EHRM: Innovation or Exasperation - A Study of Bio-Medical Engineering Firms

*Shabnam Saxena **Anjali Gupta

This study is an attempt to identify whether EHRM is an innovation or exasperation and if the employees are well satisfied with EHRM or not? The study has been conducted on the 3 bio-medical firms which are producing medical equipments for hospitals and these firms are JDS, Hospomedica and Toshiba. Data was collected either from the employees who are recruited through or from the employees who are fully aware of EHRM. The sample consisted of 100 employees of medical firms. The results and findings are tabulated and discussed in the light of other relevant studies. After the analysis of the study it is very clear that these three organizations are getting benefit with the application of EHRM and it also proves that EHRM is an innovation for the companies rather than exasperation.

Introduction

Electronic HR (e-HR) refers to the broad access to the centralized database of human resources information, accessible and delivered through web in most workplaces, as the strength of web enabled data capture and management reporting lies in its ability to provide targeted information to those who need it. It includes a variety of new technologies available that help multiple systems, tools, database both inside and outside the firms. One of the major effects of this explosion of web technologies in HR and the dramatic impact this growth has the way the employees now receive information through integrated self service applications. People and processes linked with integrated HR data and tools enable employees and managers to conduct transactions through portal any time, anywhere.

"E-HR" is, therefore, an integration of all HR processes and employee related tasks through an electronic enterprise portal-enabling, empowering and extending the HR functions.

Technologically optimistic voices assume that from a technical perspective, the IT possibilities for HRM are endless: in principle all HR processes can be supported by IT. Words are becoming even more provocative when some say that the question whether HR should become digital is already outdated: HR must become digital!

E-HRM is coming to a more full grown stage within an organization life. Much is assumed and expressed about the advantages of E-HRM; though scientific proof of these advantages is scarce. No clarity exists about the answer to the question whether E-HRM contributes to HRM effectiveness.

Effective management of HR function is increasingly becoming a source of strategic advantage for organization. There are various trends in areas of HR management practices, which are imparting both challenges and opportunities for HR professionals in recent years; the increasing role of IT in HR to meet these challenges is leading to improved benefits. Given the widespread availability of technology, a company lacking this component will not qualify as an employer of choice for the emerging workforce. The IT infrastructure has helped HR departments to access opportunities, manage risks, take decisions and communicate with employees and, thus making it easy to measure performance and trying it to over all objectives.

Leveraging technology is helping HR department to contribute as a strategic business partner, by using enterprise portal gateway as a primary tool for establishing a common image, culture and branding ; establishing self service and extending HR related collaborative applications to the work force of empower employees for doing their job related

---

*Associate Professor, Haryana School of Business, Guru Jambheshwar University of Science and Technology, Hisar
** Teaching Associate, Haryana School of Business, Guru Jambheshwar University of Science and Technology, Hisar

transactions easily ; using workforce analytics to manage human capital, calculate its value and align it for maximum productivity ; and using e-learning as tool for workforce development on an on going basis.

Review of Literature

Ulrich (1997) presented model of HR roles. In this model, four HR roles derived from two dimensions, viz, people versus process and strategy versus operations and the HR roles are strategic partner, change agent, administrative expert and employee champion. Lepak and Snell (1998) referred four types of goals of e-HRM namely, improving the strategic orientation of HRM, cost reduction/ efficiency gains, client server improvement/ facilitating management and employees and globalization.

Doughty and Pugh (2000) described that today, within the HR software market there are a myriad of HR systems, payroll, training administration, 360 degree feedback, psychological testing and competency software tools operating in their own software features. Evidence suggests that most organisations fail to recognize that nearly all software on the market today is at the foundation level of e-HR. Very few organisations have reached the strategic level of e-HR. This involves the development and deployment of tasks that allow managers, employees and HR to use the massive amount of data created and housed within the foundation and service levels of emerging internet technology. Kettley and Reiley (2003) stated that a computerized human resource information system consists of "a fully integrated, organization wide-network of HR-related data, information, services, databases, tools and transactions. Perrin (2003) assessed the use of e-HR technologies some time help HR to perform the more administrative responsibilities of the department. However, recent research by Towers Perrin indicated that most companies, that have introduced e-HR, have so far limited themselves to just a few basic electronic transactions. As systems improve, technology advances and HR itself becomes more accustomed to e-HR- things are starting to change.

Dessler (2004) examined that technological applications play an increasingly important role in HR. Technology improves HR functioning in four main ways: self service, call centre, productivity improvement and outsourcing. Using internet the firm's employees can self service many of their HR transactions such as updating personal information and changing benefits allocation. Armstrong (2006) examined that the meaning of e-HR is the application of conventional, web and voice technologies to improve HR administration, transactions and process performance. Reasons for adopting e-HR are: HR service improvement, cost-cutting and operational efficiency, the desire of the HR function to change the nature of its relationship with employees and line managers, the transformation of HR into a customer focused and responsive function, the offer of services that fit the new world of work and are attractive to current and future staff. Bhatia (2006) highlighted that electronic aspect is embodied in all the areas of HRM where there is transmission of information from one employee to another employee and from one client to the another both internally and in the processed form, is highly essential in most of the functions and activities of HRM.

Bondarouk and Ruel (2006) in their research raised a question that e-HRM contributes to HRM effectiveness or not? e-HRM is coming to a full-grown stage within organisational life. Much is assumed and expressed about the advantages of e-HRM, however, scientific proof of these advantages is scarce. Regression analysis confirms that the experienced quality of e-HRM application is the only significant explanatory factor of technical and strategic HR effectiveness. The First European Academic Workshop: "The future of e-HRM research" (2006) focused on reflection on what can be learnt from the first five years of electronic HRM research, and to determine its future direction. Ashwathappa (2007) explained that e-HRM is the complete integration of all HR processes based on common HR data and information and on interdependent tools and processes. Voemans and Veldhoven (2007) conducted an empirical study on e-HRM at Philips and this

research suggests a multi factorial framework that can help organizations in understanding and solving difficulties of implementation with e-HRM systems, as far as attitude towards these systems is concerned.

Paauwe, Kalika and Lepak (2008) stated that e-HRM is basically a barrier not a trigger for HRM transformation. IT continues to impact the HRM function. For a decade now, digital possibilities are challenging the traditional ways of delivering HRM services within business. The traditional two-level HRM function based on HR department and middle managers is being questioned for its (in) flexibility, rigidity, innovative capacity. Hann (2008) gave Electronic-HRM solution. The most efficient way to manage your valuable asset is e-HRM and it contains: central repository of employee data, intuitive and easy to use search functions, facilitate rapid report generation, benefit management is greatly simplified, quick payback for your investment in e-HRMs. Armstrong (2008) stated that e-HR, means the application of conventional, web and voice technologies to improve HR administration, transactions and process performance.

Gregeby (2009) stated that e-HRM is a conceptual umbrella to the complete approach for "doing HRM". This definition has traditionally touched upon the implementation and structuring process of technology driven HR transformations and the consequence of these organizing activities in creating HR network structures throughput the organization (Strohmeier 2007). Teresa and Mario (2009) referred that in the information society, HR/HRIS managers need to deploy and mobilize the more valuable corporate resource: the human capital. HR management professionals are becoming strategic business partners in their organisations, capable of contributing to the improvement of the organisation's competitive advantage. Nicholas (2010) stated that the term e-HR reflects the movement to deliver HR services to its customers via web-based technology.

Srivastava (2010) stated that Electronic Human Resource Management (e-HRM) is an Implementation Support System (ISS) for HRM. For understanding the better skills, creative abilities and talents of human resources at a very quick time there must be a concept of e-HRM, generally e-HRM is an interface through which we can directly communicate or know about the right talent through traverse some list or records in our personal database without creating any issue. Zafar, Shaukat and Mat (2010) stated that Classic HRM models such as those from Harvard (Beer, Spector, Lawrence, Mills & Walton 1984) and Michigan (Fombrun, Ticky, & Devana 1984) assume that HRM can only be effective if it connected to an organization's strategy. Strategic HRM assumes a direct and interactive relationship between the management of employment relationships and the organizational strategy.

Objectives of The Study

The present study aims at two objectives. The first one is to evaluate the E-HRM practices applied by Bio-medical engineering firms and the second one is to identify whether E-HRM is innovation or exasperation.

Sample

Sample size consisted of 100 employees from 3 bio-medical firms and disproportionate random sampling technique was adopted.

Measurements

Guidance was taken from the website namely "ehrresearch.com". From this website the information for questionnaire was collected for the survey that was conducted on IT for HR.

Research Methodology

The questionnaire was given to executives in each section personally during the working hours to be filled up as per the respondent's own convenience. The respondents were assured of the anonymity and confidentiality in fillingup the questionnaire.

Primary data was collected with the help of specially designed questionnaires and detailed discussion with the employees of the selected medical firms in New Delhi. The scale which was used for the assessment of questionnaire is Likert type scales ranging from 1-5 i.e. 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree. For the purpose of analysis we have given the weightage to the above five attributes in the following manner: 5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree. The average scoring has been done of the responses given by employees of the three different companies.

Data Analysis and Interpretation

According to the mean average mean score of the first statement, it is clearly stated that Toshiba has conducted more detailed analysis that they can best use their IT capabilities to make HR more intensive as the mean score is highest in case of Toshiba and lowest in case of Hospomedica (Table 1).

In the 2nd statement again Toshiba is the company which is doing more detailed analysis about how competitors are using their IT capabilities to make HR more technology intensive while JDS and Hospomedica are nearly equal in their analysis (Table 1).

Without top management cooperation growth of E-HR is not possible. Third and fourth statement clarifies that top management of Toshiba participated more in comparison to JDS and Hospomedica (Table 1).

The results of 5th statement state that JDS knows the need that top management has to participate in the IT use for HR operations and it has tried its best. That's why it is leading Hospomedia in this case but lagging behind the Toshiba (Table 1).

Hospomedica's top management provides most constructive feedback on the use of IT in their HR operations in the comparison to JDS and Toshiba. Toshiba is slightly less than Hospomedica (Table 2).

7th statement clearly states that in Toshiba HR is involved highly in major strategic decisions although JDS and Hospomedica are nearly equal (Table 2).

Analysis of 8th statement states that in Toshiba HR is also also actively engaged in making decision about broader business issues (Table 2).

Toshiba has adequate funds for firm's HR application implementation efforts. JDS is 2nd in this no and Hospomedica is lagging behind to these two firms (Table 2).

It is very easy in Toshiba to identify one person that has been instrumental in the automation of the HR services. JDS and Hospomedica both are equal in this case (Table2).

Analysis of 11th statement, in Toshiba the level of IT in HR operation can be attributed to vision of key person mostly. Hospomedica has 2nd no in average scoring while JDS is at least position in comparison with the other two (Table 3).

All the 3 companies have more than average scoring in the 12th statement which states that managers are satisfied with the responsiveness of HR services and in this case also Toshiba is leading (Table 3).

According to 13th statement analysis, Toshiba's managers are comparatively more satisfied with the accessibility of HR services while Hospomedica's manages also have almost same average scoring to Toshiba (Table 3).

Only manager satisfaction does not provide the proper growth to the company because in HR employees contribute to the major portion and without them nothing is possible so their satisfaction is also considered very important. 14th and 15th statements clearly state that employees of Toshiba are more satisfied with the responsiveness and accessibility of HR services. Hospomedica is following Toshiba and JDS again is lagging behind in this case also (Table 3).

Most of Toshiba employees pointed out that their HR practices are tailored to fit the nature of their business operations. JDS and Hospomedica have almost same average scoring on this 16th statement (Table 4).

17th statement states that for solving HR problems in the firm requires knowledge of their business strategy and Hospomedica is leading in this case according to the mean average scoring while Toshiba is following it and JDS is too much far away from both the firms (Table 4).

18th statement states that you can't solve its HR problems until and unless you have the knowledge of its history and culture and this point is very strong in case of Toshiba while JDS is following it with 3.21 and Hospomedica is at 3.09. It means that Toshiba has complex structure and Hospomedica has very simple structure (Table 4).

As we all are aware that in today's environment there is the demand of creative and innovative work for survival of any firm. If there is appreciation of innovative work then the employees will feel satisfied and motivated. The firm which is more doing this kind of work is Toshiba as they recognize and give rewards to innovative ideas. Hospomedica is following it with 3.18 average scores and JDS has 3.00 mean score (Table 4).

The firm which has more adaptable and flexible structure in the uncertain environment, that firm has more chances to succeed it can be benefited from the opportunities given by the environment time to time. Toshiba and Hospomedica almost have the same scoring and JDS is following them with 3.09 scores means, all the firms have the adaptable kind of structure (Table 4).

Analysis of 21st statement, as tomorrow is uncertain and therefore risk arises itself so for that the company which is having more risk bearing capacity can cope up the environment. Toshiba is the company whose staff wants to take risk with 3.48 average scoring.

JDS is following Toshiba with 2.36 scores and Hospomedica is lagging with 1.97 scores (Table 5).

Only success will not be the motive of taking risk. The firm must have tolerating power of failure and the firm which has this kind of power is Toshiba. Hospomedica is at no 2 and JDS has least power of tolerating failure (Table 5).

Before applying the innovative work in operation you just have to do pilot survey whether you ideas will work or not so that the failure chances get reduced. Toshiba provides more support in this kind of activity while JDS and Hospomedica are equally supporting these kinds of activities (Table 5).

Mostly all firms think that their competitors are utilizing high level of IT in their HR activities and after analyzing this statement we find that all the 3 firms are almost equal in their this type of thinking (Table 5).

This is the first hand experience of applying IT application in HR work. Hospomedica and Toshiba are convinced with this statement while JDS is lagging behind them with 2.82 scores (Table 5).

Conclusion

From the above interpretation we can see that all the firms are effectively applying IT applications in HR or it can be said that these organizations have fully implemented EHRM practices. No firm is facing any kind of problem in applying these kinds of EHRM practices rather they are being benefitted from these IT applications in HR as they can compete with other firms with the help of it. The burden of managing the human resources becomes reduced due to it. Reputation of firm also gets increased by having this kind of application in HR. Hence it can be generalized that EHRM is innovation not exasperation for any organisation.

Refrences

1. Ashwathappa K, (2007), *Human Resource Management*. 5th ed, New Delhi: Tata McGraw Hill

2. Armstrong M (2006), *A Handbook of Human Resource Management Practice.* 10th ed, New Delhi: Kogan Page

3. Bartol K M (2002), *Information technology and human resource management*: Harnessing the power and potential of netcentricity. Personnel and Human Resource Management Review, 21, 215-242

4. Beer M, Spector B, Lawrence P, Mills Q & Walton R (1984), *Managing Human Assets*. New York: The Free Press

5. Bhatia S K (2006), *Human Resource Management*-A Competitive Advantage, New Delhi: Deep & Deep Publications Pvt. Ltd.

6. Biesalski E (1991), *Knowledge Management and E-Human Resource Management. http://www.wikipedia.org- human resource management systems//*

7. Bondarouk T V & Ruël H J M (2009), *Electronic Human Resource Management*: challenges in the digital era. *The International Journal of Human Resource Management*, 20(3), 505 - 514

8. Bondarouk T & Loosie J K (2005), HR contribution to IT innovation implementation results of three case studies. *Creativity and Innovation Management*, 14(2), 160-168

9. Bondarouk T & Ruel H J H (2006), *Quantitative Study in a Dutch Ministry*, paper presented at 4th international conference of the Dutch HRM network. The Netherlands: Enshede

10. Bondarouk T V & Ruel H J M (2005), *Quantitative Study in a Dutch Ministry*, paper presented at 4th international conference of the Dutch HRM network, Enshede, the Netherlands

11. Broderick R & Boudreau J W (1992), *Human Resource Management, information technology and the competitive edge*. Academy of Management Executive, 6(2), 7- 17

12. Doughty M (2000), *The role of e-HR and organization*. Retrieved Jun 25, 2010, from *www.Brite-HR.com*

13. Fombrum C, Ticky N & Devana M (1984), *Strategic human resource management*. John Wiley, New York 1-10

14. Gardner S D, Lepak D P & Bartol K M (2003), Virtual HR: the impact of information technology on the human resource professional. *Journal of Vocational Behavior*, 63, 159-79

15. *Globetronics Multimedia Technology Sdn*, Bhd (2003), Retrieved from *http.//www.google.com/.*

16. Gowan M (2001), e-HRM: *An Internet Guide to Human Resource Management*, Prentice Hall

17. Gregeby J (2009), *The use of information technology in contemporary HRM*– A practice-based study of e-HRM at Sandvik Corp. Research School Management & IT, Uppsala University,

18. Gupta A K (2008), *Management Information Systems*, New Delhi: Sultan Chand & Sons

19. Gupta S C (2008), *Advanced Human Resource Management*, New Delhi: Ane Books India,

20. Hahn J K (2008), CPP, VHR, Vice President of HR, GHG Corporation. Retrieved from *http.//www.willoughby.nsw.gov.au/.*

21. Hawking P, Stein A, Victoria A & Foster (2004), E-HR and Employee self service: *A Case Study of a Victorian public sector organization*. Retrieved Jun 25, 2010, from www.google.com

22. Jovita L (2008), *A Study On Electronic Human Resource Management* {Ehrm}: With Reference To Cognizant Technology Solutions India Private Limited. Accessed at *http://www.citeHR.com/.*

23. Kettley P & Reiley P (2003), E-HR: An introduction. *IES Report. 398.*

24. Lawler E E & Mohrman S A (2003), HR as a strategic partner: What does it take to make it happen? *Human Resource Planning*, 26, 15 – 29

25. Lepak D P & Snell S A (1998), Virtual HR: s*trategic human resource management* in the 21st century. *Human Resource Management Review*, 8(3), 215–234

26. Nicholas A (2010), e-HR transformation Projects Within the UK Public Sector: *Critical Success Factors*. University of Chester Business School

27. Paauwe J, Kalika M & Lepak D, Second European workshop on e-HRM (2008), E-HRM: *Barrier or Trigger for an HRM Transformation*.

28. Poole M & Warner M (1999), *The IEBM Hand Book of Human Resource Management*. Hardcover

29. Prasad L M (2003), *Human Resource Management.* New Delhi: Sultan Chand & Sons

30. Ruël H J M, Bondarouk T & Looise J C (2004), *E-HRM: Innovation or irritation*. An explorative empirical study in five large companies on web-based HRM. Management Review, 15(3), 364–381

31. Srivastava S K (2010), Shaping Organization with *e-HRM. International Journal of Innovation*, Management and Technology, 1(1)

32. Strohmeier S (2009), Concepts of e-HRM consequences: a categorisation, review and suggestion. *The International Journal of Human Resource Management*, 20(3), 529-543

33. Strohmeier S & Kabst R (2009), Organisation adoption of e-HRM in Europe: An Empirical exploration of major adoption factors. *Journal of Managerial Psychology*, 24(6), 482-501

34. Strohmeier S (2007), Research in e-HRM: Review and Implications. *Human Resource Management Review*, 17, 19- 37

35. Second European workshop on e-HRM. (2008)

36. The first European academic workshop: *The Future of Electronic HRM (e-HRM) research*. (2006), Netherlands: Twente university.

37. Torres T & Mario A (2007), *Encyclopedia of Human Resource Information Systems*: challenges in e-HRM

38. Ulrich D (1997) Human resource champions: *The next agenda for adding value and delivering results*. Boston MA: Harvard Business School Press

39. Venkatesh V, Morris M G, Davis G B & Davis F D (2003), *User acceptance of information technology*: toward a unified view. MIS Quarterly, 27(3), 425-478

40. Voemans M & Veldhoven M V (2007), Empirical Study at Philips. *Emarald Group Journal*, 36(6), 887-902

41. Walker A J (2001), Web-Based Human Resources: *The Technologies and Trends That Are Transforming HR*. New Delhi: Tata McGraw Hill

42. Wright P M, McMaham G C, Snell S A & Gerhart B (2001), *Comparing line and HR executives' perceptions of HR effectiveness*: services, roles, and contributions. Human Resource Management, 40(2), 111–123

43. Zafar J, Shaukat M & Mat N (2010), *An analysis of e-human resource management practices*: A case study of State Bank of Pakistan. European Journal of Social Sciences, 15(1), 18- 26

Table 1
Comparison among three firms on the basis of mean score

		Average		
Statement no.	Statement	JDS	Toshiba	Hospo mediaca
1.	The firm conducts detailed analysis of the ways that we can best use our IT capabilities to make HR more technology intensive	291	3.61	2.65
2.	In this firm, detailed analysis are conducted about how competitors are using their IT capabilities to make HR more technology intensive	2.91	3.85	3
3.	Top management participated in the development of the IT'S we use in our HR operations	2.82	3.39	3.12
4.	Top management maintains regular conduct with the sponsor of IT use in our HR operations	2.82	3.67	3.18
5.	It is important for top management that our HR operations utilize IT's	3.33	3.79	3.06

Table 2
Comparison among three firms on the basis of mean score

		Average		
Statement No.	Statement	JDS	Toshiba	Hospomedica
6	Top management provides constructive feedback o n the use of IT in our HR operations	2.67	3.48	3.5
7	In this firm, HR is involved in major strategic decisions	2.82	3.67	2.91
8	In this firm, HR helps make decisions about broader business issues	3.03	3.36	3
9	Adequate funds are available to fund this firm's HR applications implementation efforts	3.24	3.79	3.03
10	It is easy to identify one(or more) person(s) that has(have) been instrumental in the automaton of the HR services in this firm	2.82	3.24	2.82

Table 3
Comparison among three firms on the basis of mean score

		Average		
Statement no.	Statement	JDS	Toshiba	Hospomedica
11	The level of IT in our HR operation can be attributed to vision of key person(s)	2.82	3.52	3.38

12	Overall, manages here are satisfied with the responsiveness of HR services	3.15	3.61	3.21
13	Overall, managers here are satisfied with the accessibility of HR services	2.85	3.3	3.26
14	Overall, employees here are satisfied with the responsiveness of HR services	2.91	3.61	3.06
15	Overall, employees here are satisfied with the accessibility of HR services	2.64	3.39	2.76

Table 4
Comparison among three firms on the basis of mean score

Statement No.	Statement	Average		
		JDS	Toshiba	Hospomedica
16	Our HR practices are tailored to fit the nature of our business operations	3.09	3.73	3.12
17	Solving HR problems in this firm requires knowledge of our business strategy	2.45	3.27	3.38
18	In this firm, you have to understand its history and culture before you can help solve HR problems	3.21	3.64	3.09
19	In this company, HR recognizes and rewards new ideas from HR staff	3	3.36	3.18
20	The HR department and its staff shows flexibility and adaptability	3.09	3.42	3.41

Table 5
Comparison among three firms on the basis of mean score

Statement no.	Statement	Average		
		JDS	Toshiba	Hospomedica
21	HR and its staff show a willingness to take risks	2.36	3.48	1.97
22	The HR department and its staff shows tolerance of failure of new ideas	2.82	3.39	3
23	The HR department provides practical support for new ideas and their applications	3.09	3.45	3.09
24	Major competitors in our industry utilize high levels of IT in their HR activities	3.15	3.36	3.26
25	Senior HR executives possess considerable first-hand experience working on IT projects	2.82	3.45	3.44