Information Systems In International Human Resource Management (IHRM)- An Overview

Nguyen Duc Huu

https://orcid.org/0000-0002-8862-2685 Vietnam Trade Union University

Abstracts:
Over the years, International Human Resource Management (IHRM) has undergone significant changes. The focus has shifted from administrative management tasks to becoming strategic partners of the overall organizational strategy, largely with the strong support of the development of information technology in this field of knowledge. The expanded use of information systems has a profound effect on today's IHRM management. It promotes a massive shift of Human Resource processes and practices (Human Resource -HR) in organizations, in particular on how they collect, store, use and share information. Some IHRM processes have become more efficient and the impact of improving this service level allows for more involvement of HR in business strategies. This new role in the business strategy adds significant changes to its personnel functions and to its experts. This article discussing the impact of information systems in IHRM, examining existing documents on this topic, describes the benefits and limitations can have the use of them. Articles analysis the specific task of professional personnel when using some technology applications of IHRM

Keywords: Human resources, Management, Information systems, Education International.

1. Introduction

Rapidly changing markets, industries, and services require an organizational environment that is constantly adaptable to new ideas and reduces marketing time. In this competitive reality, IHRM has an ever more important role because new forms of business require new ways of relating to people. HUMAN RESOURCES professionals must analyze social, economic, political-legal and technological environmental opportunities to redesign personnel management processes and practices that are key success factors for the organization's mission and goals.(Mendenhall, 1999; John Milliman et al., 1991)
To deal with these challenges, IHRM has been forced to adopt new logic, and most personnel managers must forget outdated habits, ways of thinking, and actions. On the other hand, they should help organizations define their strategies and develop programs to develop their human resources.

Practice shows that information systems have increased the efficiency of IHRM through more efficient recruitment methods, organizational communication, employee participation, and increased skills of personnel managers. From there, the fields of human resource management must link human capital strategies with the most suitable technology solutions. This means creating an HR organization focused on connecting people to a business strategy to achieve a quick adaption to the needs of general change for people and businesses. (J Milliman et al., n.d.) The same needs began to make HR necessary.

However, not all HUMAN RESOURCES professionals work in the IHRM strategy, many still find themselves under pressure and find their time devoted to daily concerns. To escape the administrative burden and optimize the time of contribution to the organization. HUMAN RIGHTS PROFESSIONALS need a support tool platform for this task. It sets out the urgent need to build a Human Resource Information System (HRIS) as well as the role of human resources professionals in this process. (G. K. Stahl et al., n.d.)

2. Literature Review

In recent years, information technology has influenced almost every aspect of the organizational process, including IHRM processes and practice. From a position associated with administrative management, the information system has become a strategic partner of organizations, largely due to the use of technology. It has transformed human resource processes and practice in a way that organizes the collection, storage, use and dissemination of information. (I Björkman, …, et al., n.d.; M. M.-M. I. Review & 1999, n.d.)

The quality of IHRM is an important success factor for organizations. Human resources professionals need to analyze and consider the social, economic, political-legal and technological environment. In response to these challenges, IHRM has been forced to adopt a new approach and most international personnel managers must forget about outdated habits, ways of thinking and actions. On the other hand, they should help organizations identify strategies and build programs to develop their human resources. (Ariss et al., 2016; K. K.-J. of H. R. Management & 1996, n.d.)

In fact, HR's main goals in organizations are to attract, select, motivate, and maintain talented employees in their roles, and technology has changed the way HR processes are managed. It is basically how organizations collect, store, use, and disseminate information about HR. [4]. Kovach and his associates define the Human Resource Information System (HRIS) as a systemed process for collecting, storing, maintaining, re-storing, and validating necessary data of organizations on HR. Tannenbaum defines it as a technology-based system used to receive, store, manipulate,
analyze, retrieve, and distribute appropriate information related to personnel within the organization (R. K.-H. R. Management & 1994, n.d.)

HRIS shapes the integration between IHRM and information technology. HRIS is a management system specially designed to provide managers with information to make personnel decisions. Is a system that allows you to keep track of all employees and information about them. It is usually done in databases, or more often in a variety of inter-related databases.

In this context, information systems have increased the efficiency of IHRM through more efficient recruitment methods, organizational communication, employee participation, and increased skills of personnel managers. From there, the fields of international human resource management must link human capital strategies with the most appropriate technology solutions. This means creating an organization (human resources software –eHR) focused on connecting people to a business strategy to achieve a rapid adaption to the needs of general change for people and businesses. These same needs began to make eHR necessary.

3. Methodology

3.1. Objectives of information systems

HRIS shapes the integration between IHRM and information technology. Therefore, the basic objectives of HRIS are (Figure 1) (P. K.-I. J. of H. R. Management & 1991, n.d.; Relations & 1997, n.d.)
Organizations request information about their human resources and functions, but also request information from their external environment. Thereby, HRIS enables to collect, store, manipulate, analyze, retrieve and distribute information from the internal and external environment. HRIS in an organization should be developed in such a way that the data stored in it can be used for some output. Due to the high use of this data, it is necessary to develop a system for the collection, processing and circulation of complete information (Harzing & Ruysseveldt, 2017) (Figure 2).

**Figure 2. The type of information required in HRIS.**

Chakraborty lists several examples of information collected from human resources rooms or from their surroundings and that is part of HRIS, such as: (M. Harris, 2007; Kamoche, 1996; Kopp, 1994)

- Employee information (name, age, qualifications);
- Type of employee employed during the year;
- Training and development;
- Performance appraisal results;
- Promotion, demotion, transfer, separation of employees;
- Compensation packages, both financial and non-financial, are provided;
- Absenteeism and revenue;
- Maintenance, safety and health services;
Human resources available from different sources;
Training and development facilities available outside the organization;
Expectations of human resources from the organization;
Government policies affecting employment conditions and employment laws;
The trade union movement and its attitudes to employers;
IHRM practice benchmarks.

3.2. Components of HRIS

HRIS applications allow users to store and track all kinds of data related to HR (PJ Dowling et al., n.d.; studies & 1994, n.d.) In research conducted by Dorel, IHRM has focused on collecting and storing individual data (records) of each employee, processing wages, benefits, vacations, etc. However, the personnel function has evolved and become a very important management function. It is possible to identify the three main functional components of HRIS (P Edwards et al., n.d.; Kidger, 1991; J. S.-I. J. of human resource management & 2011, n.d.)

Figure 3. Functional components of HRIS.

The input function allows the import of personnel information into HRIS. The maintenance function allows updating and adding new data to the database. To generate valuable output, HRIS needs to make the necessary calculations and format the data in an understandable way. Therefore, it is important to remember that the most important elements of HRIS are information, rather than process automation or the hardware/software used (I Björkman, Management, et al., n.d.; P. J. Dowling & Welch, 1988)

In HRIS, three aspects of HRIS can be identified: operation, tactics, and strategy

- Operational human resource information system - provide data to support regular and repetitive human resource decisions (e.g. workforce, government regulations);
- Tactical human resource information system - provide data for supporting decisions related to resource allocation (e.g. recruitment, job analysis, training and development decisions, compensation plans);
- Strategic human resource information system - provide data for strategic decisions in the human resource plan.

3.3. Users

There are some HRIS users. So, who uses HRIS and how is it used? Basically, we can define three groups of people: personnel specialists, functional managers, and employees (P. D.-M. I. Review & 1999, n.d.) (Figure 4)

Figure 4. HRIS users.

In the case of human rights professionals, HRIS helps them fulfill job functions, even the most basic job tasks, such as reporting and compliance, salary and compensation analysis, benefit administration, candidate tracking and skills testing.

On the other hand, functional managers expect that HRIS provides data to achieve the goals. They hope that the system provides information for performance evaluation and management, team management and project management, recruitment and training. In addition, employees become end users of some HRIS applications, such as self-service, benefit options, career planning or training and development. (Dean Keeley, 2001; Schuler et al., 2007)

3.4. Costs and benefits
The information system represents a large investment of organizations. Therefore, it should be noted the costs and benefits of the implementation of HRIS (Ingmar Björkman & Welch, 2015; Shen, 2011; Welch, 1994) (Figure 5).

**Figure 5. Costs and benefits of HRIS.**

The common benefits of HRIS introduced by different authors are:

- Improved accuracy
- Provide time and quick access to information
- Cost savings
- Operating, controlling and planning personnel operations
- Increased competitiveness by improving personnel practice
- Increased efficiency
- Producing a large number of personnel activities
- Shift the focus of HR to strategic IHRM

However, there are costs associated with implementing HRIS:

- Employees should have access to computers and a global internet connection
- Can re-system or make mistakes, errors
- Costly technology costs, time
- Work issues (task changes, training, layoffs)

There are many software solutions offered, the choice of which will depend on the user's decision. Many types of computer-based training, internet access to the world of recruitment and the use of certain programs to evaluate employees in the recruitment process are only available to those with a technology-rich environment. The fact is that HRIS allows validity and efficiency, and ensures competitiveness. (P. J. Dowling, 1999; Paul Edwards et al., 1996; H Scullion et al., n.d.)

According to Hendrickson's research, increased berries are the benefit of HRIS. Both time and cost efficiency can be solved with the ability to make more transactions with fewer fixed resources. This can especially be seen in areas such as payroll and the benefits of transaction accuracy that HRIS offers. In addition, the technology can be used to simplify processes (Dickmann & Sparrow, 2008; Geringer et al., n.d.; C. M. Vance & Paik, 2015)

4. Result

Continuous innovation in technology is creating a way to get personnel done. These technological developments have created an interactive and information-based work environment in real time. The personnel information system has evolved from automatic employee record keeping to more complex reporting and decision systems (P Dowling, 2004; G. Stahl et al., 2012)

In a traditional HRIS, in fact we can only handle administrative issues, such as absence of monitoring, salary structure, training information, recruitment, communication response, access to current information, medical information and global governance.

However, HRIS allows human resources professionals to respond more quickly to changes and decision-making needs. HRIS enables budget control, monitoring and screening, combining skills, evaluation, feedback, human resources planning, succession planning, skills monitoring, training needs analysis, and global analysis

The main problem is determining what the true meaning and role of information systems in IHRM are. HRIS can be applied in several fields, integrated into the HRIS system (Aswathappa & Dash, 2020; C. Vance & Paik, 2015) (Figure 6).

Figure 6. Fields of HRIS application.
According to research by Kavanagh and associates, HUMAN RESOURCES professionals spend time primarily improving business processes, talent management processes, workforce metrics, personnel strategy, workforce management and planning, and capacity management. Here are some examples of the application of information systems in the functional areas of IHRM.

4.1. Strategic Human Management

Strategic IHRM is characterized by the application of a dynamic vision of the resources it manages. It includes not only the planning and implementation of actions, but also the control of the results, which must be related to the strategy of the organization. In HRIS, personnel specialists can find information at the following levels (Briscoe et al., 2012):

- Environmental screening: internal and external environmental monitoring to detect opportunities and threats that may affect organizational plans;
- Quality and productivity improvement: analysis and development to certification of the development of quality and personnel productivity.

4.2. Workforce and employment planning

Personnel planning of what the organization will need is of great importance to personnel professionals, revealing different skill profiles, work schedules, allowing the organization to have the right people, the right number, at the right time. It reflects the interests and views of the organization as well as the aspirations of candidates and collaborators. (Michael Geringer et al., 2002; Hugh Scullion et al., 2007) The information that human rights experts can collect in this field from HRIS is:
- Promotions, assignments, hiring and termination rates: track data for analysis and decision-making on workforce plans and employment needs.
- Job analysis and definition: allows employees in geographically distributed locations to work together.
- Recruitment and selection: the ability to support processes by creating faster tools and allowing for online work.

4.3. Human resource development

The development of HR is a competitive element of each unit. (Harzing & Pinnington, 2010; A. L.-H. resource management & 1986, n.d.; Pucik et al., 2017). In these cases, the information that the personnel specialist can collect from HRIS is:

- Career development: analyze their career, development, develop career plans and achieve the goals outlined.
- Education, skills and training programs: analysis and determination of capacity, determination of training needs, access to distance learning content.
- Employee performance evaluation: define performance goals, design metrics, evaluate performance, and respond to results.

4.4. Commendation-discipline

The reward system includes all material and non-material partners that employees can receive, depending on the quality of their operation, contributing to the development of the business and its identification with the values of the organization. (Schuler et al., 1993; S Taylor et al., 1996; text & 2001, n.d.) HRIS allows personnel experts to identify relevant information:

- Salary information: payroll processing, holiday management, absence and automatic calculation of payroll components.
- Retirement plan: determine success success success plan, pension, reasonable disassembly programs.
- Benefit management: benefit allocation, regulatory benefit analysis, cost benefit analysis.
- Salary analysis: salary development analysis, salary comparison.

4.5. Labor and labor relations

The role of personnel professionals in the social relations system is significant. They appear as a link between organizations, employees, workers' representatives and trade unions. (Brewster et al., 2016; H. Harris et al., 2003; B. Reiche et al., 2017). HRIS can help personnel professionals in various aspects of the field:

- Employee disciplinary records: access and management of proceedings, disciplinary reports.
- Labor unions and distribution: management of information about trade unions and workers' collective representatives, job distribution and analysis of industrial and industrial relations indicators,
- Attitude, culture and commitment: the ability to automatically understand the entire organization and perform analysis of attitudes, cultures and commitments.

4.6. Risk Management

Improving safety and working conditions are areas that are difficult to assess and are considered real investments for the company and are a specific area of IHRM. Therefore, consistency must be established between the actions of the organization and other areas of the IHRM.(B. S. Reiche et al., 2016; Schuler et al., 2002; Sully Taylor et al., 1996) HRIS can assist with risk management by analyzing the following points:

- Accidents and diseases: analyzing trends in accidents and diseases; management and reporting.
- Safety and insurance requirements for workers: quick access and support for processes, case management, monitoring of high-risk conditions and accidents.

5. Discussion

International human resource management provides guidance to an organization's workforce. "The use of information technology (IT) in personnel management is critical to meeting organizational needs with staff with qualifications and organizational support Therefore, information systems have been a valuable tool for personnel managers to facilitate processes and practices of personnel management. As we have seen, HUMAN RIGHTS professionals have a special role to play in this process.(Laurent, 1986)"

The Human Resource Management Association. Mentions that human resources professionals should recognize the integration of an HRIS as a large project and a major change for the organization. Some employees (employees and even managers) will resist the change and it is imperative that they be prepared to deal with resistance. PERSONNEL professionals must support the change and facilitate communication. They need to:

Recognize individuals who may react negatively to change.
Anticipate resistance and find a way to deal with it.
Show commitment and positive attitude to change.
Get people involved in the process.
Ensure top managers can see and support this
Remind that change is a process and successful change takes time.

Enhance changes with offers.

Communication and staff management.

Personnel professionals should remember that IHRM is limited to the storage of employee records and is provided as a service to the organization. The function of human resources has undergone drastic change. With global competitive success based on the application of knowledge, information and technology, IT professionals are now committed to participating in more important and strategic roles, improving efficiency. They become strategic business partners based on the use of HRIS in their work.

HRIS's future trends can easily lead to confusion for organizations and personnel professionals, and it can cause major changes in the operation of IHRM and HRIS in organizations. The fact that the most successful organizations are those capable of leveraging the technology and linking it to their personnel strategy. In this case, personnel specialists need to understand that:

- Technology of the future will be both cooperative and connected;
- Will increase the use of personnel score cards with workforce analyses;
- The process of automation and the use of online analytical processing will be used more;
- Will access accurate personnel information thanks to advances in communication tools;
- Information security should be a top priority;
- Future workers will be able to work anywhere, anytime and on any device.

6. Conclusion

Technology has an increasingly profound impact on IHRM. As the technology develops, it will also force IHRM to receive new standards in both its processes and practices. HRIS emerges to meet the needs of this change made in the most efficient way possible, considering improved accuracy, rapid access to information, increased competitiveness and efficiency of personnel function regeneration.

There are still many questions about the real goals of HRIS and the answers they allow to the real needs of IHRM. In fact, there are still some limitations in its use and results. However, HRIS's role in IHRM allows human resources professionals to respond more quickly to IHRM changes and needs, for example, allowing for budget control, monitoring and screening, combining skills, evaluation, feedback, human resources planning, skill planning, training needs analysis and training needs analysis and global analytical training needs analysis... By focusing on using technology to continuously improve the quality of work. Technology can improve the information available to HR, facilitate hr processes and make them faster and more efficient.
One of the largest tools in IHRM, HRIS is passed to make organizations more accurate and efficient. Human rights experts need to integrate HRIS as a project and be a major change for the organization, taking on the role of a business partner, as a data analyst, as an internal consultant, focusing on IHRM's strategic issues. This is necessary for the development of people, businesses and organizations.

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