



Toward the application of E-HRM in Algerian enterprises The case of SOGERWHIT Tlemcen

Dr. BELHADJ Meriem

Laboratory of MIFMA (University of Tlemcen)
Abu Bakr Belkaid University of Tlemcen
Algeria
belhadjmeriem@yahoo.fr

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Abstract

This paper attempts to clarify the important of E-HRM in organizations, and to mention to which level Algerian enterprises are applying E-HRM. First of all, a literature review was conducted to elaborate the field of E-HRM and its major activities. Then, an empirical analysis was conducting through handing out a questionnaire which was based on E-HRM conception and the main four activities of HRM (e-attracting and selection, e- recruitment, e- training and e- formation). The questionnaire carrying out to a sample of employees of SOGERWHIT Tlemcen where 30 questionnaires are agreed and the data was analysed by using SPSS.

The findings showed that the actual company integrates information technologies in its major activities, and point out that e-HRM is a kind of innovation that promotes, develops and facilitates the practice of HRM, both for the department of human resources and for managers and employees. Finally, the paper provides further insight on integrating HR practices with IT which contributes to organizational superior outcomes and leads to organizational success, and ends with future research avenues.

Key Words: (HRM) Human Resources Management, Information technologies, E-HRM, Algerian companies.

JEL Classification : M12.

* Corresponding author: BELHADJ Meriem (*belhadjmeriem@yahoo.fr*)

Introduction:

In today's rapidly changing business environment and especially with the advent of the so-called information revolution, organizations seek not only to succeed but even to survive in a competitive environment.

Nonetheless, the human resource assets should be considered as an important factor for the attainment of competition power and continuation of organizational success, the significance and the functioning of HRM in organization have substantially increased especially with today's transitions of work setting which has placed human resource management (HRM) practices in the central position of global management, parallel with the transition to information technology and the change from capital economy to human based economy . Hence, human resource is one of the key assets determining the success or failure of an organization and hence the importance of the knowledge, skills, attitudes and behaviors of those people for the betterment of an organization.



For the reason to the new technological and informational development, and coupled with changes in the management practices, the HRM should be also adapted to such fast changes as much as for the overall functioning of organizations.

As a result of these changes and challenges, the concept of Electronic Human Resource Management known as e-HRM was recently emerged and refers to conducting HRM activities with the use of internet or intranet (*Ma & Ye, 2015, p. 71*).

The present paper elaborates on electronic human resource management (E-HRM) in detail and investigates to what extent are Algerian companies trying to transform their HRM practices from physical to electronic based on SOGERWHIT case study in Tlemcen. Hopefully, this paper could help readers understand E-HRM more comprehensively.

The problematic and research questions:

This study is concerned with the investigation of electronic human resource management as a new concept to support HRM activities in SOGERWHIT Company in tlemcen.

To do so, this study firstly investigates the global context of E-HRM from the company administrative employee's viewpoint. Thus, the above major problematic will be divided into sub-questions based on the major HRM activities as follow:

- Do technological changes affect HRM activities in SOGERWHIT Company?
- Does this company base in attracting and selecting new employees on technology (e- attracting and e- selection)?
- Does this company apply e -recruiting practices?
- Does this company implement e-training programs?
- Does this company develop on line formation policies?

The research hypotheses:

Thus, the previous research questions can be reflected as hypotheses, and empirically investigated. So, the following hypotheses are developed.

H₁. The HRM function in SOGERWHIT Company couples its major activities with technology

H₂: This company uses on line attraction and selection of new employees.

H₃: This company applies e-recruitment practices.

H₄: This company implements e-training programs.

H₅: This company develops and implements on line formation policies.

Purpose of the research:

This research will provide a global context on the application of Electronic Human Resource Management in SOGERWHIT company of tlemcen with the critical exploration of the literature. Analyzing the literature will be useful in acquiring relatively dimensions for the functioning of E-HRM. The main aim of this study is to examine thoroughly the level of technology adopted in HRM and the way it has shaped the role of HRM functions in the studied company, and to



find out what level of understanding it has about E-HRM and whether it has completely incorporated E-HRM into its HRM functions or it is moving towards it.

Hence, it is an objective of this article to explore whether the adoption of technology in HRM has facilitated such a shift in the role of HRM.

The methodology:

To answer the research questions and test proposed hypotheses a descriptive approach is used by developing a theoretical side to understand the concept of HRM and its major functions (study variables), and the analytical method applied in the field study based on the questionnaire. The primary technique of data collection was through a questionnaire which is based on a 5-point Likert scale that labeled: (Strongly disagree=1, Disagree= 2, Neutral=3, Agree=4, Strongly agree=5), and it consists of three main parts, the first one focused on demographic characteristic information about the respondents and the second is about the extent of adoption of technology in HRM, and the last part is for the E-HRM functions that are mentioned as variable in this study (e-attracting and selection, e-recruitment, e- training and e- formation).

The population of the study represented by all of HR function employees in the company, this population was chosen for the purpose of this study which was aimed at studying the extent of adoption of technology in HRM. A simple random sampling technique was being used to select the sample for the study within the defined population for examination. Then, the studied company was visited in order to gather more information through interview.

A descriptive statistical analysis will be conducted based on the frequencies, percentages, means and standard deviations to test the hypotheses previously proposed. Data will be analyzed using SPSS.

I. Literature review:

1. From the HRM to E-HRM:

Human resources managers, besides their responsibilities such as finding for the right person for the right position improving overall performance of employees, they are assigned with new responsibilities such as responding to increased competition for globally mobile talents. Until 1980s, the Human Resource Management (HRM) in the form of Personnel Management, in a strict sense, involved certain policy formation processes in the working environment (*Min & Ebru, 2015, p. 425*). Over time, the role and importance of the HR function have changed in a way that changed the attitude towards the human capital, but also in a way how technological changes occurred. More recently, owing to the IT and electronic systems transactional, daily HR activities are carried out faster, more accurately, and easier than before. At the same time, through this connection between IT and HRM, the new HRM concept was developed and named E-HRM.

However, E-management, in general, is one of the most important and latest scientific terms developed in the field of modern science; it first appeared in the USA as a result of the development of information and communication networks (*Abusef & Arun, 2021, p. 41*); it is considered as an integrated electronic system



that depends on ICT to transform the administrative manual labor work carried out by digital and modern technology (Moulay & Yazid, 2021, p. 928). In this regard, organizations that have been in swift transformation and adaptation processes from industrial to informational age are rearranging their work flow processes with the effective utilization of technology (Ensher, Nielson, & Grant-Vallone, 2002). It is also mentioned by (Bandarouk & Brewster, 2016) that e-HRM focuses on all integration mechanisms and all the content of human resources management that is transmitted through IT, which aims to make the HRM processes more consistent, more efficient, with better quality, and which should create longterm opportunities for the stakeholders of the organization.

2. Electronic Management Tools (Dimensions) :

The E-management in all function's activities such as HRM use four management tools (Almutairi, 2014, p. 61):

- Computer Hardware: It is the mechanical part of the computer networks and accessories.
- Computer Software: It is the invisible part installed in the computer hardware. It is divided into system software.
- Communication Networks: These are the transmitters of information for example extranet, intranet and internet.
- Knowledge Makers: These are the information technology literate leaders, managers and analysts of cognitive resources and the capital to install the IT technologies in a firm.

3. Types of E-HRM:

Thus, when explaining the essence of e-HRM, reviewing to (Berber, B, & Milanovic, 2018, p. 24) it is mentioned that some authors place an emphasis on the transactional side of e-HRM, that is, the fact that HRM activities are more easily administered, other authors, place emphasis on technology that provides access to human resources data, while the third group of authors puts emphasis on the strategic aspect of e-HRM. When it comes to the first group of authors, some of them point out that e-HRM is such a concept in which it enables improvements in the administration of human resource activities and transactions. Those three main types of E-HRM are suggested in 1998 by Lepak & Snell and are described in the table as follow (Shah, Michael, & Chalu, 2020, p. 12):

Table (1): Types of E-HRM

Operational E-HRM	Relational E-HRM	Transformational E-HRM
Concerned with administrative functions. Eg: payroll and employee personal data	Concerned with supporting business processes. Eg: training, recruitment, performance management, etc.	Concerned with strategic HR activities. Eg: knowledge management, strategic orientation

Source: Shah, Michael, & Chalu, 2020, p. 12

4. E-HRM functions:

Nowadays, it is observed that HRM functions can be transformed and integrated in digital forms within organizations. In current practices, the most



widely used E-HRM functions are (Min & Ebru, 2015, p. 426): E- HR Planning, acquiring HR (recruitment and selection), developing HR (training and development, career management), rewarding HR (performance evaluation, compensation and benefits), and protecting HR (health and safety, employee relations and legal issues).

5. Advantages of E-HRM:

After conducting a related literature review (*Kaur, 2013*) (*Nenwani & Raj, 2013*) (*Ruel & Kapp, 2012*), the following major goals of E-HRM are listed:

- Cost reduction
- Efficiency gains by improving the quality of HRM services.
- Clients' services improvement
- Facilitating management and employees' relations
- Ensure a multidimensional organizational communication
- Maintaining transparency in knowledge, learning, evolution, career and rewarding policies.

6. Disadvantages of E-HRM:

Although the benefits of implementing the E-HRM concept are significant E-HRM has several shortcomings and challenges, which are also indicated. These disadvantages are mainly attributed to (*Berber, B, & Milanovic, 2018, p. 26*):

Illegal access and use of information: the data contained in the databases is available to anyone who can access them in an illegal manner and these data can be used for different purposes. In other words, they can be "hacked", deleted, etc.

▪ Lack of appropriate staff: Although implementation of the E-HRM concept can be motivated by a reduction in the number of employees, there may be a lack of staff within the HRM function that possesses the appropriate technical qualifications necessary for the implementation and servicing of the E-HRM system

. ▪ Errors when entering data: In order to successfully operate the E-HRM system, it is necessary to avoid errors when programming this system, but also when using different applications. However, the human error factor is concerned.

▪ Interpersonal contacts are reduced: Since the implementation of the E-HRM concept the number of employees' interpersonal contacts is reduced when performing work tasks, which in some of them can lead to the feelings of isolation.

▪ Inadequate use of the e-HRM capabilities due to the inflexible way of thinking of employees: employees within the HRM function change the way they think, as many have proven to be certain about the use of modern technology as such, but also its possibilities.

It is necessary to pay attention to all these potential hazards, since E-HRM should primarily facilitate and speed up the HR process, rather than slowing it down and caving.



II. Method and tools

1. Data collection: The researcher uses a questionnaire for collecting primary data from a sample randomly chosen from the research population. Questionnaires were distributed over 47 administrative employees in SOGERWHIT Company, 35 questionnaires have been gotten which is equivalent to 74.46% response rate for the sample size. This response rate is considered to be high, even more than the 49% response rate benchmark set by (Rao, 2009, p. 165)

2. Questionnaire testing: In order to test the goodness of the data, the questionnaire must first be tested for validity and reliability. The reliability of a measure is established by testing for both inter-item consistency and stability. According to (Yu, 2001, p. 1) Cronbach's Alpha is recommended as the perfectly adequate index for internal consistency, it ranges in value from 0 to 1, and a questionnaire with a score of 0.60 is generally accepted as reliable (Sekaran, 2004).

Cronbach Alpha is conducted and the following table summarizes the results:

Table (2): Cronbach's Alpha Reliability

variables	Cronbach's Alpha
Technology in HR function	0.91
e-attraction and e-selection	0.87
e-recruitment	0.79
e-training	0.92
e-formation	0.84
The questionnaire	0.86

Source: SPSS Outputs.

As mentioned in the previous table, Cronbach's Alpha values are above than 0.6. So, the questionnaire is reliable for all variables.

III. Statistical Analysis:

In this section of the paper the statistical analysis for sample and hypotheses of the research is conducted and presented.

1. Sample tests: For sample description we used descriptive statistical analysis as frequencies, percents, means and standard deviations and results are presented in the following table:

**Table (3): sample characteristics**

Characteristics and categories		Frequency	Percentage
Gender	Male	16	53.3%
	Female	14	46.7%
Age	Under 25	3	10%
	25- under 35	13	43.3%
	35- under 50	11	36.7%
	Equal to 50 or over	3	10%
Academic qualifications	PhD	5	16.66%
	Master	17	56.66%
	BSC	5	16.66%
	Other	3	10%
Working experience	Less than 5years	12	40%
	5- less than 10	8	26.7%
	10-less than 15	10	33.3%

Source: SPSS outputs

16 respondents (53.3%) were male, and 14 (46.7%) were female; this occurs because the positions of the respondents are appropriate to the two gender types. The largest age group of respondents was 13 (43.3%) who identified themselves as being between 25 and 35 years old and the smallest age group was 3 (10%) and were Equal to 50 or older, this means that this company tends to recruit and keep young workforce. As it appears, the academic qualification of Master is prevailing between respondents with 17 (56.66%). Those respondents have a working experience less than 5 years (40%), followed by (33.3%) and (26.7%) of respondents with working experience between 10 and 15 years, and 5 and 10 years.

2. Descriptive analysis:

Secondly, a number of descriptive statistics, based on the central tendency indexes centered on the diagram of means and standard deviations, are performed to extract relevant information regarding variables. Results of the means are interpreted using a three-scale calculated based on the five Likert scales. The scale that becomes the limitations of this research:

- 1 - Equal or less than 2.33: the mean is interpreted as *low*
- 2.33 - Equal or less than 3.67: the mean is interpreted as *medium*
- 3.67 – 5: the mean is interpreted as *high*

3. E-HRM statistics:

Based on the SPSS outputs, the following table is developed to summarize the data related to E-HRM major functions used as variables in the actual study:

Table (4): E-HRM statistics

Variables	Mean	Std. D	Degree of Agreement
e-attraction	3.66	.76	Medium
e-recruiting	3.58	.94	Medium
e-training	2.94	1.01	Medium
e-formation	3.16	1.08	Medium
E-HRM	3.34	.84	Medium



Source: SPSS Outputs.

The means and standard deviations of Educational intelligence include the culture, data tools and reporting, investments, expertise, and infrastructure or the governance. The mean of educational intelligence as a whole is equal to 3.34 with a standard deviation of .84, these values result in a medium agreement to the application of electronic human resource management in SOGERWHIT Company of tlemcen. In addition, it appears from the table that all results of e-HRM functions are at the average of 2.94 to 3.66 which demonstrate a medium agreement of the respondents to all dimensions. So, it seems that respondents are somewhat committed to the use of technology in their daily activities.

Consequently, technology in HRM is still developing; means were below 3.66 on all variables.

Conclusion:

E-HRM activities like e-recruitment, e-selection, e-training, e-formation and e-development tend to upgrade the organization in terms of technological advancement. The introduction of such a system could lead to cost savings and greater efficiency in HR department activities. Also, since E-HRM allows for less time spent on administrative activities, HR experts could pay more attention to strategic outcomes in HR, which would significantly strengthen the HR competitiveness internally and externally. This is particularly important if we have in mind that successful organizations are based on the assumption human capital is one of the main factors of success and sustainable competitiveness in modern business.

The paper points out that the key advantages of such a system are the faster, more accurate and easier processing of information about employees, cost savings, increased access to HR data, standardization, more consistent and up-to-date data on employees and their performance. In short, using the E-HRM concept, this function is able to achieve a significant positive impact on the entire operation of the organization by enhancing the performance of both the organization and the employees as well.



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