

Human Capital Enhancement through E-HRM

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ABSTRACT

Today's managers have recognized that their decision making has been dominated by the knowledge of Information Systems. In these circumstances, present study is conducted to discover role of human resource information system (HRIS) in e-HRM. The focus is on identification of the challenges related with the implementation and maintenance of e-HRM systems. It also derives certain suggestions for improving the effectiveness of existing e-HRM systems. This paper portrays a comparative outline about the services as well as manufacturing sector regarding implementation of e-HRM systems in selected organizations working at Sangli District. The study highlights on different aspects corresponding to the probable key areas for inducting e-technology in existing HR practices. It further concentrates on constraints towards development of e-HRM concept and application of e-technology for HR functions.

The implication of e-HRM desires presence of an IT culture resulting into possible threats to the security of information and gradual reduction in the 'human touch'. Considering all probable challenges, if e-HRM practice has taken up in the right spirit, it can assure sustainable existence of the organization for a long term. Similarly it will nourish the most significant asset of any organization – the human capital.

Keywords: E-HRM, HRIS, Human Capital, Sustainable Development, Talent Management.

Introduction

Role of human resource management (HRM) department is experiencing drastic changes in last few years. The focus of HRM has shifted from mere administration to maintenance of valuable human capital of organizations. Organizations have now accepted the “human capital approach,” which considers the amount spent on developing the valuable workforce as an investment. Similar to dynamic approach towards the role of Human Resources, the technology has also continued to accept changes. The role of Human Resources has always focused on delivering support to the workforce according to the need of organization. Technology provides due assistance to human resource activities in realizing managerial expectations. Now, organizations encourage use of human capital technologies for everyone in the business.

E-HRM (Electronic- Human Resource Management) is a web-based solution that takes advantage of latest web application technology to deliver an online real-time Human Resource Management application. There is a basic difference between HRIS (Human Resource Information systems) and e-HRM. Basically HRIS are directed towards the HR department itself whereas the scope of e-HRM is very wide. E-HRM is useful not only for the HR staff but people outside this department are also become beneficiaries. It can be said that e-HRM is the technical face of HRIS for all employees of an organization. Like all new systems and concepts, e-HRM also has to face different challenges and issues which require a careful analysis before its adoption and launching in the organization.

Review of literature

Right from the inception of modern management theory, the terminology, ‘human resource’ has been used to describe the role and function of employees that has evolved from "personnel" to "human resources" via “industrial relations" and "employee relations", (Beer, Michael, et al., 1985). In the 1990s several forces were recognized for designing the advanced concept of HRM. The most significant factor was adoption of technology in general and information technology in particular. The information technology has decentralized the communications and stimulated human interaction which embedded with organizational theory. Over the years success of corporate decision making process depends on inputs from Human Resource Systems, (Broderick & Boudreau, 1992). E-HRM has capacity to change all traditional human resource management functions. Employees do not have to be in the same geographic areas to work together.

The business process re-engineering of the HR function is required in the beginning, (Alfred J Walker, 2001). It should be followed by e-engineering of the HR work. Formal re-engineering teams of providers, customers and users will examine the whole spectrum of HR activities. It results into a set of processes distributed among well organized groupings like recruitment and re-sourcing, compensation, and training and development. These processes should be tested by the re-engineering team and redesigned as per needs with help of suitable technology. In an organization the most valuable input is the human element. The success or failure of an organization depends to a large extent on the persons who manage and run the organization, (Biswanath Ghosh, 2002).

The main activities of Human Resources Management where Information systems can be used successfully include Employee records and management, Recruitment & promotion, Training, Job rotation, Succession planning, Employee stock options, Evaluation, Compensation and benefits management, (S.A. Kelkar 2003). Large organizations generally install e-HR because it enables them to collect store, process and manipulate large amount of data inputs, reduce costs of maintaining human resource data, and provide accurate information about human resources anytime and anywhere, (L.M. Prasad 2003).

If one would separate the HR function into two broad components, namely transactional and non-transactional activities, then it is easy to locate the transactional components which can be e-enabled, (Scott, 2008). The e-possibilities exist in many of the non-transactional HR activities. There are two views regarding applying information technology in human resource management. One view highlights on continuum approach, while, other view focuses on radical approach. According to continuum approach, it must be ensured that no electronic mechanisms should be used to replace “people” activities, while the radical view suggest that the technology could replace all direct human interaction with the technical components.

Pre-requisites of e-HRM

Attitudes towards e-HRM technology are important. Opinions about technology may well be moderated by the relationship between groups of stakeholders. The HR managers and line managers have certain inter-group frames which shape attitudes towards technology and may be developed as constraint to a transformational approach to e-HRM.

For example, line managers frequently may express doubts about the capability of the HR function to deliver strategic technology tools when they are unable to operate a strategic HR

function. In some cases, they even fail to deliver a good operational service. Lack of confidence at the functional level is therefore linked to poor expectations with regard to transformational technology. In such circumstances, success of e-HRM practice depends on following pre-requisites.

1. Commitment to change management from the start of the project
2. Presence of an IT Culture an important pre – condition
3. Culture of Knowledge management
4. Involvement of all the stakeholders
5. Communication of the value of any technology solution to the users
6. Clarity on the part of all users regarding their role in e-HRM
7. Adequate training to the users

Challenges of e-HRM

The most prevalent issues facing management include control, business requirements, and best practices. Some of the major challenges that have been identified are-

Cost Implications: Costs tend to be proportional to requirements and the type of organization. Organizations must classify those operations which are vital, essential and desirable.

E-HRM system and business requirements: Management must consider the ERP's status on control to ensure for meeting the business requirements of organization.

Security of information: An organization needs to ensure that outsiders should not access the information. In this context proper vendor selection is a critical condition to ensure confidentiality.

Data Management: Managing the huge amount of data generated through e-HRMS is becoming new challenge for organizations.

Loss of the 'human touch': Another challenge is the avoidance of 'overkill' and loss of the 'human touch'. Many times human side remains neglected, while becoming more and more techno-savvy.

Difficulty for Traditional organizations: E-HRM seems to be more challenging for the traditional organizations which need to bring about a change in the mindsets to a large extent.

Customization in right perspective: Most of the e-HRM modules are of international standards and based on best practices. Hence customization needs to be taken up in the right perspective.

Training of the users: Training the users is many times a lengthy process. Many people do not find the system to be user friendly.

Return on Investment (ROI): The ROI on an e-HRM project is the projected cost reduction brought about by the system and its impact on revenue or profits over time. The e-HRM initiative should align itself with the overall HR and IT strategy. It should be further aligned with the business strategy to ensure ROI.

Synchronization of ERP along with other systems: Organizations integrating their value chains with the business activities of suppliers, business partners and customers have to implement additional systems like Customer Relationship Management (CRM) along with ERP.

Continuous monitoring and feedback: Continuous monitoring and feedback are critical for the success of any e-HRM effort in an organization.

Cost reduction through e-HRM

1. Tracking of Applicants

In the existing economic environment any job advertisement receives huge response. It is required to cross check applicants from one job to another, and to track each applicant through the selection process. Frequently applicants passed over from one job may be a good match for another.

2. e- Employee Profile

The E-Employee Profile web application provides a central point of access to the employee. It includes contact information and provides a comprehensive employee database solution. It is very much useful in making decisions with less cost and at fast speed.

3. e-Recruitment

Today the internet has become a primary means for employers to search for candidates and for applicants who look for a job. The employers post their vacancy position in the job search web portals. These websites help in review resumes in online mode which helps to reduce the recruitment cost.

4. e-Selection

Most employers are recruiting their employees from the online job search engines (website like Naukari, Monster) etc. The new tests are now conducted using IT based software.

5. e-Learning

E-Learning refers to the programme of learning, training or education where electronic devices, applications and processes are used for knowledge creation, management and transfer. E-learning covers a wide set of applications and processes. It helps to save time and money.

6. Classical Virtual Learning

The classical learning model has derived from non- reversible flow of information. The virtual learning system enables horizontal and vertical communication.

7. e-Training

Most organizations start to think of online learning primarily as a more efficient way to distribute training inside the organization, making it available “any time”, “anywhere” reducing direct costs and indirect costs.

8. e-Performance Management

A web-based appraisal system can be defined as the system which uses the web (intranet and internet) for effective evaluation of skills, knowledge and performance of the employees. It reduces the money.

9. e-Compensation

Compensation planning is the process of ensuring appropriate salary equitably across the organization while staying within budget guidelines. The usage of intranet and internet for compensation planning is called E-Compensation Management which reduces the cost.

10. Grievance Redressal

Effective automated grievance management system information can save money, avoid unnecessary ill-will, and avoid the prospect of losing grievances or arbitrations for technical reasons

11. Paperless HR work

With the growing awareness for environmental sustainability, many companies are looking for ways to “go green.” Implementing a HRIS will help to reduce almost all of the paperwork associated with HR tasks which can save money and time.

12. e-Leave

It helps to reduce the cost by defining the work force in advance and to review the past data records of the employee leave etc. In this way it will reduce the cost.

Objectives of the study

This research is an attempt to identify the challenges involved in achieving administrative and service excellence by organizations using e-HRM and also the challenges faced by these organizations in moving towards performance excellence. By understanding and overcoming these challenges, organizations would be successful in achieving the primary objective of e-HRM exercise; to reduce costs of HR transactions, compress time value and provide resources for their easily utilization. Accordingly the objectives of this research are:

1. To identify factors and prerequisites for the success of an e-HRM initiative.
2. To recognize the challenges associated with the implementation and maintenance of e-HRM systems.
3. To deduce recommendations and suggestions for enhancing the effectiveness of e-HRM systems.

Hypotheses

Following hypotheses were set to ascertain results of this study.

1. First Hypothesis:

- a. Null Hypothesis (H0): e-HRM practice does not affect Human Resource functions significantly.
- b. Alternate Hypothesis (H1): e-HRM practice affects Human Resource functions significantly.

2. Second Hypothesis:

- a. Null Hypothesis (H0): e-HRM does not support Human Resource applications effectively.
- b. Alternate Hypothesis (H1): e-HRM supports Human Resource applications effectively.

These hypotheses were tested using “Chi-Square Test”.

Research methodology

1. Sampling Method

The study was related to randomly selected sample organizations working in Sangli District of Maharashtra State. A sample size of this study was 40 organizations in the private sector. The sample unit was an organization which has adopted an e-HRM system carrying out at least three HR functions using e-technology. Both sectors, namely, manufacturing and services were represented by the sample organizations.

2. Selection of Respondents

The 16 organizations (40 % of sample size) represent service sector, while, remaining 24 organizations represent manufacturing sector. Judgment and convenience sampling technique was used for identifying the sample organizations. A structured questionnaire was designed to use as the research instrument. The major aspects of the research design comprised of questions intended to identify,

1. The possible accelerators for introducing e-technology into the HR systems,
2. The barriers in progress of e-HRM journey,
3. Usage of e-technology for the various HR functions,
4. Perception of respondents on a five point Likart scale regarding their views on e-HRM.
5. Expectation of respondents from e-HRM system to be successful in satisfying employees in their HR needs, benefits from e-HRM etc.

Table-1: Participants' Profile

Sr. No.	Organizations	Respondent		
		No.	%	
A	Manufacturing			
1	Agricultural Processing	6	24	60
2	Engineering Products	6		
3	Pharmaceuticals	6		
4	Textiles	6		
B	Services			
5	Banking	4	16	40
6	Communication	4		
7	Health	4		
8	Hospitality	4		
Total		40		100

Source: Field Survey

Present study is based on the responses of different organizations located in Sangli District. Total 40 organizations were selected randomly for this study. Out of them 24 organizations i.e. 60 % represent manufacturing sector. This sector comprises of six organizations each from agro processing, engineering articles, pharmaceuticals and textile production units. The remaining 16

units represent service sector comprising of four organizations each from banking, communication, health and hospitality services.

Findings

1. Factors determining needs for introducing e-HRM systems in organizations

Table-2: E-HRM Need Assessment Factors

Sr. No.	Factors	Respondents					
		Manufacturing		Services		Total	
		No.	%	No.	%	No.	%
1	Rising complexity in HR function	20	80	10	60	30	75
2	Need of Information Sharing	18	72	08	48	26	67
3	Controlling HR Cost	21	84	12	72	33	82
4	Better use of Time	16	64	14	84	30	75
5	Reduction in documentation	12	48	07	42	19	47
6	Increased Productivity	15	60	09	54	24	60
7	Improvement in HR transactions	10	40	10	60	20	50
8	System standardization	14	56	06	36	20	50

Source: Field Survey

As shown in Table 2, the most significant factor determining the need of incorporating e-HRM is related with its cost control approach (82 %). It was followed by rising HR complexity and better utilization of time (75 %). The information sharing need has been pointed out by 67 % respondent organizations. According to 60 % organizations for improvement in productivity, 47 % for reduction in documentation and 50 % each for improving HR transaction and system standardization are determinants of e-HRM.



Chart -1: Factors determining need of e-HRM

2. Application of e-technology for efficient Human Resource Functions Table 3 shows the usage of e-technology for different Human Resource functions.

Table-3: E-technology and HR Functions

Sr. No.	Functions	Respondents					
		Manufacturing		Services		Total	
		No.	%	No.	%	No.	%
1	Recruitment and Selection	17	68	12	72	29	73
2	Training and Development	21	84	10	60	31	77
3	Wage and Salary Admn.	22	88	13	78	35	87
4	Career Development	11	44	10	60	21	52
5	Leave Management	18	72	15	90	33	82
6	Succession Planning	16	64	05	30	21	52
7	Exit Management	15	60	13	78	28	70
8	Documentation	19	76	14	84	33	82

Source: Field Survey

According to 87 % respondents, e-technology is most powerful tool for wage and salary administration. It was followed by leave management and documentation (82 % each), training and development (77 %), recruitment and selection (73 %) and exit management process (70 %). Only 52 % respondents found the use of e-technology for the functions like succession planning and career development.

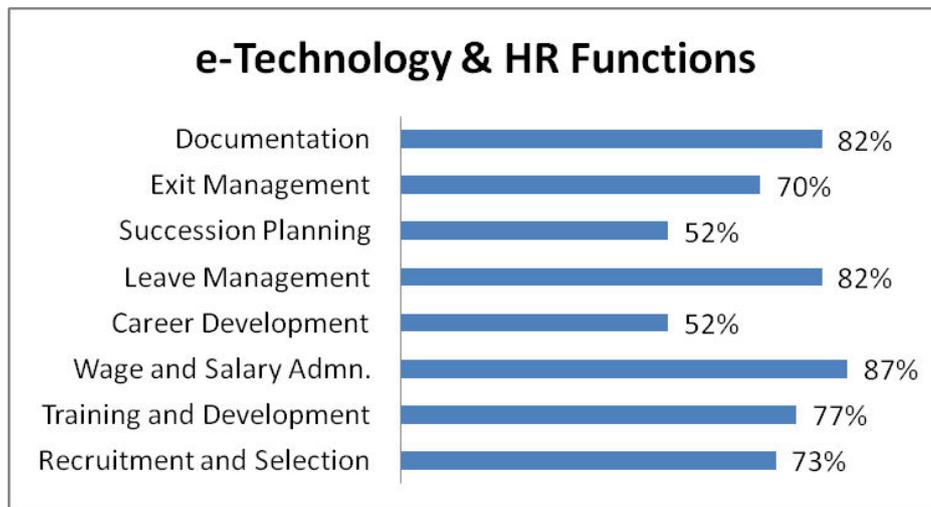


Chart- 2: e-Technology & HR Functions

3. Challenges in launching of e-technology for HR functions the table below indicates constraints observed during implementation of e-technology.

Table-4: Challenges in launching of E-technology

Sr. No.	Challenges	Respondents					
		Manufacturing		Services		Total	
		No.	%	No.	%	No.	%
1	Financial Limitations	18	72	12	72	30	75
2	Unpreparedness for Changes	17	68	10	60	27	67
3	Less Management Support	10	40	10	60	20	50
4	Insufficient Training	11	44	06	36	17	42
5	Infrastructural Shortages	13	52	07	42	20	50
6	Security Difficulties	14	56	09	54	23	57
7	Absence of Tangible Gains	08	32	08	48	16	40
8	Less Innovation Spirit	07	28	05	30	12	30
9	Rigidity in e-technology	10	40	11	66	21	52

Source: Field Survey

The financial barriers was determined as disturbing constraints experienced by both manufacturing & service sector organizations in implementing e-technology modules the (75%). The 67% respondents found their unwillingness to accept changes. Security difficulties &

rigidness were identified as barriers by 57% & 52% respondents. The 50% organizations faced difficulties like limited support from top management and shortage of infrastructural facilities. The 42 % respondents found insufficient training. The 40% & 30 % organizations respectively found, constraints like non availability of tangible gains and innovation prone environment



Chart-3: Challenges for e-HRM

4. Pre-requisites of e-HRM

There are certain pre-requisites for launching of e-HRM practices in organizations. Opinions of organizations during this study were recorded which are shown as under.

Table-5:Pre-requisites of E-HRM

Sr. No.	Pre-requisites	Respondents					
		Manufacturing		Services		Total	
		No.	%	No.	%	No.	%
1	Commitment	3	14	1	06	4	10
2	IT Culture	4	17	3	18	7	17
3	Total Involvement	4	17	4	26	8	20
4	Transparency	2	08	3	18	5	12
5	Clarity in Understanding	6	24	1	06	7	17
6	Proper Training	5	20	4	26	9	24

Source: Field Survey

The need of proper training was observed as most important pre-requisite by 24 % respondents. It was followed by total involvement by 20 %, IT culture and clear understanding by 17 % each

and transparency by 12 % respondents. The commitment was viewed significant by 10 % organizations.

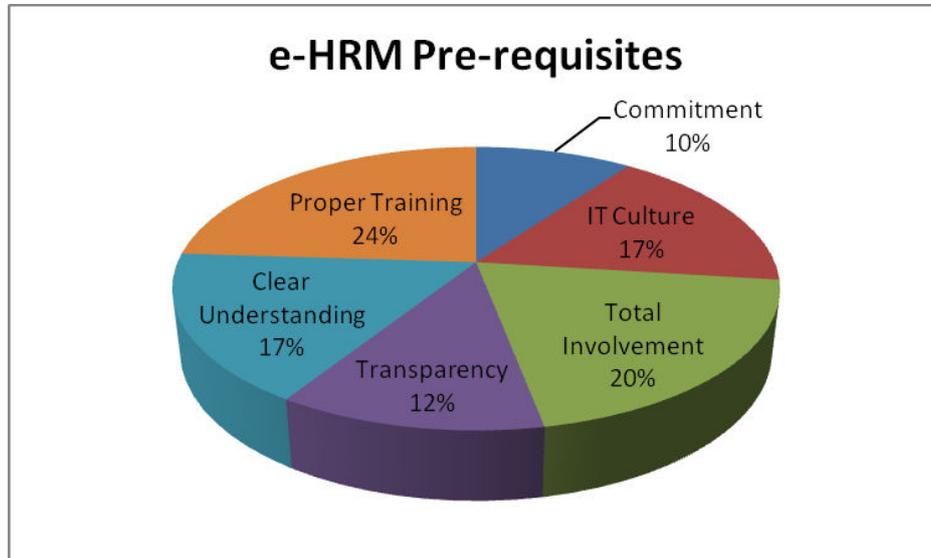


Chart-4: e-HRM Pre-Requisites

5. Applications of e-HRM

Respondent organizations were requested to inform about the applications of e-HRM modules in their organizations. The responses are indicated below.

Table-5: Applications of E-HRM

Sr. No.	Application	Respondents					
		Manufacturing		Services		Total	
		No.	%	No.	%	No.	%
1	e-Recruitment	4	17	2	13	06	15
2	e-Training	6	24	4	24	10	25
3	e-Compensation	5	22	3	18	08	20
4	e-Performance Measurement	1	04	2	13	03	08
5	e-Administration	8	33	5	32	13	32

Source: Field Survey

The most popular (32%) use of e-HRM was related with administrative activities like maintenance of leave records, disciplinary notes, enquiry reports etc. The next application was dealt with e-training process (25 %). The e-compensation was used by 20 % and e-recruitment

by 15 % organizations. Only 08 % respondents reported performance measurement with help of e-HRM.

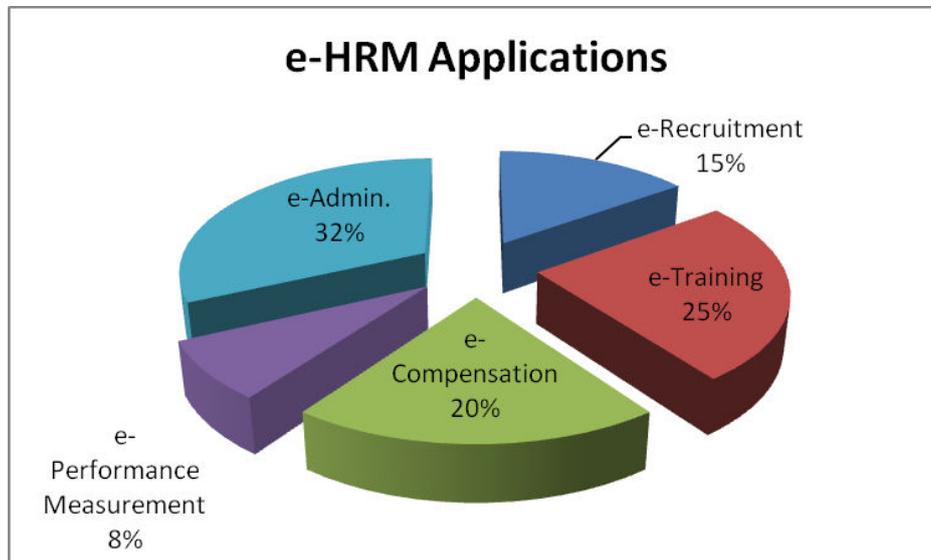


Chart-5: e-HRM Applications

Hypotheses testing

The following conditions of ‘Chi-Square Test’ were most perfectly matched with the data associated with this research work.

1. Observations are collected and recorded on random basis.
2. All items in the sample are independent.
3. The number of items is reasonably large.
4. Variables have linear correlation.

Further advanced research can be carried out by using techniques like ‘Factor Analysis’.

Table 6: Hypotheses Testing

Hypothesis	Table Value	Calculated Value	Inference	Result
First	110.475	15.950	Accept H0	e-HRM do not affect HR functions
Second	13.277	16.900	Reject H0	e-HRM supports HR applications

Source: Field Study

For the first hypothesis, for 8 degrees of freedom, at 99% level of significance, table value of Chi-Square is 110.475 and calculated value is 15.95. As table value is greater than calculated value, the H₀ should be accepted. Hence, it has been proved that, “e-HRM practice does not affect Human Resource functions significantly”.

For the second hypothesis, for 4 degrees of freedom, at 99% level of significance, table value of Chi-Square is 13.2777 and calculated value is 16.9. As table value is smaller than calculated value, the H₀ should be rejected. Hence, the H₁ is to be accepted which proves that, “e-HRM supports HR applications effectively.”

Conclusion

Now it has been ensured that, any e-HRM implementation exercise if taken in appropriate manner considering all its challenges can surely lead an organization towards a long term success. When organizations become successful in handling the challenges in front of e-HRM, the organizational environment would convert into highly enthusiastic, more comfortable resulting into delighting jobs. It would enhance speed and efficiency of Human Resource transactions, reduce paper work and yield cost effective working in the long run. It is easier for top management to monitor all the systems because of acute transparency in all functions.

The e-HRM practice enables better management which is essential dimension of an organization in today's competitive edge. Dynamism is required for thinking, generating ideas and serving the customers more effectively. The e-HRM approach reduces unwanted activities, updates personal information accurately and timely and accelerates error free work environment. It saves most valuable time of Human Resource professionals which can be utilized for other significant strategic activities related with Human Capital.

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