Computerization of the health sector in Algeria
Case of RH Santé DZ in the PHEPT

Numérisation du secteur sanitaire en Algérie
Cas de RH Santé DZ en EPSPT

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Abstract:

In this paper, the focus is on the HRIS and more particularly on RH Santé DZ implemented in all establishments belonging to the health sector in Algeria. To reveal the importance of the implementation of such a system, the case study is carried out at the level of the PHEPT. The results suggest that the HR function experienced more functional flexibility after introducing RH Santé DZ.

Keywords: *Information; HRIS; HRM; RH Santé DZ; PHEPT.*

Jel Classification Codes: I18, M15, M54, O14, O15.

Résumé:

Dans ce papier, on se focalise sur le SIRH et plus particulièrement sur RH Santé DZ implémenté dans tous les établissements encastrés dans le secteur de santé en Algérie. Pour révéler l'importance de l'implémentation de tel système, l'étude de cas est menée au niveau de l'EPSPT. Les résultats suggèrent que les fonctions de RH ont touché plus de flexibilité fonctionnelle après avoir introduit RH Santé DZ.

Mots clés: *Information; SIRH; MRH; RH Santé DZ; EPSPT.*

Jel Classification Codes: I18, M15, M54, O14, O15.

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1. INTRODUCTION

Today, as never before, companies are relying on a new strategy capable of confronting the ever-increasing complexity of endogenous and exogenous economic and managerial relationships, guaranteeing their survival and success. It is about digitization, which makes it possible to make the firm proactive in an increasingly uncertain environment.

The adoption of information systems has become indispensable and even unavoidable at a time when information is seen as the new weapon in today's economy (Sedkaoui and Benaichouba, 2021). Particularly for a vital sector such as the health sector, the implementation of information systems not only improves the managerial and economic situation of establishments in this sector, but also protects and improves the lives of citizens.

In this work, an illustration of this strategic orientation of the health sector in Algeria is carried out by the *RH Santé DZ system*. This platform, recently introduced in the internal management of the human resources function, has created a qualitative leap forward by computerizing the process of carrying out the management of this function.

Our aim in this study is therefore centered on the RH Santé DZ system by presenting the system, the components and how it works. To do so, a case study in the local public health of proximity in the city of Tlemcen will be conducted.

A presentation of the PHEPT followed by an analysis of the *RH Santé DZ* platform will allow us to focus on the extraordinary digital development and unprecedented change in HRM after introducing this new information system.

2. Literature review

Today, as never before, the computerization of daily and strategic management has become indispensable to cope with the qualitative and quantitative enormity of information. The adoption of information systems has emerged in recent decades as a concern that guarantees the survival and success of organizations (Chakraborty and Abu Mansour, 2013; Kharroubi, 2021).

Similar to a production centre, the IS is responsible for providing information to those who need it to carry out their various tasks. Through four phases of production, the IS collects, stores, processes and then disseminates the information so that it is useful for decision making (O'Brien, 1995; Laudon et al., 2006; Abdelouahed and Mezhoud, 2019).

Reix (2002, p: 3) suggests that: "*IS is an organized set of resources: hardware, software, personnel, data, procedures . . . enabling the acquisition, processing, storage and communication of information (in the form of data, text, images, sounds, etc) in organizations*".

Multiple criteria are used to categorize this SI. From a functional point of view, IS supports and exploits the various functions of the firm. Reix (2002) and Zafar (2013) see that functional information systems serve two main purposes: assistance in processing transactions and information for managers at different levels.

Thus, for each function within the firm, there is a specific functional information subsystem that is used to better manage these functions (O'Brien, 1995; Indiyaningsih, 2020). In this context, we find for example: production IS, accounting IS, human resources IS, etc. . . .

As for the human resources information system, the latter, whose abbreviation is HRIS, is broken down into subsystems that ensure the computerization of the executive process of the activity in question. HRIS is defined as: "*HRIS involves materials, software, staff, data, and proceedings which allow for acquiring, storing, processing, analyzing, retrieving and disseminating information about an organization's human resources*" (Ben Moussa and El Arbi, 2020, p: 20).

Today, HRIS is inseparable from the management of the human resources function (Zhang et al., 2021). The latter ensures the smooth functioning of the information flow concerning the personal and professional career of the employee belonging to the firm. In the Algerian health sector, computerization is a challenge to better meet the health-related needs of all citizens. The supervisory ministry makes efforts to modernize its organization and service to stakeholders in all its institutions and departments.

3. Presentation of the establishment:

The PHEPT is located in the street of peace n6, 600m far from the state headquarters of Tlemcen. The establishment provides health coverage for 460270 inhabitants. The PHEPT is locally responsible for polyclinics and treatment rooms in 4 daïras; that is to say 10 municipals which are: Amieur, Mansourah, Ain-Ghoraba, Beni-Mester, Sabra, Bouhlo, Tirni, Beni-Hdiel, Chetouane, and Ain-Fezza.

The treatment rooms provide a general medical check-up and a dental examination. However, the polyclinics provide various services including: generalized screening, dental, maternity and childhood, radiology, etc. . . .The number of staff is 982, broken down as shown in the following table:

Table: Number of FTE staff classified according to the work

Services	Category	Num
Medical support	Specialist doctors	24
	General practitioners	168
	Dentists	54
	Pharmacists	07
Paramedical support	Nurses: (IDE/ ISSP/ ISP /ATS)	324
	Midwives	51
	LABO	24
	MRX	38
Administrative Support	Managers	86
	Vacancies	118
	Employers	52
Biological and psychiatric support	Biologists	22
	Psychiatric	14

Source: according to the authors from the internal statistics of the HRF

The primary mission of the PHEPT is to provide health care to all residents of the city of Tlemcen. This concern:

- Basic medical consultations through the long-term existence of a general practitioner in all health centers closest to the patient;
- Control of environmental hygiene against microbes and viruses;
- Specialized medical screening to reduce the burden of patient mobility;
- Monitoring of pregnant mothers and vaccination;
- Strengthening and increasing preventive activities;
- Medical follow-up in schools;
- Health recovery in isolated areas via mobilized units;
- The upgrading of the level of health sector employees and the renewal of skills.

4. The management of the PHEPT

By the executive decree 07/140 of 19/05/2007 concerning the foundation of the public health establishment of proximity in particular articleN.06, the organization of such establishment includes the following poles:

- The Director:

The Director of PHEPT appointed by the Minister of Health has the primary responsibility for the operation of the institution. His mission is to ensure the execution of tasks, and he presents its firm to the various institutions. The director is the only authorizing officer who implements the proposed program-budget by adjusting the accounts and supervising the internal organization.

The director also organizes the meetings of the board of directors, prepares the annual reports and sends them to supervisory authority after obtaining the board's approval. Thus, the director enters into contracts, transactions and agreements in accordance with the regulations in force.

- The assistants:

Four deputy directors assist the director in carrying out his various tasks. These are those that supervise:

- The sub-directorate of finance and resources;

- The sub-directorate of human resources;
- The sub-directorate of health services;
- The sub-directorate of equipment maintenance.

- The board of directors:

According to executive decree 07/140 on the establishment of local public health establishments, the board of directors chaired by the director includes individuals presenting different institutions having a relationship with the establishment in question in the city. It's about:

- A representative of the Wali;
- A representative of the finance department;
- A representative of the economic insurance;
- A representative of the social insurance institutions;
- A representative of the Wilaya People's Assembly (APW);
- A representative of the Communal People's Assembly (APC);
- A representative of the medical staff elected by his colleagues;
- A representative of the paramedical staff elected by his colleagues ;
- A representative of the organizations active in health promotion ;
- An employee representative elected at a general assembly;
- A chairman of the medical board.

- The Medical Council:

It is an advisory body composed of the president of the medical council and his deputy as well as four members elected for 3 years renewable. Each of these parties is elected by his colleagues according to the higher echelon. These are:

- A medical services manager;
- A pharmacist in charge of the pharmacy;
- A dental surgeon;
- A nurse;
- A representative of university hospital employees as appropriate

The medical board is responsible for the treatment of the necessary subjects of the establishment and its functioning. It gives medical and technical advice, particularly on:

- The organization and endogenous relations between medical services;
- Draft programs relating to medical equipment and the introduction of new therapeutic services;
- Health and population programs;
- Programs of scientific and technical events;
- The creation of medical structures or their abolition

5. HRIS in the PHEPT: illustration by *RH Santé DZ*

The Ministry of Health Population and Hospital Reform (MHPHR) is one of the pioneering ministries adopting an organizational computerization approach. One of the manifestations of this trend is seen in the adoption of an HRIS called *RH Santé DZ*[1]. The latter is a human resources management platform dedicated to the health sector in Algeria.

RH Santé DZ is used to collect, process, and analyze the necessary information related to human resources in the health sector. Therefore, this system helps to determine the sector's strategic human resources plan in line with overall policies and directions. The general and detailed design of the system is based mainly on the General Civil Service Act and the various rules issued and provided by the MHPHR[2].

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[1] *RH Santé DZ*: Algerian Information System of Human Resources in Health.
[2] Decree n 06/03 of 15/07/2006.

Within this framework, the MHPHR has concluded an agreement with the firm Spider Network[3], entrusting it with the development and maintenance of this platform as well as the processing of the system's data for the benefit of all the services linked to the ministry in question.

It is therefore sufficient for the PHEPT to access the platform via a simple web browser to reveal all the information on each employee from the moment of recruitment until retirement.

6. The components of *RH Santé DZ*:

Like every IS, *RH Santé DZ* includes the following components:
- The inputs: this concern:
  - The employee's personal data (surname, first name, nationality, family situation, number of children, residence);
  - The employee's professional data (date of assignment, bonuses, penalties, promotion decisions, and transfer decisions);
  - Work evaluation data (workload, attendance at work, quality of work);
  - Training data (number of employees subject to: training, duration of training, place of training).
- Operations:

After collecting previous data from internal and external sources within the establishment, employees of HR function begin to sort, verify and track it to produce usable information that is later stored in archival media while building a database to protect the information from loss and alteration and to facilitate accessibility.

- The outputs: these refer to the:
  - Employee information (employee's electronic file: EEF)
  - Information on administrative operations;

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[3] It should be noted that Spider Network is a company specializing in consulting and experience in charge of IS maintenance while providing technical support to public administrations. This concerns the creation of IS, implementation, operation and maintenance along national borders via intranet and internet.

- Information on previous, current and future situations of employees;
- Reports on recruitment, promotion, training, job evaluation and leave;
- Other documents such as the work certificate, the installation certificate, the leave certificate, the recruitment order, the promotion order, the employment record, the list of names, the occupational card.

7. The goals of implementing *RH Santé DZ*

RH Santé DZ system has led to remarkable progress in the management of operations not only at the level of the HR function but also at the level of the lead ministry, leading to:

- Improve the availability of credible indicators for sound decision-making on human resources in the health sector;
- Modernize the planning and management of human resources in health establishments;
- Categorize establishments according to the qualifications of their employees to balance the skills in the sector throughout the national territory;
- Ensure efficient management of career development, promotions, absence management, illness and leave for all employees of the central management.
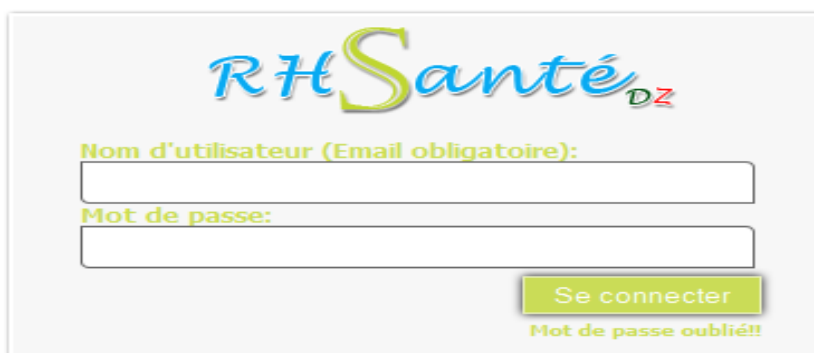
In addition, the *RH Santé DZ* system has enabled the PHEPT to:

- Obtain structured, disaggregated, classified, accurate, complete, and real-time information on all employees of the institution;
- Simplify and unify HRM operations and activities;
- Preparing and managing analysis and scoreboards reports on human resources such as: age, gender, specialization, diploma, habilitation, retirement, civil service;
- Provide the information needed for research and decision-making;
- Reduce unintentional errors produced by recursive data entry;
- Minimize routine tasks through computerization, saving effort, time and cost.

8. How the *RH Santé DZ* platform works:

To access the system platform, we must have a computer linked to the MHPHR intranet (*health network*). So just we write in the web browser the extension: rh. sante. gov. dz. A window presented below opens:

Figure: *RH Santé DZ* access window

Source: PHEPT's personal service

After entering the personal user name and password, the employee of HRF in the PHEPT accesses the platform which encodes all information concerning the employees working in the establishment.

The *RH Santé DZ* consists of four main parts which are:

− The platform list: which presents the main list of this system and is repeated several times;
− Direct access to the employee's file: by just entering the national number followed by the social insurance number;
− The abbreviations of different units: which present the acronyms of different lists;
− Notifications and warnings: to draw attention to a new event related to the personal or professional career of the employee.

9. CONCLUSION

It is clear that there has been a radical change in the way HRF operates after the introduction of *RH Santé DZ*. The latter has enabled PHEPT to cope with the enormous quantity and quality of information. Computerizing the internal management of the PHEPT has led to improving the flow of information within this public firm. *RH Santé DZ* has contributed to making the management of the HR function more flexible and to minimizing the time and effort required to obtain useful information for decision-making. Today, PHEPT employees see more managerial flexibility at the level of the function in question. Certainly, the HRIS study here has facilitated the process of task performance not only for HRF employees but for all employees in the MHPHR.

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