

The integration of information and communication technologies in the human resource function

إدماج تكنولوجيات المعلومات والاتصالات في وظيفة الموارد البشرية

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Abstract:

In recent years and under the veritable effect of a technological revolution, the company has become a matrix for the production and transmission of information. In fact, we are witnessing major qualitative changes, where the information and communication technologies cause real upheavals in the structures and processes of the company as well as its human capital.

Thus, the integration of information and communication technologies in the company , especially in the human resources function induce changes and impacts it with different effects.

Therefore, the main object of our research work is to observe the impact of the integration of this TIC in FRH and to analyze the various contributions that they may bring.

We noted, after our empirical study in the agro alimentary company MATEG that occupies an important place in the national market of the industry and appears among the companies which ensure an advanced introduction of the ICT in its services, that these ICT offers to the HR function an improvement in its performance, as well as a good functioning and a substantial increase.

Keys words: ICT, Human Resources Management, Internet, Intranet, Extranet

JEL classification codes: M12,L86.

ملخص:

في خضم التطورات التكنولوجية التي يشهدها العالم وتحت وطأة الثورة المعلوماتية والمعرفية وجدت المؤسسة نفسها مجبرة على مجابهة هذه التحولات من خلال الانخراط فيها وذلك بتبني استراتيجيات من شأنها تلبية متطلبات هذا الوضع لسيما فيما يتعلق بإدارة الموارد البشرية.

تهدف هذه الدراسة الى تحديد وتحليل العلاقة بين تكنولوجيا المعلومات والاتصال ووظيفة الموارد البشرية، ومن خلال دراسة ميدانية على مستوى مؤسسة MATEG للأغذية، تبين أن لهذه التكنولوجيا أثر إيجابي كبير في تطوير وظيفة الموارد البشرية فضلا عن اسهامها في تحسين سير وأداء المؤسسة.

الكلمات المفتاحية: إدارة الموارد البشرية، تكنولوجيا المعلومات والاتصال، الانترنت، الانترانت، الاكسترنات.

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1-Introduction

Nowadays, we are witnessing the "information age" which is characterized by the acceleration of data processing known as the information economy. The latter is an economy of networks and services where information is a raw material and strategic resource for creating added value. Thus, faced with a constantly changing environment, companies are required to enrich themselves with progressively sophisticated solutions to increase their potential for competitiveness.

Over the past twenty years, there has been a very positive overall consideration of ICT in its evolution. These tools have become quite necessary in the economic and professional sectors as well as in the daily activity of employees, whether at the organizational or strategic level or even for company changes. (KLEIN,T.,RATIER,D, 2012). Moreover, they make it possible to shorten deadlines, coordinate actions, and generalize simultaneity in an environment.

They supplement a whole series of transformations including strategy, content, work organization, and forms of management. They also affect all areas of the company. In addition, the use of its tools improves the performance of companies' human resources.

In this context, human resources management (HRM), as a function of the company and discipline of management sciences, in the same way as other fields, has undergone a real transformation through the adaptation of ICT.

KALIKA. M addresses this question and gives an element of understanding: "The introduction of ICT in management practices has disrupted the daily lives of organizations. Moreover, Professionals in the human resources function (HRF) are faced with the need to structure their activity and use ICT in the practices they employ. Some authors speak of e-HR (KALIKA.M, 2005).

This concept (e-HR) involves new working methods and new tools to relocate the activities of human resources management to produce a service of quality to employees.

The Human Resources Information System (HRIS) is, therefore, among the tools inspiring the development of ICT; a recent discipline within companies that have integrated communication and management processes for better effectiveness. ICT is a system for storing, analyzing, and distributing information relevant to an organization's human resources. For TANNENBAUM S-I "the System ICT-based Human Resources Information (HRIS) is a real opportunity to analyze and optimize all of its processes and make them more efficient. On one hand, it allows the achievement of productivity gains by automating repetitive tasks (employment contract, working time, leave, payroll, extra-legal benefits, social legislation, etc.). On the other hand, these acquired productivity gains are used to free up time that can be devoted to higher added value activities (Recruitment, skills management, career management, training, etc.). »

In this information age, the world becomes a small village. Therefore, as a developing country, Algeria cannot stay away from the change generated by these technologies, and the Algerian companies have to upgrade as soon as possible. So, they must face this ICT revolution which consists in following their evolution and acquiring new skills to ensure the improvement of their services and products for better performance.

To understand the reality of Algerian companies, our field of research consisted in analyzing, in the first place, the integration of ICT and HRM within the national food company known as MATEG. The main goal of our research is to explain how ICT impacts the HR function and what role it plays. There will be an attempt to answer the following research question:

What is the impact of ICT on the human resources function of MATEG Ccompany?

Here are added secondary questions to better inform our research including:

- What are the changes brought about by the involvement of ICTs in Human Resource Management (HRM)?
- Does ICT improve HRM?
- What is the role played by the human resources information system in the HR function?

In our research, we suggest that there is a strong positive impact of Information and Communication Technologies (ICT) on the so-called Human Resources Management (HRM) within the MATEG Company.

We conducted a quantitative study. In this regard, we used the questionnaire, which is a collection of information from the staff of MATEG 's HRD. Our case study, within the MATEG company, was carried out at the level of the direct structure within the management of human resources.

2- Definition of information and communication technologies:

The concept of Information and Communication Technologies (ICT) includes the techniques used in the processing and transmission of information mainly: information technology, Internet and Telecommunications. Moreover, they refer to the sector of economic activity of information and communication technologies.

So, they bring together necessary and useful confederate techniques as a resource for manipulating information especially in computers, programs, and networks in order to convert, store, manage, transmit, and retrieve it. This allows the company to:

- Facilitate the sharing of information (intranet, internet).
- More flexible access to information (the intranet allows to retrieve information from all workstations regardless of time).
- To promote group work through network technology (workflow, groupware.).
- Simplify data exchanges between companies or sites (EDI).

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- Facilitate communication and cooperation between team members (mailing list, blog, wiki).
- To set up a collective memory.

3- ICT tools:

Network technologies are technologies that help to disseminate and share information by all the organization members, namely the Internet, the Intranet, the Extranet, ERP, Workflow and GroupWare.

3-1. Internet:

According to Marie-France, the Internet presents: "a set of computers interconnected with each other, by cables, telephone links, infrared ..., and communicating with the same language, thanks to the computer network" (LANDREA.M-F, 1998). Accordingly, the Internet is a place for sharing data, disseminating information, making contact, exchanging information. Today, it is one of the most widely used means of professional communication. Among its uses are:

- **World Wide Web** has made it possible to open the Internet network to the general public by facilitating the consultation of sites, since it offers users the possibility of online wide range of information presented in the form of archives, magazines, book pages, public and university libraries, documentation for professional use... etc.
- **Electronic mail (E-mail):** is a correspondence service allowing the exchange of all types of digital documents, from one computer to another, through an Internet network.
- **Social network** refers to a website allowing Internet users and professionals to register and create a virtual identity card, most often called profile. The network is said to be social, in the sense that it allows the exchange with other members registered in the same network, public or private messages, hypertext links, videos, photos, spaces of exchange distinguished by their usefulness (professional, private, meeting ...). There are several types of social networks including: Facebook, discussion forum, blog and LinkedIn. Each has its distinctive logo and audience.

3-2. Intranet:

Intranet is the declination of the Internet, but within a company. It is a question of reproducing on an enterprise scale, a system of dissemination and sharing of information that already works perfectly on a global scale.

Indeed, according to JUST. B, the intranet is a "private version of the Internet within the company itself, for its internal needs allow to have a messaging and a dissemination of information internally. Intranet is usually reserved for employees of the company who need to use a password to log (JUST.B., 2010).

3-3. The extranet:

The term "Extranet" refers to an Intranet network which access is authorized to a restricted external public: customers, suppliers and partners

constituting a closed network. It is a website where some of the pages or all the sections are reachable by a password. This system allows, for example:

To Limit the consultation of confidential information to customers, distributors to subscribers. The Extranet extends access to the Intranet network to an audience outside the company,

3-4. Enterprise Resource planning (ERP):

The ERP enterprise resource planning in French “enterprise resource planning (ERP)” is a set of applications that is based on a database. These applications can be set up in isolation, in connection with each other, or in addition to solutions that allow, therefore, to link all areas of management in the company

3-5. The GroupWare:

Facilitates three fundamental mechanisms inherent in any human organization: communication, coordination and cooperation.

According to BOUTYEB, the groupware "is a set of methods, procedures, software and computer platforms allowing people, associated in the same professional context to work together with maximum efficiency".

The different categories of applications classified in the field of groupware are the following applications:

- Publication
- Collective bases.
- Shared folders.
- Coordination (Workflow).
- Forms.
- Discussion (or forum).
- Agendas.
- Messaging and directories.

The interest of this groupware is, above all, the improvement of the ability to react in terms of speed and quality, so that information can spread faster with better potential for cooperation. It is also possible to network the skills available in the company (RACHEDI, 2011).

3-6. Workflow:

A Workflow is used to model and automate the company's information flows e.g., specific documents, such as folders of insurance, loans or expense reports that must follow a predetermined path or their elaboration. In this way, the workflow defines the flow circuits for each type of file by specifying the stakeholders, the deadlines and the approval and validation operations. Accordingly, it is "a set of technical devices allowing the definition, administration, management and execution of a flow of information within a working group (GUNIA, 2002).

3-7. Computer data exchange (EDI):

According to EDIFRANCE, EDI is defined as "the exchange of structured data in the form of pre-approved messages from computer to computer via

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telecommunication networks “ (CIBON, 1999). EDI allows the electronic exchange of information (purchase orders, invoices, etc.) between separate and independent economic partners.

4- Human Resource Direction in the age of digitalization:

Several companies have computerized the management of their human resources in terms of its efficiency, and this is characterized by the adoption of IT solutions to the extent that these tools make it possible to significantly reduce the delays in the transmission of information and eliminate the boundaries of space and time, but also to disrupt the way of informing and communicating between employees, in the organization.

The role of ICT in HR management is to computerize and automate the various activities related to this field, and thus allow the user to gain in productivity (time and energy savings), to easily keep a traceability of all HR activities, to collaborate and communicate more quickly and efficiently and to help decision-making by offering the possibility of having complete and accurate dashboards etc.

This is why the HR function cannot avoid the transformation that ICT continues to bring in the various managerial functionalities of the company. Indeed, these technological changes will necessarily have a strong impact on the role and place of this function.

4-1 Computerization of the Human Resource's Function and its activities:

The acceleration of the IT market and the field of technology has led to a massive penetration of ICT, in companies, which are today widely used by the human resource functions i.e., E-HRM, E-HR and even E-HRD.

▪**E-HR:** Defined as the set of processes to dematerialize HR practices, using specialized and digital tools.

MERCK. B defined it as "e-HR, supported by a corporate strategy and the use of ICT is a global mode of operation of a company around the management of a significant number of HR processes that is based on: the sharing of HR information and its processing by direct and free access of employees; management and the HR function and the implementation of new HR organizations to optimize the service relationship" (KALIKA.M et AL, 2005).

▪**E-HRM:** The e-HRM appeared at the end of the 90s in the United States of America and means electronic HRM, is an expression used to describe applications integrating ICT and HRM within a company. The e-HRM represents the local supervision allowing the accompaniment of each employee in his work and the evolution of his skills.

▪**E-HRD:** E-HRD is the new form of computerized human resources management. It allows the different departments and the management to run all their activities taking into account human resources and knowing how to quickly

quantify the effects (staff, costs, performance, lack or surplus of staff ...). The e-HRD can provide valuable indicators leading to quantified decision-making.

The E-HRD covers mainly the following sectors: selection for hiring, job classification, staff evaluation, professional mobility of staff, career plan, staff motivation, internal communication (in collaboration with other departments), staff training, remuneration (salaries and other benefits), administrative management of staff, social relations...

4-2. Innovations introduced in the HRF:

ICT applications: internet, e-mail, groupware, workflows, electronic document management, intranet.... They introduce major innovations in the human resources function that profoundly transform its missions and activities. These are the following innovations:

- **Remote work and collaborative work in groups** offer the possibility of reducing the constraints related to space and time dimensions and giving rise to new forms of work organization (virtual teams, call centers, etc.) and networking.
- **The re-engineering of HR processes** not only administrative management of staffs, but also the processes of recruitment, training, skills management, etc. Leading to the emergence of "online HR services" and opportunities for the HR function to invest in value-added missions.
- **New management methods** that are imposed by working remotely individually or in virtual project teams, easy access for all to information, online services and new relationships with the hierarchy.
- **The development of knowledge management**, a source of value, thanks to the electronic management of documents which facilitates the preservation and also has access to administrative documents of staff legally subject to archiving.
- **Easing the sharing of the HR function** for the benefit of operational managers inducing greater accountability of the latter in the management of HR and their structures.
- **The emergence of new skills in the careers of the HR function** (mastery of ICT, new expertise, etc.).

These innovations introduce major advantages and several opportunities to the HR function for greater efficiency. At first glance, in terms of reducing administrative management costs and also a refocusing of this function towards value-creating missions that can greatly reformulate its place in the company as PICQ points out: " the dominant idea behind advanced automation and the transfer of responsibility is precisely to allow HRM experts (fewer but of a higher level) to devote themselves to so-called strategic missions i.e. directly related to the development of the company and its competitiveness" (KALIKA.M, 2005).

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4-3. Transferability of knowledge:

CASTRINOTE points out that "The emphasis is on the conservation of natural resources while it is HR that generate development through cultural adaptation to change, the author adds that development is relative to the current form of informational culture that acts in two directions or different directions. Indeed, both old and new employees are a source of information related to experience in the company, but also the mastery of new technologies. The challenge will be, at this level, to be able to capitalize on this knowledge to make it accessible, regardless of their presence in the company.

The observation is that employees maintain their savoir-faire that they continue to consider as a weapon to maintain their assets and manage their career which represents a limit to the transfer of knowledge.

4-4. Resistance to change:

Resistance to change is a limit to adjusting to new systems in organizations. Indeed, employees tend to prefer the old methods that give them a sense of security related to their mastery. This causes resistance that limits the evolution of HRM practices.

4-5. Financial limits:

Several obstacles can be cited in this context: physical infrastructure, telecommunications tariffs, content... etc. Undeniably, the cost of the equipment influences the financial situation of the company and can force it to limit its use of ICT.

Indeed, the structural impediments to the adoption of ICT and the adaptation of the internal organization are acute, but the fact remains that the uncertainty about technological choices and their return on investment are highly detected difficulties. IT leaders face the challenge of driving the introduction of new technologies at a pace that is tailored to the real needs of the business and within a controlled budget.

4-6. The limits related to the human resource:

The level of education differs from one employee to another, making access to ICT not so easy for all categories. In this regard, it is estimated that "the lack of qualified HR significantly reduces the means of effective access to ICTs". Therefore, HR can be a hindrance if ICT is not mastered by all the company's staff.

In addition, there are psychological barriers related to various reasons such as fear of change, lack of information, knowledge or skills and resistance to transformation projects. These psychological barriers are considered less important in large companies that have managed to implement ICT-related projects with a strong involvement of all internal skills.

4-7. Legal limits:

To show the importance of contextual values in the process of ICT integration, Ben Abderrahmane argues that "developing countries face several

legal and ethical obstacles that have huge impacts on the free flow of information to inside and outside undertakings (Ben Abderrahman, 2012).

5- Case study:

MATEG is the first operator to have produced margarine in Algeria with the launch in production of MARGARINE SOL in the year 2000.

5-1. Presentation of the technologies used by MATEG:

MATEG has an application park composed of some software that covers specific management perimeters as follows:

5-1.1. Access Control Software (KELIO):

It is software that allows having a particular and instant service of the movements of the staff, via a device at the entrance, to ensure the access control as well as the employees' checks. It allows the calculation of the hours of work performed by each employee, divided according to several headings. It has very extensive features in terms of time and presence management, has a fully configurable and open aspect that allows, among other things:

- **Manage** the schedule of employees, their absence, their presence and their work system.
- **Manage** different mandatory, flexible, cyclical, conditional time categories... etc.
- **Manage** an unlimited number of absences (illness, maternity leave, public holiday...)
- **Had** a self-service (request for leave, absence etc.)

The software solves all problems related to the management of time, attendance and absence of staff and also integrates into the overall system of the company, such as the staff payroll system.

5-1.2. Workflow platform:

For the management and de-materialization of various HR requests that include request for leave or training, annual interview, update of skills, request for absences and request for mission order ... etc.

5-1.3. Communication technologies:

- **Telephone:** it is the most used telecommunication application in the business world. It makes it possible to connect the different workplaces employing a PABX which also allows access to the external telephone network. MATEG has what is called IP telephony, the phone plugs into a router/modem rather than into a phone jack. This technology offers several advantages including: financial and energy savings, ease and speed of installation and rapid succession ... etc.
- **E-mail:** It is one of the most popular communication solutions in business. It is a service for the transmission of written messages and documents sent electronically via the Internet. It also allows a synchronized calendar service, automatic archiving, protection against data loss ... etc.

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- **Videoconferencing:** is a communication solution integrated into the company to take decisions rapidly, interact quickly and save a lot of travel costs.

5-1.4. Sage paie i7:

Developed by the wise publisher, this software makes it possible to manage all the information related to employees and ensures the day-to-day management of payroll and administrative management of staff (civil status, leave, salaries, social and tax data, social balance sheet, attestation... etc.). It adjusts the structure of the company to meet internal management issues and multiple administrative requirements. The wise payroll plan ensures the availability of the social and legal changes in force, by automatically updating the payroll settings. The latter is linked to the sage FER accounting software via an application interface. Sage allows:

- Integrated management of payments and bank reconciliation (organize the different customer supplier steps, automate the lettering of accounts... etc.)
- Carry out daily payroll processing: quick entry of payroll variables, editing and control of bulletins, transfer of salaries, closing... etc.
- Manage payroll accounting, accounting, analytical follow-up... etc.

5-1.5. COSWIN General Means Software:

It is integrated asset management software where each user (staff, subcontractor or service provider) can securely access the required information through the internal network of the company which reduces response times and eliminates any communication problems.

It improves the management of subcontractors and internal services, brings out good practices and optimizes information circuits. It ensures the centralization of data and also the management of stock entries and exits, repairable items, reservations of manual and automatic purchase requests, and inventories to ensure the availability of parts at the right time and reduce stored fixed assets.

5-1.6 Enterprise Resource Planning (ERP) Software:

ERP makes it possible to manage all the company's operational processes by integrating several management functions including: commercial management, inventory and order management,

Supply chain, accounting, payroll and human resources or customer relations.

5-2. Research Methodology:

We selected a quantitative study through the use of a questionnaire that represents an important working tool. After distributing the questionnaire on our study sample in May 2022 then retrieving, counting, the carried fieldwork led to a corpus of seven (7) respondents.

Our questionnaire consists of closed, semi-closed and multiple-choice questions. Here the questionnaire designed through the use of *Google Forms*

and sent by email to the employees of MATEG’s HR department. As for the data processing, we used SPSS software, version 26, to extract data tables.

Table 1: Description of the sample by gender, Age and Diploma

Gender	Man	71,4%
	Woman	28,6%
Age	Less than 30 years	57,1%
	30 to 39 years	42,9%
Diploma	No diploma	0%
	University degree	85,7%
	Other degree	14,3%

Source: Made by us SPSS, V26

According to the data collected and represented above in Table N°1. We find that men make up the largest number of respondents with a percentage of 71.4% and women with a percentage of 28.6%

57.1% of respondents are under 30 years of age, and the rest of respondents are in the 30 to 39 age group with 42.9%. MATEG's HRD workforce is relatively young. This is explained by the need of the company to recruit young people mastering the computer tool.

We also note a significant rate of 85.7%, of our respondents with a university degree and the 14.3% have other diplomas. Accordingly, the largest number of employees of the MATEG HRD is academics. This reflects the importance that MATEG attaches to the recruitment of qualified staff with a high intellectual level mainly for the handling of NICTs.

5-3. Discussion of results:

5-3.1. Use of ICT at HRD:

Table N°2: ICT used by the HRD staff

Tics used in the company	Percentage
Computers	100%
Computers connected to the internet	100%
Video conferencing	71,4%
Business card	0%
File transfer protocol	100%
Software	100%
Access control equipment	28,6%
Telephone	100%
Electronic mail	100%

Source: produced by us/ SPSS V26

According to the table, it is noted that all of the staff of the HRD use computers, connect to the internet, also use the file transfer protocol as well as the various software, phones and e-mails.

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71.4% of respondents often use video conferencing, but only 28.6% use access control equipment. The business card is not used in this company.

5-3.2. The use of software packages in HRD:

Table N°3: The software packages used in HRD

The software packages used in the HR department	
ERP	00
Groupware	00
Workflow	00
EDI	00

Source: Made by us /SPSS V26

According to Table 3, we see that all of HRD staff use software packages such as ERP, Groupware, Workflow, EDI.

5-3.3. Difficulties encountered in the use of these technologies

Table N°4: Distribution according to the difficulty of use of these technologies

The difficulty of using this technology					
		Staff	Percentage	Valid percentage	Cumulative percentage
Valide	sometimes	3	42.9	42.9	42.9
	Rarely	2	28.6	28.6	71.4
	Often	2	28.6	28.6	100.0
	Total	7	100.0	100.0	

Source: developed by us using SPSS software

According to the results of this table, it can be observed that 42.9% have sometimes encountered difficulty in the use of ICTs. 28.6% of them reported that they often have difficulties with the use of ICT among them. Unlike the remaining 28.6% who rarely experience difficulties in use.

5-3.4. Training follow-up for the use of ICTS

Table N°5: breakdown by follow-up of a training:

Follow-up training					
		Staff	Percentage	Valid percentage	Cumulative percentage
Valid	yes	7	100.0	100.0	100.0

Source: developed by us using SPSS software

The survey showed that 100% of respondents answered yes to the question. They mentioned that they have received ICT training.

The company promotes training, intending to develop the ICT skills of its employees.

Table N°6: breakdown by employee satisfaction level:

Employees' satisfaction level					
		Staff	Percentage	Valid percentage	Cumulative percentage
Valid	satisfied	5	71.4	71.4	71.4
	Very satisfied	2	28.6	28.6	100.0
	Total	7	100.0	100.0	

Source: developed by us using SPSS software

Furthermore, it is necessary to ensure whether the training has been useful or not, for this is very important for the effective use of ICTs; therefore, we looked at the level of satisfaction. Indeed, the following results emerged: 71.4% were satisfied, 28.6% were very satisfied.

5-3.5. Impact of ICT on the HR function:

Table 7: Impact of ICT on the HR function:

Impact of ICT on the HR function	%
Speed of the realization of my work	100
More autonomy in the realization of my work	72
Better information sharing	100
Improves interpersonal relationships	86
Enables quality service	100
fluidity of information and communication in the HR department	100
Decrease in hierarchical distance	43
Improving the efficiency and effectiveness of the HR function	100

Source: developed by us using SPSS software

According to the results of this table, all of respondents strongly agree that ICT provides them with a rapidity of their work. A better sharing of information allows a quality service that facilitates the fluidity of information and communication in the HR department. 71% of respondents strongly agree that ICT provides them with more. In addition, more than 85.5% say ICTs help improve interpersonal relationships. However, only 43% think that they reduce the hierarchical distance.

5-3.6. Role of HRIS in the HR function:

When asked what activities are covered by HRIS, respondents stated that HRIS is used in two activities in the HR department namely time management (hours worked/absences) and pay management. Recruitment, training and career management are underway, the company MATEG intends to set them up.

6. Conclusion:

ICT today offers significant opportunities and powerful support for: HR planning, management and control processes and management logic that is both quantitative (workforce) and qualitative (skills). Their uses change the way employees act, work and collaborate. They make it possible to reduce the launch

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time of a product to target efficiently customers. The use of these technologies ensures the future development of companies. Thus, HRM cannot ignore the contributions of automated information processing.

As a reminder, the purpose of our research was to assess the impact of information and communication technologies on the effectiveness of the HR function, and we started a study on integration ICT in the HR function, at the level of the agri-food MATEG Company.

The results obtained from our conducted field of study allowed us to note that the staff of MATEG's HR department makes heavy use of information and communication technologies: software, software packages, internet, intranet, etc... This has made it possible to evolve and develop this function with autonomy and facilitate the employees' tasks. We appreciated the positive impact that the contribution of ICT to the improvement of the HR function and the various ICTs introduced in the HR Department of MATEG.

These technologies have made the HRD more efficient and effective, with a service of better "quality, price, time", and they have also increased the skills and working capacities of the employees in terms of knowledge sharing, orientation towards tasks with higher added value.

Consequently, we were able to conceive that among the ICTs determining the improvement of the RHF, the HRIS, which is essential for the activities of this function. Thanks to these technologies, we are witnessing a shift from a pyramidal structure where knowledge is held by the leader to matrix structures where all individuals participate in decisions through the pooling of knowledge where each worker becomes a decision-making core that gives more responsiveness to the company. Finally, one may conclude that information and communication technologies contribute effectively to the management of human resources.

This research is not without limits. First, for we were not interested in the behaviours and attitudes of employees in terms of opposition or acceptance generated by ICTs. Second, we studied the impact of ICT globally without mentioning the details of the activities because within the HR department, they do not use ICT in each activity (training, recruitment ...), but they use software that covers and integrates all activities globally. Last but not least, our research theme is based on the study of the impact of information and communication technologies taking into consideration the fact that both are regularly evolving.

In this regard, other research, in this field can take place for further study to bring other resolutions on the impact that ICTs can have on the HR function in Algerian companies.

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