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Electronic human resources management as a mechanism for modernizing human resources management in local communities in Algeria

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Abstract: Through this research paper, we aim to clarify the most important reforms by the Algerian state in order to modernize human resources management in local communities, by introducing one of the modern methods in human resources management, represented by electronic management of human resources, as this type of management is considered an integration process. Between human resources management and information technology, this is in order to develop administrative work and create added value in the local administration and employees. The study concluded that the application of electronic management of human resources in local communities is limited to some electronic applications and that its application is still in the beginning stage, but it has given tangible results on the administrative process and user satisfaction.

Keywords: human resources management; Electronic administration; local communities; information technology; Public administration.

INTRODUCTION

Amid the sweeping technological changes witnessed worldwide, most countries have sought to adopt modern technologies within their public administrations in order to modernize them and enhance the efficiency and effectiveness of administrative work. This gave rise to the concept of *e-administration*, which was embraced by many Western countries and which transformed the relationship between governments, employees, and citizens into one conducted through the Internet—an environment unrestricted by time or place.

Algeria has likewise sought to integrate these modern technologies, commonly referred to as *electronic administration*, into its public sector, particularly within local communities. The aim has been to replace traditional, paper-based, and bureaucratic administrative practices with electronic offices,

thereby facilitating access to public services.

Given the critical importance of human resources in institutions and public administrations—considered the beating heart of these entities without which no objective can be achieved—the state has invested significantly in this domain to achieve its goals with efficiency and effectiveness while responding to emerging challenges and changes. Within this context, the following central research problem arises:

“To what extent does electronic human resource management contribute to the modernization and improvement of HR performance in local administrations in Algeria?”

To further refine this problem, the following sub-questions may be posed:

1. What does electronic human resource management in local administrations entail?
2. To what extent does e-HRM contribute to the development of administrative work?
3. What is the current reality of implementing e-HRM within local administrations?

Research Objectives

This paper seeks to achieve several objectives, including:

1. Highlighting the key concepts related to human resources within institutions.
2. Examining electronic human resource management and its various applications.
3. Identifying the different tasks and functions associated with HR management.

, suggested a recommendation to enhance awareness amongst users.

METHODOLOGY

The nature of this study requires the adoption of the deductive method, utilizing both description and analysis. This involves describing and defining human resources and HR management within institutions, while outlining their main functions and responsibilities.

Structure of the Study

To cover the full scope of this research, the study is divided into three main sections:

- **Section One:** Concepts of Human Resource Management.
- **Section Two:** Electronic Human Resource Management.
- **Section Three:** E-HRM in Local Administrations.

I – Concepts of Human Resource Management

This section discusses the essence and philosophy of HRM, its definition, and the characteristics that distinguish it.

-1. The Philosophy of Human Resource Management

The use of the term *Human Resource Management* (HRM) in management thought dates back to the mid-1980s, when it was first introduced in the United States. Historically, HR-related activities were limited to a number of traditional functions

associated with managing employees or workers within institutions and organizations. These functions were referred to by various names, such as *manpower management*, *staff administration*, *personnel management*, *employee affairs management*, or *human relations management*. Partial attention to employees and their needs was labeled *Personnel Management* (Qemal, 2023, p. 13). Scholars have differed in offering a unified definition of HRM, as their interpretations depend on the perspective adopted. Generally, two distinct approaches or philosophies toward HRM can be identified: the traditional view and the modern view. From the traditional perspective, HRM is seen as a routine activity limited to carrying out operational and administrative tasks within the organization, such as record-keeping, monitoring employees—particularly their attendance and working hours—and handling other clerical functions.

In contrast, proponents of the modern perspective argue that HRM is a core and fundamental function within the organization, playing a role as significant as other functions such as marketing or finance. This is attributed to the critical importance of human capital in both administrative and production processes, and its substantial impact on organizational efficiency and productivity (Al-Baqi, 2007, p. 9).

The main activities of HRM include: job analysis and description, human resource planning, attracting and recruiting suitable candidates, training, capacity building, and human resource development, as well as performance appraisal. In addition, HRM continues to cover traditional activities related to labor relations and employee affairs.

The concept of HRM has evolved considerably in response to environmental, competitive, and governmental pressures (Al-Anzi et al., 2014). It has become a key instrument in designing and structuring organizational systems for managing employees and in shaping HR-related strategies. The following table illustrates the main similarities and differences between *Personnel Management* and *Human Resource Management*, which may be summarized as follows.

Table (1): Similarities and Differences between Personnel Management and Human Resource Management

Key Aspects	Personnel Management	Human Resource Management
Philosophy	- The employee is considered a dependent productive element managed by the organization to maximize productivity. - Personnel management is advisory, providing guidance to other departments.	- The employee is an independent entity with expectations and demands. - HRM is an executive function and a strategic partner in formulating and implementing the organization's overall strategy.
Objective	- Maximizing organizational productivity, with limited concern for meeting some employee needs.	- Aligning organizational goals with individual goals through balancing work requirements and employee needs.

Key Aspects	Personnel Management	Human Resource Management
Activities	- Planning and providing workforce needs. - Developing and training employees. - Compensation through wages and salaries. - Maintaining and retaining staff. - Developing employee relations.	- Meeting workforce needs. - Developing and training employees. - Compensation through employee relations. - Career planning and development. - Organizational development. - Communication and information sharing. - Expanding service domains.
Position in Org. Structure	Top management as an <i>advisory</i> function.	Top management as an <i>executive</i> function.
Timeframe & Planning	Short-term.	Long-term, based on future expectations.
Control Systems	Internal and formal.	Self-regulation.
Employee Relations	Utilitarian, based on weak trust in employees.	Reciprocal, based on mutual trust and respect.
Structures & Systems	Bureaucratic, centralized, and mechanistic.	Flexible and organic.
Roles	Specialized and professional.	Diverse and integrated.

Source: Magdy Abdullah Sharara, *Modern Trends and Roles in Human Resource Management*, Egypt, 2019, p. 20

From the comparison table, it becomes evident that Human Resource Management (HRM) has a strategic dimension, emphasizing the importance of human capital within organizations. HRM recognizes that employees require a more liberated style of leadership, one in which they exercise self-monitoring. It assumes that individuals are most creative when working within a cohesive team where relationships are built upon mutual respect, trust, and teamwork. This approach favors flexible, organic structures over bureaucratic and hierarchical ones, which tend to stifle individual creativity within organizations.

I-2. Definition of Human Resource Management

Definitions of HRM vary depending on the perspective from which it is viewed. Among the key definitions are the following:

Human resources are defined as the collection of individuals and groups present within an organization at a given time. These individuals differ in their background, experience, behavior, attitudes, and ambitions. They also vary in their job roles, managerial levels, and career paths. Organizations utilize these human resources to achieve their goals and design their strategies, and the characteristics of these resources differ from one organization to another (Wassila, 2004, p. 25).

HRM has also been defined as a set of activities, practices, and administrative policies centered on the human element, concerned with determining the organization's needs for human talent across various functions. These practices include job analysis, workforce planning, recruitment and selection, compensation and rewards management, training

and development, performance appraisal, among others. They aim to nurture, develop, and retain employees to maximize their potential and thus contribute effectively to the achievement of organizational objectives (Sa'ani & Saleh Ibrahim, 2020, p. 17).

From these definitions, HRM can be understood as the process of managing employees within an organization through various functions such as recruitment, training and development, performance appraisal, compensation and benefits management, and labor relations. The overarching aim is to achieve the institution's pre-established objectives by managing employees effectively, enhancing both individual and collective performance through motivation, and fostering employee satisfaction and organizational commitment.

I-3. Administrative Functions of Electronic Human Resource Management

According to Khanka (2008, p. 5), the primary administrative functions of e-HRM include:

- **Electronic Planning:** A predetermined process involving the identification of organizational objectives and the formulation of policies and programs to achieve them. Planning is future-oriented, setting the direction of future activities. Forecasting is a crucial element, as other managerial functions in HRM depend on effective planning.
- **Electronic Organizing:** The process of structuring and allocating tasks, which involves assigning responsibilities to subordinates, establishing departments,

delegating authority, creating channels of authority and communication, and coordinating subordinate efforts.

- **Electronic Directing/Leading:** Directing is the process of mobilizing team efforts to achieve the desired objectives, motivating subordinates, and implementing activities aimed at accomplishing organizational goals.
- **Electronic Controlling:** The process of setting performance standards, monitoring actual performance against those standards, and taking corrective measures where necessary.

I-4. Objectives of Human Resource Management

According to Qemal (2023), the key objectives of HRM include:

1. **Attracting and selecting the right employees:** Ensuring the recruitment of candidates with the appropriate skills and expertise for the required positions.
2. **Employee development and training:** Enhancing employee skills and capabilities through suitable training and development programs.
3. **Performance appraisal:** Evaluating employee performance and providing feedback to improve individual and organizational outcomes.
4. **Compensation and benefits management:** Implementing reward and benefits systems to motivate employees and improve job satisfaction.
5. **Strategic HR planning:** Developing strategies to secure the human resources necessary for achieving the organization's long-term goals.
6. **Labor relations management:** Building and strengthening positive relationships between management, employees, and external stakeholders to ensure balance and cooperation in the workplace.
7. **Organizational culture development:** Promoting shared values and organizational culture to enhance employee belonging and integration within the institution.

II. Electronic Human Resource Management

This section seeks to provide definitions of electronic HRM and outline its main characteristics.

II-1. Definition of Electronic Human Resource Management

Multiple definitions of electronic HRM exist, reflecting the diversity of scholarly perspectives.

E-HRM has been defined as the planning, execution, and application of information technology in carrying out HR functions within organizations.

It has also been defined as “a structure based on web

technologies and information systems designed to help the organization acquire, develop, and retain human capital—also referred to as intellectual capital—in order to achieve organizational objectives.”

At its core, e-HRM involves delegating HR functions to managers and employees, making these functions accessible through intranet platforms or the Internet. This enables employees to independently perform certain HR tasks remotely, thus reducing administrative burdens on HR departments. As a result, HR professionals can concentrate more on operational and strategic aspects, while organizations can minimize the size of their HR staff.

II-2. Characteristics of Electronic Human Resource Management

The main characteristics of e-HRM can be summarized as follows:

- It is an administrative process, which means it remains within the broader scope of management expertise, involving policy-setting, resource allocation, and performance monitoring.
- E-HRM is distinguished by the absence of direct, face-to-face interaction between the involved parties, as such interactions occur remotely via electronic communication networks.
- Problem-solving in e-HRM is carried out through computer systems across distances, reducing reliance on material and human resources (Redouane, 2001, p. 5).
- The impact of e-HRM on the HR function has shifted considerably compared to a decade ago. The use of ICT has transformed HR practices, moving record-keeping and employee information management from manual systems to electronic platforms based on computers, information systems, and networks (Internet or intranet).
- HR practices are now executed more quickly, providing comprehensive insights into human resources through information systems, thereby enabling HR professionals to plan, organize, and monitor more effectively.

II-3. Additional Features of Electronic Human Resource Management

- **Electronic document management** has facilitated the processing, storage, and transfer of documents from one workstation to another. Unlike traditional methods that relied on dividing tasks among multiple offices, e-document management enables HRM to update systems, monitor deadlines, and oversee task completion more efficiently (Latif, 2004, p. 251).

- Enhanced **coordination among employees**, with tasks being executed simply through email communication.
- A reduction in **routine administrative tasks**, as computers and software systems have significantly lessened the workload in various HR activities.
- Increased **speed of execution**, enabling the completion of multiple processes in a shorter time frame and allowing human resources to dedicate more attention to higher-value tasks.

- Accuracy in Performance

Thanks to modern technology, Human Resource Management now has access to comprehensive data on jobs and tasks.

- Accuracy in decision-making.
- Higher planning capacity due to the availability of data and information systems that provide a comprehensive picture of human resource management.
- Coordination among organizational members in different departments has become faster, particularly when forming work groups from various divisions.

III – Electronic Human Resource Management in Local Communities

Before addressing the reality of applying electronic human resource management in local communities, it is important to first define local communities, summarized as follows:

III-1 Definition of Local Communities

Definitions of local administration vary depending on researchers and perspectives. French author Vallin defined it as: *“the transfer of administrative decision-making authority to freely elected councils by the concerned citizens”* (Ali, 2007, p. 20).

It has also been defined as an administrative method by which the state is divided into units of local nature, each supervised by an authority representing the general administration of its inhabitants. This authority works to optimally exploit its resources while maintaining a relationship with the central government through the state’s general policies and the constitution and laws. Thus, it represents a local authority while also being an extension of the central state (Ahmed, 2010, p. 17).

Hence, local administration can be defined as a method of administrative organization aimed at decentralization by assigning certain tasks to local administrative units that enjoy legal personality, have their own organizational structure, financial independence, and acquire resources through self-financing, subsidies, and various grants. Their efficiency depends on their capacity to achieve

effective outputs.

III-2 Objectives of Local Communities

Local communities pursue several objectives on political, administrative, and social levels:

III-2-1 Political Objectives

Practicing democracy at the local level by involving citizens in managing local affairs through elected councils encourages citizens to engage in public matters and strengthens ties between them and the government. These practices nurture citizens’ awareness of their rights and duties, elevate their dignity, and reinforce democracy and participation in managing local affairs. Citizens freely choose their representatives through elections, expressing their views and aspirations (Al-Hamid, 2008, p. 72). This enhances national integration and reduces political monopolization.

III-2-2 Administrative Objectives

Local administration enables a quick and precise response to residents’ needs, improves public service quality, reduces the inflation of central government structures and administrative apparatus, and allows for experimentation with alternative administrative systems.

III-2-3 Social Objectives

Local administration fulfills the needs and aspirations of residents in line with their priorities, motivates them to influence decision-making and implementation, and strengthens trust between citizens and central administration through participation. This fosters a spirit of citizenship.

III-3 Applications of Electronic Human Resource Management in Local Communities

The Ministry of Interior initiated reforms in human resource management by adopting electronic administration and introducing ICT into its system. These reforms included:

III-3-1 Human Resource Information System (HRIS):

An information system that maintains employee data and policies to support organizational efficiency. It handles HR management and processing, unifies HR tasks, facilitates record-keeping, and generates accurate reports.

In line with Instruction No. 4315 dated 22/05/2019, the first version of a comprehensive HRIS was launched for the Ministry of Interior and Local Communities, covering 1,541 municipalities in addition to the ministry itself and all central and local administrations. A training program for 5,000 HR employees was conducted to ensure proper application.

The HRIS serves as a permanent operational platform

shared across municipalities, provinces, and central administration, and linked to financial control and civil service authorities. It acts as a management dashboard providing statistical and real-time HR indicators. Initially, the program was rolled out in ten pilot provinces: El Oued, Constantine, Ouargla, Béchar, Mila, Khenchela, Bordj Bou Arréridj, Tipaza, Ghardaïa, and Naâma.

The system aims to address core HR needs such as workforce planning, budgeting operations, organizational structures, staff lists, and workforce counts. It improves staff qualifications and strengthens financial and civil service oversight. Instruction No. 2937 (09/03/2024) required provinces and municipalities to digitize HR-related administrative documents within 60 days, creating electronic personnel files. A digitization manual was provided to guide managers in naming, storing, and managing electronic files on secure servers.

The digitization process covers the professional records of senior executives, staff, contractors, employees on leave, secondment, national service, retirees, and others. The ministry considers this process strategic and sustainable, requiring adequate technical infrastructure (e.g., 10th-generation servers with Windows Server 2012, scanners, secure intranet connectivity).

The methodology outlined in Instruction 4315 specifies stages such as:

1. Entering the official organizational structure.
2. Entering actual (informal) structures.
3. Entering property-linked structures, confirmed by provinces.
4. Creating budget codes for all positions and linking them with the official structure.
5. Registering nominal staff lists and assigning senior officials.
6. Assigning employees and contractors to organizational units.
7. Recording lists with and without budgetary impact.
8. Ensuring financial oversight references are included.
9. Uploading personal photos and other demographic data.
10. Adding data for senior staff to ensure automatic transmission across relevant entities.

III-3-2 Payroll and Allowances System:

Salaries and incentives are crucial for HRM, as effective systems boost morale, job satisfaction, and efficiency, while poor systems have the opposite effect.

The Ministry of Interior introduced electronic payroll applications to simplify salary preparation and performance bonuses. These systems ensure accounting accuracy, reduce errors, facilitate payroll

documentation, and minimize paperwork. Employees can now instantly access salary slips and related documents electronically, which are digitally stored and sent to financial controllers and the treasury before salary disbursement.

III-3-3 Advantages of Applying E-HRM:

The main benefits of implementing e-HRM include (Boumejan, 2017, p. 158):

- Organizations using e-HRM enable managers and staff to implement strategic HR plans, practices, and procedures.
- Organizations that adopt IT require fewer staff, as computers replace some HR functions.
- Transformational organizations using IT must employ HR experts.

Further advantages:

- E-HRM enhances operational, technical, and strategic management efficiency from planning to execution and monitoring.
- It improves product and service quality through investment in technology and skilled digital talent.
- It provides speed, agility, and flexibility, delivering services anytime, anywhere.
- E-HRM fosters a culture of information transparency and competitiveness.
- It reduces costs, boosts performance, and improves HR service quality, leveraging internet-based systems and digital storage to build strong knowledge assets.

CONCLUSION

This study demonstrates that Human Resource Management is the core of any organization, fostering a positive workplace culture, enhancing performance, and encouraging employee engagement. By strategically investing in qualified personnel through recruitment, training, and development, HRM plays a vital role in organizational stability and growth in dynamic environments.

The adoption of e-HRM has added dynamism to administrative practices and streamlined HR functions. However, in Algerian local communities, its application is still at an early stage, limited to certain electronic applications and an intranet-based HRIS. Despite this, it has yielded tangible results and improved user satisfaction where implemented.

Recommendations

Based on this study, the following recommendations are proposed:

- Integrate modern technology into HRM to enable effective management and strategic workforce planning.
- Develop an HR information system to monitor public employees' status, training,

and development to improve public service quality and support comprehensive national development.

- Optimize the use of human resources as the key driver of development, particularly as public administration continues to face citizen dissatisfaction.
- No administrative reform policy can succeed without optimal use of human resources, requiring sound policies in recruitment, training, and development.

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