Human Resource Information Systems in Human Resource Management

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Abstract

Modern and efficient HR requires a powerful IT infrastructure. Companies' HR departments have long since outgrown the role of mere personnel administrators. HR is both a business partner and a business enabler. The human resources department is evolving into the role of pacesetter for digitalization and initiating internal modernization processes.

Digitalization, agile project management, and automation are becoming increasingly important in companies – a trend that has naturally also reached HR departments. Software has been simplifying traditional tasks such as payroll, hiring management, and flexible working hours for some time now. HR management software supports teams even further, facilitating online recruiting, managing digital personnel files, and seamlessly integrating new employees into the existing workforce. In short, HR management software transforms the manual management of personnel data into a digital process.

Key words: Management. Business, project, software, information.

Introduction

When encounter the topic of HR management software, it is normal to come across related terms such as Human Resource Information System (HRIS), Human Capital Management (HCM), or Human Resource Management System (HRMS). All describe similar concepts with slightly different focuses. And depending on the HR software solution, either all or only specific HR processes are digitally mapped.

The information obtained from the HRIS database must be up-to-date, complete, flexible, and easily accessible. These are important criteria, as will be indicated in the discussion of the implementation of some of the HRIS database modules that follows. Training and Development Module With this module, the training and development needs of an individual are compared with the training and development opportunities available within the organization. Training needs assessments of both employees and managers can be entered. The training component of the HRIS database can be quite extensive. It can carry complete training course information on thousands of internal and external courses, training course evaluation data, instructions, costs, room layout, and employees scheduled to participate.[1]

[1] Beutell, N.J. & Walker, A.J.(1991). HR information systems, in Randall S. Schuler (ed.). Managing HR in the information age. Vol. 6. Washington, DC: Bureau of National Affairs. p.192.

This module can also generate individual records. This includes educational achievements and degree certificates, courses taken internally and externally, course results and training recommendations. This and other information can be provided to employees as part of their career development program.[2]

Skills Inventory Module

The skills inventory module has many applications in the human resources department. The following questions can be asked here: Does the organization have enough people with specific skills to meet production goals next year? Does it have the human resources to bid on a specific project that requires known skill levels? To answer the above questions, the module collects, stores, and maintains records of individual qualifications and experiences. Some skills inventories are extremely detailed and require careful and sometimes time-consuming effort on the part of the individual collecting the data. However, as can be seen, the skills inventory is a vital tool for human resource planning and training.[3]

Capital Management Module

This component enables employers to formulate an employment equity plan, in accordance with the new laws promulgated by the Ministry of Labor in 1999. It provides a workforce profile and employee skill development, and manages the development of the equity plan.[4]

Competency Management Module

The competency system package tracks employee skill levels and develops compensation and training in accordance with employee and organizational needs. Both managerial and employee training needs assessments can be entered. This component contains information on internal and external training courses, course evaluation training, instructors, costs and enrollment

[2] Manzini, A.O. & Gridley, J.D. (1986). Integrating human resources and strategic business planning. Washington, DC: Amacom. p. 37
[3] Ibid
[4] Werner, A. (2003). Human resource information systems. in Nel, P.S., Gerber, P.D., Van Wyk, P.S., Haasbroek, G.D., Schultz, H.B., Sono, T.& Werner A. Human resource management. 5th edition. Cape Town: Oxford University Press Southern Africa. pp. 577-579.

facilities. It also provides individual profiles, which contain information on qualifications, training received internally and externally, course outcomes, financial compensation and training needs.[5]

Picture: HR IT Strategies [6]

Human Resource Planning Module

This module is used to assess future human resource management needs by analyzing current job occupancy, turnover, transfers, promotions and retirements, as well as appropriate skill levels.[7]

High-performance technologically enhanced work practices and human resource information systems

Over the past decade, the global integration of technology with human resource management has significantly impacted human resource management practices and HRM.[8] These HPVPs can be categorized into two types of practices; alternative work practices, with a focus on job design practices; and high-commitment practices, which include training and development and behaviorally based assessment.[9] The original digitalization of human resource management, known as E-HRM, [10] has evolved into a new phase, where revolutionary technologies are integrated with human resource management practices and HRMs. Examples of the types of information technologies that impact HRMs include HR analytics, data mining, blockchain technology, and artificial intelligence (AI).[11]

Technology, for example, can support the evaluation process by using technology to measure productivity by tracking movements or transactions. Another information technology that impacts HPVP is HRIS. HRIS aims to assist in decision-making regarding human resource functions, as HRIS can manage and monitor various aspects including employees, “applicants” and contingent worker qualifications, demographics, performance evaluation, professional development, payroll, recruitment and retention.[12] The main objective of HRIS is to provide services in the form of accurate and timely information to the users of the system.[13] HRIS impacts traditional HR processes by increasing efficiency and effectiveness in various companies regardless of size.[14] In particular, large firms are adopting HRIS to increase efficiency and effectiveness in terms of compensation and payroll, administration, healthcare, compliance, reporting, and tracking functionality, ultimately leading to operational decision-making.[15]

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[5] Ibid
[6]https://cdn.prod.website_files.com/64d62ea50c43f55706681df9/64d62ea50c43f55706681f9e_Analysis%2520(4)-p-500.webp
[7] Ibid
[8] Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies and human resource management: a systematic review. The International
[9] Punia, B. K., & Garg, N. (2012). High Performance Work Practices in Indian Organisations: Exploration and Employees’ Awareness. Asia-Pacific Journal of Management Research and Innovation, 8(4), 509–516. https://doi.org/10.1177/2319510X13481913
[10] Bondarouk, T., & Brewster, C. (2016). Conceptualising the future of HRM and technology research. The International Journal of Human Resource Management, 27(21), 2652–2671. https://doi.org/10.1080/09585192.2016.1232296
[11] Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies and human resource management: a systematic review. The International
[12] Obeidat, S. M. (2017). An examination of the moderating effect of electronic-HRM on high-performance work practices and organisational performance link. Evidence-Based HRM: A Global Forum for Empirical Scholarship, 5(2), 222–241. https://doi.org/10.1108/EBHRM-11-2015-0046
[13] Thite, M. O. H. A. N., Kavanagh, M. J., & Johnson, R. D. (2012). Evolution of human resource management and human resource information systems. In Introduction To Human Resource Management (pp. 2– 34).
[14] Hendrickson, A. R. (2003). Human resource information systems: Backbone technology of contemporary human resources. Journal of Labor Research, 24(3), 381–394. https://doi.org/10.1007/s12122-003-1002-5
[15] Ibid

Therefore, HRIS facilitates the delivery of high-quality information, supporting informed decision-making. It supports the generation of executive reports for management, especially useful for leading organizations.

The use of HRIS adds value to the company. In addition, recent research has shown that the implementation of HRIS has a positive impact on organizational performance. The use of technology-enhanced HRIS and HPVPs [16] can provide multiple benefits, which are the main reasons for companies to adopt them. For example, increased organizational performance, positive employee attitudes, safety and efficiency. Despite the benefits, there are also certain challenges. Illustrative examples include technology acceptance, costs associated with introducing and implementing HRIS and technology-enhanced HPVPs, time management, lack of skills, fear of change, fear of potential lack of sufficient benefits in practice, and potential obstacles encountered during the implementation process itself. [17]

The Impact of Technology on Human Resource Management

Web technology is also changing the way HR professionals do their jobs. As a result, HR has become the latest partner in a web-based development known simply as electronic human resources (e-HR).[18] "E-HR" has become a buzzword coming out of HR departments around the world. Most people would assume that the 'e' stands for electronic, but this narrow definition is just one of many. "e" can also mean "enabling," "empowering," and "expanding" HR functions. For the purposes of this study, Karakanian's definition will be used. According to her, e-HR is: … a total HR strategy that elevates human resources, moves them out of the HR department and siloed HR activities, and redistributes them across the organization and its trusted business partners, old and new. [19] E-HR connects and integrates HR activities with other corporate processes such as finance, supply chain, and customer service. Its promise is that HR owns the strategy and, when needed, is a service provider rather than a service provider.

It can also be argued that e-HR:

- Requires HR to do its homework;
- Requires executive involvement;
- Requires an excellent understanding of technology and its use;
- Requires a well-developed and integrated human resource information system (HRIS); and
- Requires the wise use of a network of technologies and various communication channels such as the web and the internet.

Conclusion

All organizations depend on communication. Communication is the glue that holds different elements together, coordinates activities, enables people to work together, and produces results. One of the many roles of HR in organizations is to communicate new initiatives to employees. Human resource communication efforts can take many forms. Methods of communication from management to employees include orientation sessions, bulletin boards, newsletters, and employee handbooks. Methods of upward communication typically include suggestion programs, grievance procedures, e-mail, and open

[16] Abuhantash, A. (2023). The Impact of Human Resource Information Systems on Organizational Performance: A Systematic Literature Review. European Journal of Business and Management Research, 8(3), 239– 245. https://doi.org/10.24018/ejbmr.2023.8.3.1992

[17] Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies and human resource management: a systematic review. The International Journal of Human Resource Management, 33(6), 1237–1266. https://doi.org/10.1080/09585192.2020.1871398

[18] Mongelli, L. (2000). Companies turn to the web for their HR needs. Incentive, 174(5): 10.

[19] Karakanian, M. (2000). Are human resources departments ready for e-HR? Information Systems Management, 17(4): 36.

house meetings. Although HR as a field has always emphasized face-to-face interaction,[20] the presence of web-based technologies is shifting that emphasis toward managing efficiency and productivity as a result of the shift from human to online services. [21]

In the current era of information technology, there are many opportunities to use computer technology to convey information to employees. Important and urgent messages can, for example, be sent to specific managers via an electronic mail system; they can then convey the necessary information to their subordinates if not all employees have access to the system. The Internet, intranets, information systems, and human resource information systems are very common communication media in today's organizations - especially in large ones.

[20] Grobler, P.A., Warnich, S., Carrell, M.R., Elbert, N.F. & Hattfield, R.D. (2002). Human resource management in South Africa. 2nd edition. Thomson Learning. Great Britain. International Padstow, Cornwall. pp.590.
[21] Himes, H. (2001). Submitted for the Lee Hecht Harrison Best Student Paper Awards.