

The Impacts of HRIS Implementation and Deployment on HR Professionals' Competences: An Outline for a Research Program

Michel Delorme

Kuwait-Maastricht Business School, Dasma, Kuwait

Abstract. In many organizations, computer information systems affect every aspect of business operations. The widespread use of HRIS and web-based applications in business globally raises the question of the new competencies required for HR professionals. Human resources systems are now viewed as sustaining the competitive advantage of the firm. In this paper, first we elaborate on the evolution of the roles and responsibilities of HR professionals and the new competencies that are required from the strategic perspective, in other words their contribution to the strategy of the firm. Then, from the IT perspective, we review how the introduction of new technologies in the organization affect the way HR professionals accomplish their tasks not only within the HR department but also with the rest of the organization. After that, we recommend some HRIS research questions and the methodological orientation that should prevail in the context of complexity that characterizes the introduction of HRIS in organizations and the new roles assigned to the HR professionals.

1 Introduction

In many organizations, computer information systems affect every aspect of business operations and serve a significant role in creating a network among stakeholders [1]. The widespread utilization of web technology has conducted to the deployment of web-based HRISs [2]. The number of organizations adopting e-HRM is continually increasing according to a research project conducted in Europe. "Online HRM" seems to be a more accurate term in order to include activities such as e-HRM, enterprise resource planning (ERP), HR service centers, interactive systems, HR portals for employees and managers, and web applications. Performance-oriented cultures are more likely to implement change, and consequently adopt electronic tools [3].

The collaboration between HRM and IT has been identified as a crucial factor in e-HRM adoption and use [4]. Other variables that have to be taken into account in the decision of adopting e-HRM are the sector of activity of the firm, the top management view [5], the level of skills of the employees, the structural complexity, or the stakeholders' considerations [6].

Prahalad and Hamel [7] argued that the core competencies of an organization defined as the collective knowledge and capabilities in the organization will give this

organization a competitive advantage from the strategic perspective. The core competencies approach of strategic management is directly linked to the resource-based view of the organization [8].

The widespread use of HRIS and web-based applications in business globally raises the question of the new competencies required for HR professionals. A stream of research in the field of IT has emerged that generally posits that the roles and responsibilities of HR professionals have changed over the last two decades with the introduction of new technologies in the organization [9, 10, 11]. Human resources systems are now viewed as sustaining the competitive advantage of the firm [12].

The structure of the paper is as follows: first we elaborate on the evolution of the roles and responsibilities of HR professionals and the new competencies that are required from the strategic perspective, in other words their contribution to the strategy of the firm. Then, from the IT perspective, we review how the introduction of new technologies in the organization affect the way HR professionals accomplish their tasks not only within the HR department but also with the rest of the organization. After that, we recommend some HRIS research questions and the methodological orientation that should prevail in the context of complexity that characterizes the introduction of HRIS in organizations and the new roles assigned to the HR professionals.

2 HRIS' Implementation and Deployment and Roles and Responsibilities of HR Professionals

Researchers have established the link between human resources management practices and the competitive advantage of the firm [13, 14]. The management of human resources is an important challenge in value creation for companies in general [15]. Indeed, systems of performance indicators used by companies include learning and development perspectives that rely heavily on human resources as the basis for strategic accomplishment [16].

The resource-based view highlights that human resources systems can lead to gain and sustain a competitive advantage [12,14]. In this competency-based perspective, it is essential to understand how the introduction of a new technology affects the way HR professionals work in this new context and, thus, how their core competencies are affected. Magalhaes & Ruel [2] observed a shift in many organizations from the “file drawers to computers” style of managing the HR Department. This stage has been reached with the arrival of new HR professionals and IT specialists working together in the development of electronic information systems initially created for the purposes of the HR Department.

Considering the new roles and responsibilities of the HR Department and the expectations of top-executives concerning the HR function, we can predict new challenges for the HR Department not only in the traditional roles but also for its contribution to the global strategy of the firm including its contribution to the IT strategy. In other terms, HR professionals are not only users of HRIS but they must also act as strategy's architects of the HRIS for the whole organization. In addition,

HR professionals must play complementary roles such as change agents in the implementation and deployment of new technologies, employees' representatives regarding the implementation of HRIS issues, and advisors for first line, middle and top managers of the organization regarding the impacts of HRIS on HR policies, programs, and activities of the firm.

One of the recent tendencies in many organizations is to outsource some components of the HR function which are strongly related to the use of IT (e.g. compensation and remuneration, administration of the fringe benefits, recruitment and selection). Paradoxically, it seems that one of the main reasons of outsourcing concerns the lack of knowledge, skills and abilities of HR professionals in computer literacy. At the same time, organizations expect that the HR professionals exert a control on the same outsourced activities. However, outsourcing some HR activities seems to be the norm for many organizations looking for more organizational flexibility. Technological developments have changed the way to do business from both internal and external HR perspectives.

Because they are now seen as business partners for the organization or strategy's architects, HR professionals must participate in the design of HRIS not only for the internal use of the HR Department but also for the use of other stakeholders. This new role involves the development of specific competencies in the area of IT and HRIS for HR professionals.

3 HRIS' Implementation and Deployment and Competencies of HR Professionals

Auer & Ruohonen [17] suggest that the skills, knowledge and attitude of organizational actors affect how information systems are managed and put to work. For HR professionals, the challenge of dealing with new IT systems is recent, since many organizations have turned to information systems technology in order to adapt to a more complex environment [9]. In order to overcome the challenge of the integration of the information systems with the rest of the other functions of the organization, Magalhaes and Ruel [2] highlight the importance of the organizational change competencies. For Cummings and Worley [18], managing this type of competency is one crucial aspect of the new roles of the HR professionals.

The literature on competencies in the management field is characterized by a variety of approaches [19]. Two main streams of competencies' approaches emerge: the strategic approach [7, 20, 21, 22] and the individual approach [23, 24]. The strategic approach of competencies reflects a macro perspective of competencies and argues that an organization's main advantage derives from its core competencies and its valuable, rare and inimitable resources that it can manage [25]. The individual approach of competencies mainly observed in the HR discipline and in the sciences of education sees the concept of job competencies at the micro level, the individual. Job competence in this perspective is seen as a fit between the person's characteristics and the requirements of the job [22, 23].

In this paper, we suggest that the strategic perspective on competencies must prevail according to many authors' point of view [26, 27, 28] who pointed that the HR systems must align with the organization's strategy. Thus, the roles and responsibilities of HR professionals within the organization are diversified and have evolved from an administrative or operational perspective to a strategic perspective. Contemporary researchers in the HRM field highlight the strategic role of HR professionals and see them as business partners, [13, 29, 20], strategy architects [30, 31] or business allies [31].

Lindgren et al. [32] highlighted the need for aligning the structural features of organizational competencies between the organization's strategic orientation and its HR infrastructure. Saying so, it is necessary to turn attention to individual-level competencies and the ways to develop them. Because of the interdependence between organizational needs for competence and individuals' competence interests [32], organizations who adopt a skill-based approach on competencies instead of a task-based approach will have to promote their competencies needs to their employees including the HR professionals.

A research conducted by Society for Human Resource Management [33] has identified five critical competencies for all HR professionals. One of these competencies is entitled "HR technology – Ability to leverage technology for HR practices to deliver value". Only 28 % of the respondents mentioned that they were very proficient in that competency compared to scores varying from 47 % to 73 % for the other critical competencies. This result suggests that computer literacy is probably one of the weaknesses of HR professionals.

Considering the results of the survey conducted by Society for Human Resource Management [33] illustrating the weaknesses of HR professionals regarding the computer-based skills, it seems that the education system in business schools is not fulfilling totally the gap between the needs identified by HR professionals for accomplishing their job successfully and the training they receive in business school. Slocum and Hellriegel [34] insist in their model of seven core competencies on the importance of the communication competency, the latter including the use of a variety of computer-based resources for all managers including managers and professionals in the HR field. There is a need to analyze also the responsibility of organizations regarding the training and development of their HR people. "As HR in general is not a primary process" [2:12], investments in the HR function are more difficult to sell to the top-executive team.

4 Further Research

Further research in the HRIS and the competencies should be aligned in the perspective of the chaos theory due to the complexity and unpredictability of the environment in which these systems are implemented. Chaos theory applies to qualitative studies of unstable, non-linear, and dynamic systems [35]. According to Magalhaes & Ruel [2], HRIS has been characterized by a high level of complexity,

with HRIS dealing with all aspects of organization. For this reason, HRIS cannot be studied separately from its organizational context.

On the other hand, we agree with Magalhaes & Ruel [2] regarding their methodological perspective for conducting researches in the HRIS field. According to these authors and also in order to follow the path given by Giddens [36], it would be an asset for further researches to combine the strengths of both qualitative and quantitative research methods. In the case of a qualitative approach, researchers can learn directly and more in-depth from the people involved in the research (employees, managers, HR professionals and other stakeholders). When using a quantitative approach of collecting and analyzing data, the aim of the researchers is generalization. A combination of both methodological approaches for further researches in the HRIS field would blend the strengths of the positivist research and the interpretative research.

In this perspective, we recommend that more research in the HRIS field should be conducted in order to identify the new competencies required for HR professionals regarding more specifically their new contribution in the field of HRIS. The main research question should address the problem of the new roles and responsibilities of HR professionals and the new requirements of the job in terms of knowledge, skills, abilities, and other characteristics to be successful. Another aspect that should be investigated by further research in the HRIS field concerns the best practices between companies across different industrial clusters for policies, programs, and initiatives to help improve the training and development of HR professionals regarding their computer-based competencies. We recommend also for a future research the analysis of the different initiatives already undertaken by higher education institutions and organizations to respond to the specific training needs regarding the competencies required for HR professionals in the field of HRIS. The latter type of research should analyze more in-depth the integrative approach of the business' schools rather than the specialization approach, according to Mintzberg's point of view [37].

Since we can observe a trend in the corporate field to establish external alliances, partnerships, mergers, and acquisitions, the next-generation firms need to shift their focus beyond just top-down and bottom-up organizational relations to horizontal structures that will encourage collaboration across the partners [38]. The next-generation company will build a highly collaborative approach of doing business and will be characterized by a higher degree of organizational flexibility, a networking way of communicating, and will also rely on his technology to encourage personal interactions and cross-fertilization within the organization. Further research should also focus on the use of different structures (e.g. technology teams, ad hoc teams) in successful companies in order to build a stronger network based on HRIS.

In this era of e-business, many HR internal drivers will contribute to the enterprise growth and its changing requirements [39]. Professionals of HR Departments will have to play a more intensive role in order to lead people to adhere to the vision, values, and core competencies of the firm. They will have to deploy HR systems regarding topics like: 1) managing performance, 2) learning and development, 3) knowledge technology and information infrastructure, 4) recruiting, selecting and hiring, 5) compensating and rewarding, 6) organization structuring, and 7) business

focusing and planning [39]. New Technology is the hearth of the new business design in an age of uncertainty. It seems that a stream of further research in the e-business field and more specifically in the HR field should focus on the effectiveness of HR systems deployed in order to assist people in the organizations to adhere to its vision, values, and core competencies and the roles, responsibilities, and competencies of HR professionals in this integrative approach.

References

1. Harrison, J.S.: *Strategic Management Of Resources And Relationships: Concepts and Cases*, John Wiley & Sons, New York (2003)
2. Magalhaes, R., and Ruel, H.: *Human Resource Information Systems: an Integrated Research Agenda* (2008)
3. Jackson, P. and Harris, L.: E-business and organizational change: reconciling traditional values with business transformation. *Journal of Organizational Change*, 16:5 (2003) 497-511
4. Panayatopoulou, L., Vakola, M., and Galanaki, E.: E-HR adoption and the role of HRM: evidence from Greece, *Personnel Review*, 36:2 (2007) 277-294
5. Kossek, E.E.: Human resources management innovation, *Human Resource Management*, 26:1 (1987) 71-92
6. Hannon, J., Jelf, G., and Brandes, D.: Human resource information systems: operational issues and strategic considerations in a global environment, *International Journal of Human Resource Management*, 7:1 (1996) 245-269
7. Prahalad, C.K., and Hamel, G.: The Core Competency of a Corporation, *Harvard Business Review*, 68:3 (1990) 79-91
8. Von Krogh, G. and Roos, J.: A Perspective on Knowledge, Competence and Strategy, *Personnel Review*, 24:3 (1995) 56-76
9. Haines, V. Y., and Petit, A.: Conditions for successful human resource information systems. *Human Resource Management*, 36:2 (1997) 261-275
10. Grossman, M. E., and Magnus, M.: The growing dependence on HRIS. *Personnel Journal*, 67:9 (1988) 52-59
11. Mayfield, Milton, Mayfield, Jackie, and Lunce, S.: Human resource information systems: A review and model development. *Advances in Competitiveness Research*, 11:1 (2003) 139-151
12. Lado, A. et Wilson, M.: « Human Resource Systems and Sustained Competitive Advantage: A Competency-Based Perspective », *Academy of Management Review*, 19:4 (1994) 699-727
13. Schuler, R. S., and Jackson, S. E.: *Human Resource Management: International Perspectives*. U.S.A.: Thomson South-Western (2006)
14. Ulrich, D., and Lake, D.: Organizational capability: Creating competitive advantage. *Academy of Management Executive*, 5:1 (1991) 77-92
15. Delorme, M., and Cloutier, L. M.: The growth of Quebec's biotechnology firms and the implication of underinvestment in strategic competencies, *International Journal of Technology Management*, 31:3-4 (2005) 240-255
16. Kaplan, R.S., and Norton, D.P.: *Comment utiliser le tableau de bord prospectif*, Editions d'Organisation, Paris, France (2001)
17. Auer, T., and Ruohonen, M.: *Understanding The Human Side of Information Systems Management And Use: A Theoretical Framework And Two Evaluation Approaches in The Human Side of Information Technology Management* (Szewczak and Khosrowpour, Ed.). IDEA Group Publishing, Harrisburg, U.S.A. (1996)

18. Cummings T.G., and Worley, C.G.: *Organization Development and Change*, 7th Edition, South-Western College Publishing, Cincinnati: Ohio (2001)
19. Delorme, M.: *Les compétences stratégiques des dirigeants: application au cas des entreprises canadiennes de biotechnologie*. Doctoral thesis, University Robert Schuman (Strasbourg 3) (2007)
20. Ulrich, D., Zenger, J. and Smallwood, N.: *Results-Based Leadership- How leaders Build the Business and Improve the Bottom Line*, Harvard Business School Press, Boston, Massachusetts (1999)
21. Lucia, A.D. and Lepsinger, R.: *The Art and Science of Competency Models*. Jossey-Bass Pfeiffer, San Francisco (1999)
22. Green, P.C.: *Building Robust Competencies – Linking Human Resource Systems to Organizational Strategies*, Jossey-Bass (1999)
23. Boyatzis, R.E.: *The Competent Manager: A Model for Effective Performance*, John Wiley & Sons, New York (1982)
24. Spencer, L. M., and Spencer, S. M.: *Competence at Work.- Models for Superior Performance*, New York: J. Wiley & Sons (1993)
25. Barney, J.B.: *Organizational Culture: Can it be a Source of Sustainable Competitive advantage?*, *Academy of Management Review*, 11:3 (1986) 656-665
26. Beaulieu, P., and Delorme, M.: *Facteurs structurants de la stratégie des firmes des bio-industries*, Document de travail, Chaire en gestion des bio-industries, ESG, Université du Québec à Montréal (2001)
27. Fry, J.N., and Killing, J.P.: *Strategic Analysis and Action*. Prentice Hall Canada inc. Scarborough, Ontario (1995)
28. Hagan, C. M.: *The Core Competence Organization: Implications for Human Resource Practices*, *Human Resource Management Review*, 6:2 (1996) 147-164
29. St-Onge, S., Audet, M., Haines, V., and Petit, A.: *Relever les défis de la gestion des ressources humaines*, Deuxième édition, Boucherville: Gaëtan Morin éditeur (2004)
30. Fulmer, W.E.: *Human Resources Management: The Right Hand of Strategy Implementation*, *Human Resource Planning*, 12:4: (1990) 1-10
31. Ulrich, D.: *New Competencies for HR*, *HR Magazine*, 52:6 (2007)
32. Lindgren, R., Henfridsson, O., and Schultze, U.: *Design Principles for Competence Management Systems: A Synthesis of an Action Research Study*, *MIS Quarterly*, 28:3 (2004) 435-472
33. Society for Human Resource Management: *SHRM Weekly Online Pool: November 4 (2003)*.
34. Slocum, J.W. Jr., and Hellriegel, D.: *Fundamentals of Organizational Behavior*, International Student Edition, Thomson South-Western, Mason: Ohio (2007)
35. McBride, N.: *Chaos theory as a model for interpreting information systems in organizations*. Blackwell Publishing Ltd, *Information Systems Journal*, 15 (2005) 233-254
36. Giddens, A.: *The constitution of society: outline of the theory of structuration*. Cambridge, UK: Polity Press (1984)
37. Mintzberg, H.: *Managers Not MBAs. A hard look at the soft practice of managing and management development*, Berrett-Koehler Publishers, Inc., San Francisco (2003)
38. Jonash, R.S., and Sommerlatte, T.: *The Innovation Premium: How Next Generation Companies Are Achieving Peak Performance And Profitability*, Perseus Books, Reading: MA. (1999)
39. Woolner, P.: *Designing the New Digital Enterprise in Blueprint to the Digital Economy: Creating Wealth in the Era of E-Business*, Tapscott, D., Lowy, A., and Ticoll, D. Eds, McGraw-Hill, New York (1998)