

E-management of human resources -A necessity in light of the global digital transformation-

الإدارة الإلكترونية للموارد البشرية
-ضرورة في ظل التحول الرقمي العالمي -

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Date of submission: 30/08/2022

Date of acceptance: 20/02/2024

Abstract

E-management of human resources is an important topic for researchers in human resources field, because of the ability to improve, modify and change the operations of human resources at the level of all companies in different activity fields. This article seeks to know the necessity for e-management of human resources in the light of the global orientation towards digitalization .

Keywords: E-management; human resources; companies; organizations; digital transformation; knowledge society; technology information

المخلص

الإدارة الرقمية للموارد البشرية من المواضيع الهامة لدى العديد من الباحثين في حقل الموارد البشرية، لما تحققة التكنولوجيا من قدرة على تحسين وتعديل وتغيير صورة عمليات الموارد البشرية على مستوى جميع المؤسسات على اختلاف مجال نشاطها، المقال الحالي يبحث في ضرورة الإدارة الإلكترونية للموارد البشرية في ظل التوجه العالمي نحو الرقمنة. الكلمات المفتاحية: الإدارة الإلكترونية؛ الموارد البشرية؛ المؤسسات؛ المنظمات؛ التحول الرقمي؛ مجتمع المعرفة؛ تكنولوجيا المعلومات.

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Introduction

The human resources are the main assets that societies and their companies and organizations adopt to achieve development. The emergency of modern technology has been accompanied by an orientation and a worldwide tendency to use the results and technological outputs in order to improve and develop the human resources management in various fields of activity .

Thus; many researchers in e-management of human resources(E-MHR) have been interested in developing its image by improving its performance aiming at its applications in companies and organizations ;especially economic ones such as Internet of things, 3D printing, additive manufacturing, advanced human machine interface, big data, artificial intelligence...etc .Or administrative ones such as programs increasing the efficiency of administration, improving access to quality services, facilitating communication between administration and citizens. But; this digital transformation in business management is no longer an optional matter or a choice in which companies or organizations can only commit as it has become a necessity dictated by the current worldwide reality which focuses on the adoption and exploitation of digitization to facilitate life and achieve all benefits of e-management. Therefore, e-management of human resources has become necessary .

For this, the use of information and communication technologies in the management of human resources has become a necessary element to support and improve the skills of human resources and update their knowledge in the light of global knowledge society by simplifying procedures, clarifying tasks to summarize digital transaction costs by reducing routine tasks, in addition to other advantages that accompany the necessity for orientation towards digital transformation in human resources management.

Based on the above, this article attempts to answer the following questions:

1. What is e-management of human resources?
2. What is its importance?
3. What are its categories and practices?
4. What are the necessities that obligate organisations to adopt it?

In order to answer these questions, the research is divided into two axis; the first relating to the introduction to e-management of human resources; while the second axis deals with the necessity to use e-management of human resources in the light of global digital transformation.

First axis: introduction to e-management of human resources

The widespread dissemination of digital technology and its uses in all industrial, administrative, domestic and economic activities has today a considerable impact on the functioning of companies and organisations affected by digital transformation, including the human resources functions. The managers have more determining role for its adaptation and its development in a new context in the 2.0 company corresponding to the use of emerging social platforms within companies or organizations; especially when customers and citizens are now content generators on

the internet by using new technologies which offer new opportunities for both business and costumers (IRMA.2019.p1313)

1. Definition of e-management of human resources:

Over the last ten years, information technologies have changed the field of management so much, where significant changes have occurred in the field of marketing for example over the last decade due to the evolution of information system and particularly the web. Technology as created entire new services and product categories , works have emerged in the last 10-15 years; resulting in a new revenue streams, new business models, new retail, promotion and distribution channels, entirely new ways of interacting with and support customers (2021.p344)

New names have appeared “e-management of human resources”, “digital management of human resources”; “human resources information systems” or “human resources management systems” as shown in the following diagram

Diagram1: The field of e-management of human resources names



Source: produced by the researcher

Far to be limited to a simple semantic changes; these new expressions reflect a profound changes in the management of human resources in the digital age .

E-management of human resources is the process that uses information and communication technologies to simplify the stages of the professional life of human resources within their companies or organizations, as it defines ways in which these later- via the intranet network access to personal professional information made available to them by their companies. E-management of human resources is a change management which refers to the set of technique tools and digital services used to optimize and to improve the management of human management (Etienne.2017.p18) It designates all the applications, web technology in the different areas of human resources management such as recruitment, selection, training, career management, performance management, remuneration and knowledge management, trying to meet three types of objectives which are expressed in the context of e-management in regards to information-communication, collaboration and involvement(Nahon, Taskin.2009.p30).

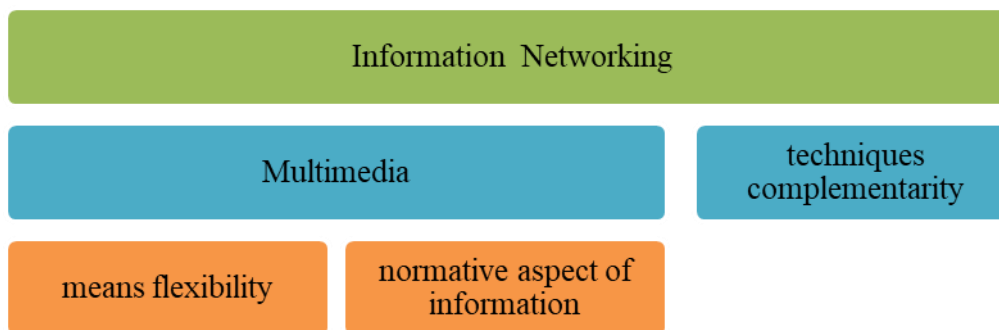
Consequently, the digital management of human resources E-MHR, can be defined as a the application of information and communication technologies in the practices of the management of human resources allowing and facilitating the interactions related

to the management of human resources within companies and organizations, in particular those related to salaries, personal data of employees, performance and career management, training and strategic orientation. Thus; the term of e-management of human resources covers the following main concepts:

- ❖ The networking of information which gives the possibility of circulating information almost instantaneously between the different actors.
- ❖ Multimedia which provides a different abilities to process this information by means such as sound, image, video... etc.
- ❖ The complementarities of other techniques favouring digitization and transmission processing.

The following diagram indicates and summarizes the main notions of e-management of human resources

Diagram 2: The main notions of e-management of human resources



Source: produced by researcher based en references

2- The importance of e-management of human resources:

Technology is always a Tekné logos (know-how) in this sense it is never neutral, because it does not operate in a social vacuum, and vehicle permanently a technical imagination. Thus, technology affects ways of feeling, thinking and orienting oneself in this world. It is unfortunately become evident today that our technology has surpassed our humanity (Danvers.2009.p546) although individuals live in a world characterised by accelerating socio-technical change.

E-management of human resources uses technologies in particular in the socio-professional atmosphere by applying information systems in the execution of activities, which has made it an increasingly important phenomenon as it helps organizations to anticipate the changes in their internal and external environment and helps it also to take advantage of it to create competitive advantages by providing the necessary information for the management of human resources operations.

E-management of human resources is also increasingly important; because it has the ability to change or modify the way in which human resources functions are carried out, in particular in the field of work analysis and design where human resources within company or organization can work in virtual teams, geographically dispersed.

Currently, the importance of e-management of human resources is derived from the importance of information and communication tools within e-management, allowing to better knowledge and communication, contributing to a real socio-economic and cultural revolution which largely opens the way to the knowledge society .

3- Dimensions of e-management of human resources:-

3-1. First dimension :

This dimension deals with the direct impact of information technologies on the practices of managers and professionals in human resources such as the ways to doing administrative entities responsible for steering the management of human resources and reengineering resources processes.

3-2. second dimension:

This dimension is interested in the direct impact of information technologies on the practices of human resources management through the changes induced in the design of organization and work, because often information technologies are induced in organization and companies without the human resources department being actively involved .Once, implanted these different changes such as the creation of virtual work teams requires practices; is one or more human resources activities, which forces this human resources department to react(Laplante,Coté.2012.p263) the following diagram summarizes the dimensions of e-management of human resources.

Diagram 3: The dimension of e-management of human resources

The direct impact of information technologies on human resources management practices

The direct impact of information technologies on the practices of managers and professionals in human resources

Source: Laplante, Coté. 2012. Transformation du monde de travail. p263

4- The categories of e-management of human resources:

The categories of e-management of human resources vary according to the different information systems, and are divided into three categories which are as follow:

4-1. Administrative decision support system category:

Digital decision-making by e-management of human resources raises the question of the duty to justify administrative decisions, the obligation to submit human resources to the artificial intelligence system for decision support; see the decision-making to tests and audits in order to avoid any bias and make the criteria transparent and their weight in the administrative decision (Doat, Damour.2021)

The relationship between the e-management of human resources and this system categorizes human resources including being the main activity of the company or organization, its purpose and its essential services giving human resources their strategic advantages, their missions and their main orientation within the company or organization; those administrative decisions relating to the e-management of human resources of work structures and processes, privileged field, as well as all human resources activities aiming for a fair and speed realisation of work processes and resulting tasks.

4-2. Category of intelligent administrative decision support systems:

The radical transformation of human resources management systems and practices in the light of digital transformation, provided big changes in the aspect of smart administrative decision support which are among the most important categories of e-management of human resources and at the same time; are among the e-

management tools in companies and organizations whose systems are summarized in the digital management of human resources through e-information, e-communication at functional levels based on the internet or intra- network.

4-3. Administrative operation support systems category:

Human resources are categorized within e-management of human resources digital system relying on supporting information systems which provides e-management of human resources with integrated information to assess the performance of human resources and companies or organizations as a whole, by building variable models using analysis and modelling methods, which requires the existence of a digital information system to support each level of decision-making specific to e-management of human resources.

5- Practices of e-management of human resources :

Practices of e-management of human resources depend on enhancing and enabling the technological aspect of e-management of human resources, and the use of digital technology applications in the formed models) ready-to-use) via internet and intranet networks with the aim of managing and improving the performance of human resources, and making them innovative within their companies, translating these practices into policies and consistent procedures with company policy.

E-management practices are differentiated by evaluating the functions on which the e-management of human resources focuses in terms of distinguishing the activity of these services identifying mainly these three functions:

- E-management of human resources practices for traditional functions such as personal administration, work qualification, remuneration, personal relationship.
- E-management of human resources practices for new functions such as e-information, e-training, e-recruitment.
- Additional e-management practices such as social security, retirement, organizational living conditions.

Practices of e-management of human resources manage human resources as they manage their capabilities to manage organizational culture:

- Managing the human resources: these practices make the human resources of company able to be administrative experts to build an efficient infrastructure and carry out organizational reengineering.
- Managing the organizational culture: executing these practices to listen and respond to human resources concerns by e-solution that varies and examine the aim of e-management of human resources, is either increase efficiency of e-solution relating to the framework, is a base for measuring the effectiveness of e-management of human resources including proposal of a project procedure model, showing experience from real projects(IRMA.2022.p752) to make human resources more motivating and increase their organizational commitment and their attachment to the organizational culture.

The e-management of human resources aims through its practices to develop human resources in a strategic way, and prepare them for the future. Its adopts a strategy and perspective of advantages based on strategic dimensions mastering these practices

which are expressed in terms of performance, transparency and motivation as shown in the following table:

Table 1: the goals of e-management of human resources practices

Strategies	Future
Strategic human resources	Ability to manage changes
Human resources strategic partner	Human resource agent of change
Human resources strategy executor	Human resources digital transformation manager
Human resources business strategy	Human resources create business and dynamic organization

Source: Larouhe et autres.2019.p8

Second axis: The necessity of e-management of human resources

The adoption of contemporary management based on digitization, makes a new tend towards e-management of human resources an inevitable necessity to develop the work of companies and organizations, and its administrative transactions such as planning, organizing, directing, and controlling through developing human resources processes such as improving their work performance within work satisfaction.

The tendency to manage human resources electronically affects the efficiency and returns of human resources, because there is a clear impact of the technological factor on many areas of contemporary work, especially with the work on implementing smart cities by far most frequently occurring keywords such as smart government, open data, big data, open governance to digital governance, administrative reform to e-administration, electric mobility, e-information (Estevez and others.2022.p18)

Many researchers in the field of human resources management consider that e-management of human resources is very necessary, with the digitization of administrative processes and re-designing tasks as it eliminates the complexity of jobs and tasks and speed them up in line with the needs of customers in light of competition, especially with the company structure changes to a flexible company and digital structures, which corresponds to a renewal information and working methods in a contemporary society that is a worldwide knowledge society. Also, the necessity to go to the e-management of human resources is obvious in light human resources functions changes such as e-selection where technology is increasingly being used to facilitate the selection processes, including legal issues, chnnels used to access the systems, privacy consideration and reactions of human resources applicants and managers(Scarpello.2008.p207) while, e-recruitment is one of the worldwide trends of human resources functions, it has involved into a sophisticated interactive engine with the ability to automate every hiring process virtually, including practices and activities carried out by companies or organizations to identifying and attracting potential human

resources by the use of internet, where better technology and easier access to information is produced between workers(Tyagi. 2017.p1)

The management of human resources in the electronic way is also very necessary in the development of administrative work in various organizations, Where it has wide implications for the development of jobs and strategies of organizations This is not only due to the technological dimension through digital technology, but to the administrative dimension through which administrative concepts have developed to achieve a greater degree of flexibility in administrative activity that has turned into a virtual activity. As the methods and methods used to implement the functions of human resource management have changed, which made the roles of individuals in them change as well, in a way that achieves their active participation.

E-recruiting changed and became more flexible and transparent in light of submitting files or filling out forms online, and the e-selection in turn relied on a set of systems and strategies that increase the chances of obtaining qualified individuals through ability tests and personal tests to obtain a sound assessment of the capabilities and capabilities of the applicant for the job within the required job.

Through human resource management, tasks can be adapted to the requirements of digital transformation by introducing new technology that works to provide financial resources for organizations, as well as speed up procedures and reduce costs, in addition to achieving integration between electronic human resources management functions, which is a great necessity in order to achieve effectiveness and efficiency within organizations that have become virtual.

E-management of human resources in light of the digital transformation and its requirements, made it essential and necessary in light of the reliance on intangible assets ,that made the human alone, capable of innovation and creativity in addressing the inputs that increase the ability of organizations to bridge organizational gaps as a benefit and a strategic necessity to achieve organizational excellence and creativity

In general, the necessity to adopt e-management of human resources in contemporary companies and organization can be summarized in the following points:

- ❖ The necessity for training and continuous learning of the human resources in light of the great competition between companies and organizations which give them competitive advantages by activating human resources development strategies.
- ❖ The necessity of providing a speed response to the needs of human resources within companies or organizations by defining and determining their professional and social priorities and converting them electronically into administrative models.
- ❖ The necessity of providing and improving services directed to the human resources within the organizations such as reviewing promotion systems, career change, professional vacation, training ...etc.
- ❖ Human resources needs e-management to face every –changing environment, to maintain control in different situations
- ❖ The necessity to communicate clearly and listen effectively
- ❖ Necessity to develop new ways of conducting business.

- ❖ Necessity to encourage creativity and innovation in companies and organizations by investing in human intellectual capital
- ❖ Necessity to improve administrative processes and functions to increase its efficiency and effectiveness.
- ❖ Necessity to improve customer's services.
- ❖ Necessity to increase the degree of loyalty and belonging to the companies or organizations.
- ❖ Necessity to improving the basis of distribution of responsibilities within the organization
- ❖ Necessity to improve the strategic direction of human resources
- ❖ Necessity to improve the company's image

Conclusion:

In light of the various changes that the global economy is going through (globalization) in addition to the technical changes made possible by information and communication technologies, especially the Internet, and the development in managerial thought, the management of human resources is subjected to a radical change in its concepts, policies, strategies and practices. Information technology has invaded various aspects of administrative work in business organizations, and we do not find an organization devoid of databases for different administrative functions. Databases have become one of the necessities of the modern organization. Without them, the organization cannot continue to work. In the midst of these transformations, interest in human resources has begun to increase in contemporary organizations and it has become an urgent necessity that imposes itself on organizations in activating the role of their human resources management as the body responsible for the affairs of the workforce, caring for and organizing its affairs. Knowledge management ideas have developed as the main source for the formation of competitive advantages for organizations in The era of the knowledge economy and digital transformation, and the real tool in human resource management, which is the electronic management of human resources as its means.

E-management of human resources is one the most prominent trends of contemporary management in companies and organizations, and it is an imperative necessity in light of the digital transformation experienced by the world within knowledge societies ; which make information possession and its good employment and development; the most profitable business in all life fields by increasing access to databases through portal models and e-platforms that contribute to simplifying and improving administrative processes, encouraging meaningful organizational changes, improving customer services and continuous learning and training for human resources, in order to achieve cost reduction and gives value to e-solution provided by this type of digital management of human resources.

E-management of human resources is necessary to create an added value that increases the competitive advantages of human resources and transform them into a strategic partner although there are some challenges that prevent the possibility of

achieving these advantages by the correct application of e-management of human resources within companies and organizations that could be a future research subjects for those interested to the field of digital human management.

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