

The Role of Human Resources Information Systems in Improving the Performance of Human Resources Management

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Abstract

Objectives: Human resource management function has assumed great importance in recent years as organisations drive their competitiveness on the basis of their human capital and employee competencies. This has created the need for organisations to acquire, store, and manage large amounts of information about their employees, their training and development requirements, their competencies, their potential for succession within organisations, etc. **Methods/Findings:** Given the amount of this required information, the use of technology-based human resource information systems has gained popularity and momentum in organisations. Research suggests that these systems not only enhance the effectiveness and efficiency of business processes and organisational productivity and performance, but also enhance the culture of the organisation by developing transparency, accountability, sound management-employee relationships, and innovation and creativity through employee commitment. However, human resource information systems are costly interventions with requirements of continued investment in the form of financial resources and specialised knowledge and training of relevant people. **Application:** The study is to identify the organisational factors that help support successful human resource information systems interventions. In this respect, top management support, training, and organisational communication have emerged as the key themes that organisations can use to minimise the disadvantages of using human resource information systems.

Keywords: Human Resource Management, Information Systems, Interventions.

1. Introduction

Human resource management is a critical process in organisations seeking to develop competitive advantage on the basis of the capabilities of their employees and their talents. Human resource management has assumed a strategic partner role in organisations in recent years given the fact of this issue and its importance in an era where organisations are looking to develop a core competency to remain ahead of their competition. From a theoretical perspective, human resource management functions involve recruiting, selecting, training, developing, succession planning, terminating, as well as

overlooking the legal issues surrounding all these functions¹. The human resource management function of an organisation also contributes towards the strategic decision making and planning of organisations and is also responsible for ensuring that it has the requisite resources in terms of human capital and its management to ensure that organisations have access to these as and when required. In order to be able to provide this, the human resource function depends upon and draws from a number of support systems, including the information that it has stored on the employees of an organisation pertaining to their experiences and expertise, and their contribution in the organisation. Whilst maintaining such information

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records for smaller and newer organisations may be a simple process, it becomes a complex one as organisations grow and expand, along with the expansion in the experiences of employees. This is then addressed through the use of definitive and custom-made information systems².

There has been a shift in the way organisations approach and adopt information systems in recent years. This has been complemented and spurred by organisational, employee, and customer expectations, propelling organisations to gain access to information systems that have the ability to address the diverse requirements of these multiple entities. The adoption of technology has been a major step in this process, and information systems now offer multiple procedures and options that can enable organisations to modify and personalise these technological interventions as per their requirements. These applications help in the acquisition, storage, and accessing and utilisation of information in a more efficient and adequate manner, enhancing the capability of organisations to manage their human resource functions effectively. These systems not only offer data storing, but also analysis and application, which is an added advantage in strategic decision-making. These systems have been rapidly and readily adopted by human resource management departments in organisations to enhance and improve their performance, which in turn enhances and improves the performance of the organisation. Information systems have been shown to improve the performance and efficiency of human resource management in the strategic decision-making and goal setting of organisations³.

Nevertheless, as is true for each intervention, human resource information systems come with their own drawbacks, particularly in the context of the costs and support required for these interventions to be implemented successfully in organisations. This paper is going to look at the performance enhancement that the use of human resource information systems provides the human resource management function in organisations and identify ways to address these drawbacks in organisational settings.

The following section provides an overview of the research literature presently available on this topic, and its contribution to this study. This is followed by a statement of the research problem, and the research methods used. The results and analysis section provide the findings of this study and the support from literature in the context of each. The final section concludes the paper, provides

recommendations for organisations based on the findings of this study, and outlines some key future directions in this respect.

2. Literature Survey

HRIS, as human resource information systems are commonly called, refer to a computer-based application that stores and maintains data about employees and their jobs within an organisation. This data is then used to support decision-making and strategic goal setting based on human capital and employee talent⁴. In⁵ maintain that human resource information systems allow human resource management practitioners to offer competency-based analysis for individual employees that can then be used to enhance organisational performance. This suggests that HRIS provide effective support to HR management to ensure that the right information is available as and when needed in capability and competency context. In⁶ suggest that when employee decisions are based upon and backed by an elaborate HRIS, they are not only more correct, but also have more long-term benefits for the organisation as well as the individual employees. HRIS thus offers a long-term solution to HR management effectiveness. In^{7,8} suggests that the use of HRIS in organisations not only enhance organisational decision-making and decision outcomes, but also enhance employee morale, motivation, and organisational commitment. This in turn enhances creativity and innovation in organisations. In⁹ also suggests that HRIS have a direct impact on employee commitment, leading to increased productivity and profitability with low wastages, thereby enhancing effectiveness and efficiency in work processes and performances. This leads to an integration of the human resource management function with information technology, enhancing the competitive advantage of organisations. Given the fact that modern competitive positions are based on innovation and creative problem-solving, this is a key merit for HRIS use. HRIS not only allow for a more accurate person-job and person-organisation fit at the recruitment and selection levels, but also ensure that employees are supported with the requisite training and development interventions required for them to work efficiently in organisations. Cost-cutting measures employed using HRIS allow pilferages to be contained in terms of training and development efforts as well. This would allow organisations to have access to trained and developed employees as per the

need of its time. A further effectiveness of HRIS is seen in the performance appraisal process. The use of HRIS not only makes the appraisal process more accurate, but also enhances transparency and accountability at both ends of the appraisal process, enhancing employee confidence in the system¹⁰. In¹¹ also include the enhancement of organisational character using HRIS, primarily due to the transparency and accountability it offers in the various functions surrounding human resource management. This is critical for organisations to uphold and align with equal employment laws, and for creating a healthy, competitive environment, replacing organisational politics. In¹² suggest that the use of human resource information systems reduce administration costs for organisations, reduce information errors, and enhance the ability of an organisation to track and control human resource management activities. This is critical to the effective planning and control of the human resource management function. This means that not only is human resource information systems helpful logistically, but also contributes towards organisational intelligence, growth, and evolution. Such multifaceted advantages of human resource information systems help in the everyday work processes and also allow for integrating the work that flow between the different organisational departments, streamlining and improving them in the process.

Other research studies have also outlined some disadvantages for the use of HRIS in organisations. A major drawback of the installation of HRIS pertains to the costs involved. This includes the cost of acquiring information systems, as well as the subsequent training of employees in its use. Most HRIS also need to be upgraded with updating of technology, and this is also an ongoing investment that organisations need to commit to. Without these upgrades, the system may become insufficient for the needs of the business. In such a scenario, not all organisations may be able to afford these systems, particularly those that are smaller in size or have fewer resources at their disposal¹³. This is particularly relevant when organisations are already looking to cut costs to remain competitive. However, it needs to be remembered that the initial investment is paid off via the cost savings that are secured over the long term in other areas of HR management. Moreover, since the end users are humans, any input error may cause an incorrect information infiltration throughout the organisation, which may become difficult to contain. Unauthorised access may create security concerns for organisations and may put employee

data at risk. HRIS are more prone to cybercrimes than the traditional methods. This creates sensitivity around their use and concerns for data protection and infiltration of individual privacy, which is a key concern nowadays, with large organisations such as Facebook and Apple facing criticism on similar accounts. Moreover, HRIS typically need specialised people to operate the systems, thereby creating the need for the employment of people with this specialised knowledge. In case such people are unavailable, the system may become unmanageable and redundant¹⁴. This could make organisations sceptical of the large investment required to instal these in the first place. Figure 1 shows and an overview of the role that HRIS play in organisations is outlined in the following model¹⁵.

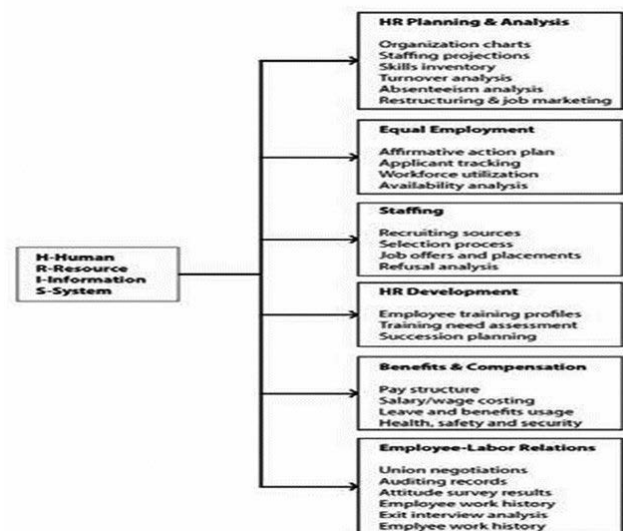


Figure 1. Human resource information systems model.

This model identifies the various inputs that different human resource functions take from HRIS. These range from the planning and analysis stage, and identify the required personnel as well as their skill levels to carry out organisational tasks, helping to develop recruitment and selection processes. Equal employment legislations and laws also take guidance from the information systems in order to ensure that staff are treated equitably, and due diligence is undertaken. The same is true for training and development purposes, with human resource information systems providing an overview of employee capabilities, future organisational needs, and training and development requirements. Compensation packages are developed using information systems to provide a holistic and competitive package to employees. HRIS also

enable a swift resolution of labour problems with regard to employment relations, and offer insights through negotiations, exit interviews, and attitude surveys on employee problems that organisations can look to improve to enhance their performance¹⁵.

3. Research Problem

Given the fact that HRIS have certain drawbacks, it is pertinent to deliberate upon these issues and identify the factors within organisations that can contribute towards the effectiveness of HRIS and enhance the potential of their success. This paper seeks to identify ways that organisations can engage to address these problems.

4. Research Method

This research analysis was conducted through qualitative methods. The primary instrument for data collection were interviews conducted with senior management and leadership of organisations across several different industries, including education, retail, manufacturing, and healthcare. Semi-structured interviews were used for data collection, with subsequent questions developed as per participant responses, allowing for responses to be explored in greater depth. Interviews were chosen as an instrument for data collection with the intent that they would allow for an identification of the most relevant support processes and management behaviours that allow for an effective integration and application of HRIS within organisations. For the purpose of analysis, thematic analysis technique was used, and the responses of interviews participants were categorised as per the most emergent theme. Thematic analysis allowed for an identification of the most relevant process that could help in resolving the research problem¹⁶.

Participants were administered the consent forms and participant information sheets prior to initiating the interviews in order to secure their willingness to be a part of the research. Their names and associations with their organisations were kept anonymous, and only the researcher had access to interview recording and transcripts. Demographic information of participants, such as their age, was considered irrelevant to the purpose of this research, and was thus excluded from the preliminary questions. The only questions relevant to the participants themselves that were asked enquired about their experience and their job titles. All research participants belonged

to senior management and leadership categories, with CEOs, COOs and human resource strategic partners being the most common job titles held by participants. Two of the respondents were heads of human resource departments as well. The individual work experience of research participants fell between 16 and 22 years.

In all, 8 interviews were conducted, although 12 had been planned. Interviewing was stopped once data saturation had been reached in data collection. Each interview lasted for approximately 30–35 minutes.

5. Result and Analysis

The results of the interviews identified three key themes that emerged as of being critical importance to the successful application and integration of HRIS for improving the performance of human resource management processes.

5.1 Top Management Support

This emerged as the most critical issue that was cited as far as the adoption and successful implementation of HRIS in organisations are concerned. Likewise, it was also cited as the most common reason why such applications failed. All participants agreed that top management support in the choice of adequate HRIS remained key to their successful integration in business processes, which then allowed for their benefits to be utilised. This included the investment required for HRIS, and the readiness of the top management and leadership of organisations to commit to this investment. This was also pertinent given the fact that there are a number of applications available in this respect, and organisational management had to make the appropriate decision that not only supported the organisational working, but also was justifiable in terms of the costs incurred in acquiring and maintaining these systems. The same has been advocated by Holland, Hecker and Steen¹⁷, who suggest that top management commitment is critical in the allocation of the organisational resources needed to sustain information systems. This includes financial as well as other logistical support needed for information systems to be used in organisations, including human resources, who provide the time and expertise in the use of these information systems for effective outcomes¹³.

5.2 Training

A second key theme, linked to the first one, was training, which related to top management support in choice

of systems as well as the ability of their own people to use them. Again, given the variety of options available, top management was not only responsible for making a choice that was suitable and cost effective, but also one that aligned with the capabilities of employees to use these systems, including training to learn how to use them and subsequent training and development as these applications were updated as technology changed and became more sophisticated. Participants agreed that this meant that not only was the staff trained in its usage, but also that the application and choice of programmes remained relevant to organisational evolution and growth. One participant also identified that sometimes, this meant that the IT department in the organisation had to be updated holistically for the remaining technology to be able to support information systems, and this was again a cost intensive process. However, the same participant agreed that the return on investment in such cases always justified, and the ease of operations achieved through such an upgrade lead to performance benefits. This issue has also been highlighted by¹⁸ who identify the need for a strong and continued interaction between IT departments and HRIS, particularly when it is being introduced, updated, or developed. Lack of trained employees leads to a misuse and ineffective use of the data in HRIS, leading to a loss on investment and valuable information¹⁹.

5.3 Organisational Communication Systems

A major influence on the effectiveness of HRIS emerges from organisational communication systems. Organisational communication systems serve two purposes in this context. Firstly, they allow for information to flow within the organisation regarding employees and their roles in the organisation, as well as the problems that they face and their training and development needs. This leads to an adequate supply of information to be stored within human resource information systems for human resource management functions, such as succession planning, terminations, etc. Secondly, it develops an internal environment of trust and support, which allows employees to integrate these information systems in their daily work and report to it accurately, which in turn enhances its efficiency. In²⁰⁻²² suggest that this also enhances the management of employee educational requirements as well as their expectation, particularly when a new system is being introduced for the first time and employees may be critical and uncertain of the change. Schermerhorn⁷

supports this idea by suggesting that such a communication network integrates management and employees, and motivates them into using information systems accurately, and not sabotaging them. Figure 2 shows findings of the study.

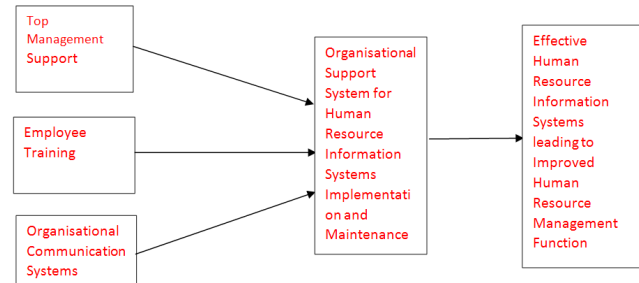


Figure 2. The findings of this study can be summarised.

6. Conclusion and Recommendation

A review of the literature suggests that HRIS significantly contribute towards the enhancement of organisational work processes and increase organisational effectiveness and efficiency. Similar advantages are also seen in terms of the cultural growth of the organisation, with enhanced management-employee relationships. HRIS provide the accuracy required to approach organisational decision-making through reliable and accurate information, leading to strategic success and goal achievement. Top management commitment has emerged as a key theme in data analysis, and given the fact that the literature review identifies cost as a key drawback to the acquisition and use of HRIS, it would not be inaccurate to suggest that in order to ensure the success of these systems, top management of any organisations needs to be financially and otherwise invested in the idea of maintaining this system. Training employees in the use of this system enhances its efficiency further and addresses the drawback of inaccurate information being fed into the system. Organisational communication systems also provide the support network needed to minimise any negative effects of HRIS, particularly in the context of cybercrime and information leakage. Addressing the issues identified in the literature review through the findings of the primary data can largely correct any anomalies that organisations or their people encounter in the use of HRIS.

Future works can investigate a quantitative analysis of how these identified themes contribute to the perfor-

mance enhancement of human resource functions in organisations using HRIS. Future qualitative studies can also focus on each of these themes separately to identify problems that may create obstacles in their exercise.

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