

The main feature of the uses of information and communication technology in human resources management in sport institutions

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Abstract:

In a sports and economic environment undergoing profound transformations, especially with the rapid growth of modern technology, sports institutions face major challenges and different management approaches. Through effective human resource management, these institutions can achieve many competitive advantages that enable them to address challenges and ensure continuity and survival. Therefore, in this study, we addressed the key features of using information and communication technology in managing human resources within sports institutions.

KEY WORDS: information and communication technology, human resource management, sport institutions.

المخلص:

في ظل محيط رياضي واقتصادي يعرف تحولات عميقة سيما النمو الكبير والسريع للتكنولوجيا الحديثة، وجدت المؤسسات الرياضية نفسها تواجه تحديات كبرى وطرق مختلفة في التسيير، والمؤسسة الرياضية ومن خلال إدارة الموارد البشرية بإمكانها إحراز الكثير من المزايا التنافسية التي تمكنها من مواجهة التحديات المختلفة وضمان الاستمرار والبقاء.

ولهذا تناولنا في هذه الدراسة الملامح الرئيسية للاستخدامات تكنولوجيا المعلومات والاتصال في إدارة الموارد البشرية بالمؤسسات الرياضية.
الكلمات المفتاحية: تكنولوجيا المعلومات و الاتصال؛ إدارة الموارد البشرية؛ المؤسسات الرياضية؛

Introduction and study problem:

The inclusion and use of modern information and communication technologies in the sports field should be part of a total change and a comprehensive renewal of the management process and the educational structure. Its objectives cannot be achieved if the conventional environment remains the same. Therefore, we should reconsider the structure of sports management in particular and its framework and methods. There should be a new comprehensive overview based on scientific foundations in which modern information and communication technologies find their place.

Information technology relies on the use of modern technological machines in collecting data. Processing and communicating information may be an effective and necessary means in today's world to meet the cognitive challenges and frequent changes, in order to develop individuals in the sports field, release their abilities and talents and renew their experiences and knowledge through learning, experience and education that target professional groups and social classes because the role of information technology in improving sports management protects the sportsman from their negatives and shortcomings and increases his humanity, which grows by mind, thought and action because sports management is considered one of the most important elements in achieving success in management and leading us to win championships in sports competitions.

Algeria's interest in the information and communication technology (ICT) sector has started recently, and Algeria is working to develop this sector and put it at the center of its strategies, as it has adopted a policy of openness and overall reform to promote political, economic and social development. However, despite the efforts made to develop the IT sector, Algeria is still lagging behind compared to other countries.

Through his work in the field of physical education and sport, and by collecting information related to the work of sports federations and institutions in Algeria, the researcher observed that the progress of these sports institutions at different levels is a limited pattern of

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administrative performance in the sports field, a slow pattern that fails to keep pace with the adaptation to these changes, this can lead in individuals lagging behind and being at the back of sports competitions and tournaments.

Noting that great countries are trying to find the appropriate skills to serve sports and meet their requirements in order to face the development of knowledge and technology and keep pace with development and rapid growth. In addition, developed countries have made significant progress in the field of updating information and aligning with the current era and keeping in step with advancements in the field of sports.

Many sports teams in Algeria have failed to win various sports competitions and tournaments, which may be due to administrative dysfunction or a lack of keeping up with the use of technology in sports management. (Selami et al, 2021, p59).

Traditional human resource management was characterized by significant paperwork and lengthy administrative procedures rendering the process slow. However, the contemporary use of information technology (IT) supports various human resource activities. Moreover, the increasing use of information technology enhances the performance of human resource professionals. contemporary human resource management views the use of information and communication technology as a catalyst for operational efficiency. Recognizing that people or human resources are one of the main assets to determine the success or failure of the institutions. Consequently, the knowledge, skills, attitudes, and behaviors of these individuals are crucial for improving organizational conditions. , human resources are the main assets capable of achieving growth and development in the institutions, The digital technological revolution in the world is seen by institutions as a tool to manipulate the performance and behavior of human resources to achieve business success. (Terfa, 2020: 266).

Building upon this foundation, the following research question arises:

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What are the main features of the use of ICT in human resource management in sports institutions?

By attempting to answer this problem, we will aim to achieve the following objectives:

_Highlighting the most important concepts of information and communication technology (ICT), human resource management (HRM) and sports institutions.

_Highlight the main repercussions of the use of ICTs on management thinking and the main features that have become characteristic of business institutions in light of the use of ICTs.

_Highlighting the infrastructure of ICT components.

_Highlight the most important uses of ICT in human resources management.

_Highlighting the effects of ICT use on human resources by identifying the positive and negative effects of ICT use.

I: Concepts concerning information and communication technology, human resource management and sports institutions:

1_1_ The concept of a sport institution:

A sports institution is a specific organizational structure, whether in the private or public sector, concerned with working in the sports field. Its aim is to promote sports activities and provide various services to the sports public, whether in the form of a profession or a hobby. This includes various structures such as sports federations, Olympic committees, sports clubs, educational institutions for sports programs, and everything related to the sports aspect, as well as organizing tournaments and competitions, improving the level of athletes, both professional and amateur, promoting health and exercise, providing various services related to administrative branches, marketing, finance, and other areas. Ultimately, the various sports organizations seek to foster physical activity and sportsmanship

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in accordance with its own principles and specific objectives. (Malki, 2024:182).

1_2_ the concept of information and communication technologies:

These are the devices, equipment and methods used by humans to obtain audio, graphic and digital information, as well as for the processing of that information in terms of organizing, arranging, storing, acquisition, retrieval, display, reproduction, broadcasting, and timely delivery to the requester, including storage and retrieval technology, and communication technology. (Mohamed Eshorfa, 2008:47-48).

These are the technologies that allow access to information through telecommunications, which are similar to information technology but are mainly based on communication technologies, including wireless networks: the Internet, mobile phones, and other communication and media devices. (Elhazzam, 2015: 35).

The advancement of new information technology is putting pressure on employees to update their professional knowledge. Whether it's specialized skills or simply the ability to do a precise job, employees need to be constantly exposed to new tools and technologies. This is because a key to winning a new job is by demonstrating the ability to use new technologies. (Wang, 2008: 454).

1_3_ Human Resources Management:

A distinctive approach to labor management that seeks to achieve competitive advantage through the strategic deployment of a workforce committed to achieving objectives through an integrated set of culture, structure, and people technologies. (Teemu j, 2015: 131).

Or it is a set of organizational activities aimed at attracting, developing, motivating and retaining employees and ensuring the effective utilization of human resources to achieve organizational objectives. (Sharmila et al, 2018: 4).

II: The trends of management thinking and the transformation of business enterprises in the light of information and communication technology (ICT):

2_1_ Characteristics of ICT:

The use of information technology by enterprises has increased in recent times due to its characteristics that enable them to solve some of the issues they face. These characteristics include:

- ✓ **Speed:** Information technology processes information by converting, processing and calculating... much faster than humans. This function has allowed to significantly reduce the time for processing information, and eliminated the need for any manual and calculation and processing tasks that are difficult to perform manually.
- ✓ **Bridging the distance:** In this regard, it has significantly reduced the time spent on remote communication. Today, it is possible to instantly transfer very large amounts of data between any two points on the globe, thanks to advancements in information technology.
- ✓ **Storage capacity:** This is demonstrated through the development of electronic means used for storing information, as well as the continuous development of the systems for managing existing databases and documents. This allows each user to have access to a large amount of information, regardless its storage location.
- ✓ **Flexibility of usage:** It is crucial feature, as it can be applied across a wide range of different fields.

2_2_ The implications of ICT use on human resources:

today, every institution uses information system and computer technology to discuss everything and everywhere, information technology and the Internet are very remarkable in organizational framework, enabling effective communication with employees and providing availability of information anytime, anywhere and at the right time. Research has shown that ICT has generated new

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competencies and attitudes as well as new job nomenclature. And many people perceive ICT as a “magic wand” that can solve the issues of any organization, forgetting that the key to success lies in a comprehensive organizational change. Therefore a new organizational design that would allow the use of all the potential advantages of ICT.

Within institutions where ICT has only a minor impact or is likely to have a small impact in the future, the strong impact of technology is not evident. However in institutions where ICT is crucial for the future existence and growth, it acts as a driving force, and a significant impact is observed when the organization's workflow and survival are dependent upon the application of technology that is a strategic resource and an integral part of the institution.

Contemporary organizations base their business success and competitive advantage on strategic human resource management. In this context, it is worth noting that ICT has become a strategic partner in human resource management, and that the level of acceptance and implementation determines the structure of the e-HRM system, i.e. with the development and introduction of new technologies within the organization, relevant effects occur on the human resource management policies and practices applied in the organization, through the recruitment and selection of potential candidates via the Internet and social networks (e-recruitment and e-selection), Changing the nature of work, redesigning existing jobs, and introducing new jobs. These are just some of the forms of human resource management activities that have been transformed by the application of ICT. (Fratsa, 2019:5).

III: Information and Communication Technology Components:

Information Technology Infrastructure can be considered to include the following elements: hardware, software, databases, networks and telecommunications, operating systems, consultants, and the Internet, Accordingly, the elements of the infrastructure are as follows:

3_1_ Hardware:

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It includes the equipment used to enter, store, transmit, transfer, handle, retrieve, receive and broadcast information to users. It also includes the computer and its associated peripheral devices that include the central processing unit, the main board, the screen and others called physical components. Thus, the hardware consists of computers of all types and their subcomponents. In terms of computer components, it includes the following elements:

- ✓ Input Unit: This includes the keyboard, microphone, camera, and other gadgets.
- ✓ Central Processing Unit (CPU): which processes data and controls the computer system.
- ✓ Storage Unit: Primary internal storage, and secondary storage such as disks, magnetic tapes, and optical disks.
- ✓ Output Unit: Such as printers, monitors, and audio output devices.
- ✓ Communication Unit: Used to connect computers.

3_2_Software:

It is a collection of the incorporeal components of a computer system, including instructions, procedures, programs, operating systems, and software languages. This software performs several basic functions, most notably managing computer operations, retrieving data, and supporting business applications.

There are many varieties and types of software, and we will focus our attention on the most commonly used types, namely base application software, general application software, and useful applications.

- ✓ Base applications: It includes all the programs that operate the machine. these programs are created to regulate the operation of the physical components. They interpret the commands from the user and convert them into signals that operate the equipments, and all programs are the so-called operating system (system d'exploitation).

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- ✓ General applications: These are all the programs that humans use to perform a specific task on a computer, such as writing texts, creating programs, preparing a table, etc. All the tasks that we can do, which are countless and numerous, require some kind of application. (Daoud Al-Lami, 2013: 13).

3_3_ Data base:

It is a collection of linked data or information stored in data storage devices such as accounting hard disks, floppy disks or tapes. It is a structured collection of electronically stored data, which is controlled and accessed through a computer, and is organized based on predefined correlations between specific types of data related to business, situations or issues. (ibid, 2013: 13).

3_4_ Telecommunication and Networks:

The term networks refer to the chain of interconnection of a group or system. The examples of networks in our world are almost endless, such as computer networks, while telecommunications, on the other hand, is the exchange of information in any form (voice, data, text, images, video over networks). Networks are the most widespread form of communication in everyday life, and the main trends occurring in the field of telecommunications have an important impact on management decisions in this area. Therefore you should be aware of the main trends of the telecommunications industry, technologies and applications that significantly increase the alternatives of decisions facing business managers and professionals.

3_5_ Human Resources:

The previous components cannot achieve their goals without the human element. Almost all specialists in this field agree that the importance of the human element in the management and operation of information technology greatly exceeds the importance of the material requirements, and also most system failures are attributed to it. (Abdul Hussein Al-Faraj, 2005: 141).

IV: The uses of information and communication technology (ICT) in human resource management (HRM):

The transition from traditional administrations to e-administrations is not only based on computers, the Internet, telecommunications networks and other technical aspects, but it is primarily a managerial issue that depends on advanced management thought and management leadership.

Therefore, we will be addressing: e-recruitment, e-selection, e-compensation system, e-formation and e-training.

4_1_ E-recruitment:

E-recruitment means the use of the Internet and modern technologies to finalize all employment-related procedures. This include everything from the announcement of jobs, the completion of job application forms, to electronic tracking by the applicant, inquiring about it, conducting electronic differentiation between applicants. Finally announcing the results on the site. (Mokri, 2019: 15).

E-recruitment includes the following procedures:

- ✓ Job Vacancies Announcement: Through the institution's internet, depending on the nature of the jobs and the organization's recruitment policy.
- ✓ Providing search mechanisms: It is a standard technology that can be easily connected to internet networks and helps employees to find the required job.
- ✓ Having links to former employers and educational institutions.
- ✓ Applicant Tracking Systems: These are resume scanning programs with potential capabilities.
- ✓ Online tests procedures: This helps to eliminate the need for all applicants to be in a specific location and allows for the screening of a large number of applicants simultaneously. (ibid, 2019: 15).

The advantages of the e-recruitment system:

- ✓ Saving time in the recruitment process: by determining the nature of the job and the specifications of the candidate, posting the advertisement online, sending an email to the concerned departments, screening job applications online, and starting the evaluation process, such as my profile, my job, market.
- ✓ Save on costs: This saves the contracting company from paying additional expenses: For intermediaries, paperwork, additional labor costs, etc.
- ✓ Job descriptions: Develop standardized job descriptions and required specifications to identify skills, tasks and duties more quickly, develop systems for obtaining individuals with the necessary qualifications, and design user-friendly job advertisement websites that offer easy access to a list of available jobs and update it regularly with links that allow applicants to email those selected for appointment. (Najm, 2004: 282).

4_2_ E-selection:

Selection systems are very important as they enable the institution to increase the chances of obtaining qualified people to fill vacant positions. These systems rely on a variety of specific strategies, including interviews, ability tests, personal tests and others, to obtain a proper assessment of the job applicant's abilities and capabilities within the required range for the job, this system allows applicants to cover vacant positions, submit their CVs or complete the application online. It also provides applicants with a comprehensive overview of the suitable jobs, and allows the organization to screen and filter applicants for the job.

Online selections are an important factor in sorting job applicants. However it is not necessary to exclude an applicant if they are not suitable for the position. Some advanced systems have the ability to transfer applications to suitable vacancies, while others keep the applicants' data in a data warehouse as an automatic reference in case other opportunities become available. (Benghida, Harkat, 2018: 259).

4_3_ The e-compensation system:

Compensation systems are used for the purposes of developing and implementing salary payment systems in institutions. They perform many tasks, such as calculating salaries, taxes and insurance, and some of them issue payment receipts, some of them electronically, in addition to that, compensation systems notify employees of many matters related to their financial aspects, and enable managers to make several estimates, such as estimating the expenses associated with salaries.

E-HRM systems can support salary systems in a number of different ways:

- ✓ Create greater integration between salary systems and time and attendance systems, especially in jobs that depend on the number of working hours.
- ✓ Facilitate the management of payroll procedures such as sending payment receipts through email, and thus save a lot of administrative expenses.
- ✓ Fast response to changes in employees' conditions such as incentives and rewards, especially in light of the recent trends of linking salary to performance in all institutions.
- ✓ Automating the forms of routine expenses such as transportation, travel and others, where the employee can fill out the form through the Internet or through the organization's website, calculate the value of these expenses and then transfer them to the payroll system electronically. (Markham, 2006: 133).

4_4_ E-Training:

It is known as the process of creating an interactive environment rich in applications based on computer technology, networks and multimedia. This enables the trainer to achieve the objectives of the training process through his interaction with its sources, in the minimum possible time, with the least effort, and at the highest levels of quality without being bound by the limits of time and space. E-

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training is designed and implemented through several stages, which are mentioned below:

- E-training planning: This stage requires assessing the future needs of trainees to work on fulfilling them, identifying and clarifying the general and specific objectives of the training, and developing the necessary policies, strategies, and procedures.
- Interactive e-training design: The process by which policies, strategies and procedures are transformed into the design of course activities and the design of the training curriculum to be delivered online.
- E-learning content preparation: Which includes: Preparing course content,, designing course activities, designing the website and customizing the training environment by designing an e-training website that includes interactive training content in the form of lessons supported by multimedia.
- E-training organizing: The steps of organizing e-training are to determine the time period for training, end-of-course test, training supervision where the website includes an effective training supervision system that allows the trainer to follow up the training work, get feedback, extract data, and write reports.
- Interactive e-learning implementation: accessing the e-learning system by launching the internet explorer program and typing in the URL then the following pages will appear.
- Login page: The trainee enters the user name and password given to them by the trainer and then clicks on the login button.
- Home page: It includes the following elements: courses, chat, evaluation, mail, down-load, and search.
- Training content page: It includes a table of contents that shows the trainee how to browse and navigate through the content and includes an index of the training content.
- Trainer's page: Includes information about the trainer (name, email address, and hours of availability).
- The self-evaluation page: Describes the strategy by which the trainee's performance is evaluated.

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- Trainees' page: This page lists the names and email addresses of trainees who are enrolled to take the training content so that they can contact each other.
- Evaluation of e-learning: The training evaluation process is based on a number of principles and criteria, including: Defining the short and long term training objectives and their clarity, the comprehensiveness and continuity of the evaluation process, the interconnectedness and consistency of the training system, and the integration and quality of previous and subsequent training efforts. (Mokri, 2019: 18-19).

4_5_ E-formation:

In the light of the great increase in information and the advancement of knowledge, it has become necessary for societies to develop their methods and techniques of formation, to move away from traditional static molds, and to think of new patterns and modern methods to serve as a response to the rapid changes and keep pace with the development and progress that the world lives in the light of the great demand from the information society for modern technological applications that are characterized by flexibility, efficiency, and good design.

There are several definitions, including:

E-learning is a set of concepts, methods, approaches and means used for the new multimedia technologies of the Internet to improve the quality of training by stimulating and optimizing access to resources and services, as well as exchanges, and possible coordination and cooperation at a distance, as expressed in the European Council resolution of 2001.

E-formation covers all forms and modes of training assisted by the Internet, i.e. by means of automated and computerized information designed to be used on an Internet, Intranet or Extranet network, and this type of training is based on strong advantages such as: Reducing formation-related costs, flexibility in working hours and working times, as well as flexibility in distribution and greater access to formation. (Mokri, 2019: 19).

V: The effects of ICT use on human resources (HR):

5_1_ The positive effects of using ICT on human resources:

The most important positive effects of ICT on human resources can be identified as follows:

- ✓ Human resources information is placed in a database instead of several archives that are characterized by the repetition of several data points.
- ✓ Automated processing is applied at the salaries level by calculating wage rates, the number of hours worked, and all the parameters that enter the salary, which leads to time saving and less errors.
- ✓ It helps the admin to select qualified human resources by referring to the database available in the institution.
- ✓ Relying on networks simplifies, streamlines recruitment procedures and reduces costs.
- ✓ Relying on information technology in training reduces the time, procedures and costs related to it, which motivates the institution to do it continuously to keep up with developments and achieve the competitive advantage.
- ✓ Enables access to human resources information (without having to go to middle managements).
- ✓ Networks, especially the Internet, encourage knowledge exchange and promote innovation and learning.
- ✓ It intensifies communication between different operators and encourages cooperation and teamwork, which develops and adds value to the human resource management function.
(Hossam El-Din, 2011: 32)

5_2_ the negative effects of ICT use on human resources:

The proven weaknesses in the use of ICTs have started to emerge over time, along with many advantages, from the technological, information security, and working conditions side, and they can be manifested in the following:

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- ✓ The increase in information technology reduces employment opportunities in the organization and a large number of employees become unemployed.
- ✓ Unless employees are familiar with information technology, the employee will not be able to get the required job in the company.
- ✓ Building a new IT system in an organization can be expensive.
- ✓ It is risky from a data security point of view.
- ✓ The ICT work environment can alienate and frustrate employees because of their inability to keep up with it.
- ✓ Minimize physical contact, as communication is often done via email, which does not allow for all elements of verbal communication, gestures or voice to be displayed.
- ✓ It makes employees feel underappreciated, because they are out of sight.
- ✓ Computers, information and communication technology (ICT) have greatly increased information processing power, enabling organizations to overcome the limits of the human mind, but at the same time, it has led to various health issues, such as insomnia, poor sleep, loss of concentration and headaches.
- ✓ Another issue facing organizations and management is the use of ICT for private purposes during working hours, which can lead to reduced employee efficiency. (Fratsa, 2019: 8).

Conclusion:

The study concluded that information and communication technology (ICT) has a positive and significant impact on the internal processes of the sports organization. the use of technological components such as computers, printers, software, modern communication, robots, etc. facilitates rapid information movement. Furthermore, through the help of information technology, a human resource management plan can be developed more quickly, job performance becomes effective. Therefore, information technology has an impact on all the sectors of human resource management in terms of electronic recruitment, electronic compensation system, training and formation.

Despite the numerous advantages of using ICTs, which are primarily concerned with enhancing employee productivity and efficiency, some

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negative aspects have been identified in practice such as alienation, negative psychological effects, information anxiety, stress, and fear of job loss. All of which represent new challenges and tasks for human resource management in sports organizations.

Based on the results of the study, the following recommendations and suggestions can be made:

- ✓ The need to adopt information and communication technology because of its positive impact on human resource management in particular and the sports organization in general.
- ✓ Ensure the generalization of the paperless work method on the various offices and departments of the sports organization to save costs and expenses and ease the transmission of information while overcoming the barriers of time and geographical distance.
- ✓ The inevitability of change and the transition from traditional human resource management (HRM) to e-HRM in sports organizations.
- ✓ Managers must strongly involve the human element in the strategic decisions related to the technology to be integrated, so that the desired goals can be achieved, as all efforts or strategies developed by the sports organization remain incomplete if individuals are not involved in making them.
- ✓ Motivating and raising the awareness of working individuals about the importance of information and communication technology and that it is not a challenge to them but rather an effective tool to increase their performance and facilitate their tasks, People are by nature an enemy to what they're ignorant of , especially since technology usually means change.

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