, the results of which indicated the existence of a positive and statistically significant correlation between human resources information systems and the effectiveness of human resources management performance, This is also illustrated by the study of **Musa Abdel Nasser and Mohammed Qureshi (2011)**, which showed that there is a positive correlation with statistical significance between the use of software and the development of administrative work, The high contribution ratio of the independent variable also indicates that the common variation between the independent variable (information systems)

of the dependent variable (human intake management performance) was very large, And that's what's clear from the level of significance, Which shows that there is a probability of a coincidence (0,000), This is illustrated by the **Sharif Hamza Study (2019)**, entitled The Use of Electronic Management Elements and Their Contribution to Increasing the Effectiveness of Human Resources Management at Sports Facilities, which have reached the following conclusions: The use of hardware and equipment contributes to increasing the effectiveness of human resources management in sports facilities, and the use of software contributes to the increased effectiveness of human resources management in sports facilities, The use of networks contributes to the increased effectiveness of human resources management in sports facilities, and also This is illustrated by **Sharif Hamza & Madjadi Rabah Study (2019)**, entitled The Use of electronic-management elements and their contribution to increasing the effectiveness of functionality in Sports Facilities, which have reached the following conclusions: The use of electronic management elements (hardware, equipment, software, networks) contributes to the effectiveness of the functioning in sports facilities , As can be seen from table 05, the statistical indication of the slope-slope factor by testing it at the value of  $t$  ) (which appears to be a function at the level of indication (0,000), which indicates the high possibility of predicting the level of performance of human water management through information systems, From these data it can be said that the conditions of the model are achieved and are valid for predictability and therefore the validity of the simple linear regression test, and the study was concluded by establishing a predictive equation of the performance of human resources management by indicating the information systems in the sports institutions of the State of Bouira.



**3- Finding and propositions results:** Through what has been discussed, we are able to draw the conclusion of this study, especially through the applied study that removed the ambiguity of this work, through the questionnaire addressed to the administrators, where we were able to ensure that the level of performance of sports management can be predicted through systems Information in the sports institutions of the state of Bouira in addition to:

- There is a statistically significant correlation between information systems and the performance of sports management in sports institutions.
- The percentage of the information system's contribution to the performance of sports management in the sports institutions of the State of Bouira.
- To achieve an equation for predicting the performance of sports management in terms of information systems in sports institutions.

This study sought to predict the performance of sports management through information systems in the sports institutions of the state of Bouira, where it was clear from this study that the degree of application of the information system in sports institutions was moderate, and the degrees of application of subsystems for the system The information varies between the weak and the medium, and the degree of performance of sports management in sports institutions was moderate, and the grades of human resources management performance indicators were also varying between the weak and the medium, and the study found that there is a positive correlation of a statistical significance between Information systems and human resources management performance in sports organizations, and that the percentage of the information system's contribution to the performance of human resources management was high, which confirms the effectiveness of these information systems in the performance of various human resources management functions,

and finally a model was built through which the performance of Human resources management in terms of information systems in sports institutions

At the end of this study, in the light of the findings, discussion and interpretation, or through what might be drawn from the literature of the topic, the following recommendations can be made:

The need to pay attention to the technological and information aspect of hardware and software and to emphasize the importance of sports management information systems and work to develop them in sports institutions.

Reliance on the predictive equation generated by this study.

- Study the relationship between the various mathematical management sub-information systems and devise predictive equations, to predict them through these variables.

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