Abstract: Information technology is changing the way HR departments handle record keeping and information sharing. It decreases the paperwork substantially and allows easy access to voluminous data. The employee can also keep track of his/her achievements without having to go through litigious procedures. It uses intranet or other web technology channels. It can also be used for implementation of different HR strategies. The processing and transmission of digitalized HR information is called electronic human resource management (e-HRM). E-HRM is the application of IT for HR practices which enables easy interactions within employee and employers. It stores information regarding payroll, employee personal data, performance management, training, recruitment and strategic orientation. The authorization of different HR functions can be distributed through E-HRM. Competitive business environments have compelled the organizations to think speedily to innovate and excel for their survival. The change in Information Technology is faster than any other processes in the organization. One of the major hurdles which the HR department needs to cross is the changing technological environment. The IT possibilities for HRM are endless; in principle all HR processes can be supported by IT. With computer hardware, software and databases, organization can keep records and information better as well as retrieve them with greater ease. E-HRM is the relatively new term for this IT supported HRM, especially through the use of web technology. E-HRM is the new field of technology that is widely spreading in organizations around the world. It aims at transforming the HR functions into one that is paperless, more flexible and resource efficient.

Keyword: E-HRM, Information Technology, HR Departments, employers and employees.

I. INTRODUCTION

E-HRM is the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities.

E-HRM is in essence the devolution of HR functions to management and employees. They access these functions typically via intranet or other web-technology channels. The empowerment of managers and employees to perform certain chosen HR functions relieves the HR department of these tasks, allowing HR staff to focus less on the operational and more on the strategic elements of HR, and allowing organisations to lower HR department staffing levels as the administrative burden is lightened. It is anticipated that, as E-HRM develops and becomes more entrenched in business culture, these changes will become more apparent, but they have yet to be manifested to a significant degree. A 2007 CIPD survey states that “The initial research indicates that much-commented-on development such as shared services; outsourcing and e-HRM have had relatively little impact on costs or staff numbers”.

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orientation. Information technology is changing the way HR departments handle record keeping and information sharing. It decreases the paperwork substantially and allows easy access to voluminous data. The employee can also keep track of his/her achievements without having to go through litigious procedures. It uses intranet or other web technology channels. It can also be used for implementation of different HR strategies. The authorization of different HR functions can be distributed through E-HRM.

Competitive business environments have compelled the organizations to think speedily to innovate and excel for their survival. Technology advancement is one of the powerful driving forces. It has reshaped the way we communicate, live, work and also the way a business is conducted. Corporations need to shift from physical technology to information technology, from capital centered economy to human centered economy, and further from conflict to cooperative working relationships. Since many years now, information technology seems to be affecting individuals and organizations communication and behaviours. The change in Information Technology is faster than any other processes in the organization. One of the major hurdles which the HR department needs to cross is the changing technological environment. The IT possibilities for HRM are endless; in principle all HR processes can be supported by IT. Computers have simplified the task of analyzing vast amounts of data and they can be invaluable aids in HR management, from payroll processing to record retention. With computer hardware, software and databases, organization can keep records and information better as well as retrieve them with greater ease. E-HRM is the relatively new term for this IT supported HRM, especially through the use of web technology. E-HRM is the new field of technology that is widely spreading in organizations around the world. It aims at transforming the HR functions into one that is paperless, more flexible and resource efficient. With the state of IT, HRM has become more effective through the use of e-HRM technologies. E-HRM has the potential to change the way traditional HRM functions are performed. For e.g. in the analysis and design of work, employees in geographically dispersed locations can work together in virtual teams using videos, e-mail etc. Under recruitment function, job openings can be posted online, and candidates can apply online. On compensation and benefits issues, e-HRM will make it easy for employees to review salary and bonus information and seek information about bonus plans.

**Definition:**

According to Kettley P and Reilly P (2003), a Computerized Human Resource Information System (CHRIS) consists of “a fully integrated, organization-wide network of HR related data, information, services, databases, tools and transactions.” Such a system can be described as e-HR, meaning the application of conventional, web and voice technologies to improve the HR administration, transactions and process performance.

Mary Gowan has defined Electronic Human Resource Management System (E-HRM System) as a web-based solution that takes advantage of the latest web application technology to deliver an online real-time human resource management solution. It is comprehensive but easy to use, feature-rich yet flexible enough to be tailored to your specific needs.

**II. OBJECTIVES OF E-HRM**

- To offer an adequate, comprehensive and on-going information system about people and jobs at a reasonable cost
- To facilitate monitoring of human resources demand and supply imbalance
- To automate employee related information,
- To provide support for future planning and also for policy formulations
- To enable faster response to employee related services and faster HR related decisions
- To offer data security and personal privacy.
The main goals of e-HRM are as followed:

- E-HRM is seen as offering the potential to improve services to HR department clients (both employees and management)
- Improve efficiency and cost effectiveness within the HR department, and allow HR to become a strategic partner in achieving organizational goals.
- Traditionally HR goals have been broken into three categories:
  1. maintaining cost effectiveness,
  2. the enhancement of service for internal customers, and
  3. addressing the tactics of the business.
- With e-HRM there is a fourth goal added to the three categories and that is the improvement of global orientation of human resource management.
- E-HRM has increased efficiency and helped businesses reduce their HR staff through reducing costs and increasing the overall speed of different processes.
- E-HRM also has relational impacts for a business; enabling a company’s employees and managers with the ability to access HR information and increase the connectivity of all parts of the company and outside organizations. This connectivity allows for communication on a geographic level to share information and create virtual teams.
- And finally e-HRM creates standardization, and with standardized procedures this can ensure that an organization remains compliant with HR requirements, thus also ensuring more precise decision-making.
- HR functions that e-HRM assist with are the transactional and transformational goals.
- Transactional goals help reduce costs and transformational goals help the allocation of time improvement for HR professionals so that they may address more strategic issues. To add to this operational benefits have become an outcome of the implementation of e-HRM. The process of payroll is an example of this, with HR being able to have more transactions with fewer problems.

IV. SCOPE OF E-HRM

- A decisive step towards a paperless office;
- A higher internal profile for HR leading to better work culture
- More transparency in the system
- Adaptability to any client and facilitating management;
- Integral support for the management of human resources and all other basic and support processes within the company;
- A more dynamic workflow in the business process, productivity and employee satisfaction.

V. TYPES OF E-HRM

There are three types of E-HRM. These are described respectively as operational HRM, relational HRM and transformational HRM.

- **OPERATIONAL HRM:** e-HRM is concerned with administrative function like payroll, employee personal data, etc.
- **RELATIONAL HRM:** e-HRM is concerned with supportive business process by the means of training, recruitment, performance management, and so forth.
• TRANSFORMATIONAL HRM: e-HRM is concerned with strategic HR activities such as knowledge management, strategic re-orientation, etc.

VI. E-HRM MODEL

![E-HRM Model Diagram]

This model developed by Ruël, Bondarouk and Looise (2004), provides sort of a structure to all existing literature on E-HRM. It combines different authors’ views and findings and creates a framework. The framework focuses on the HRM strategy and policy, moving on to E-HRM goals, types and finally the outcomes.

VII. E-HRM TOOLS

E- Employee Profile: The E-Employee Profile web application provides a central point of access to the employee contact information and provides a comprehensive employee database solution, simplifying HR management and team building by providing an employee skills, organization chart and even pictures. E-Employee profile maintenance lies with the individual employee, the manager and the database manager.

E-Employee profile consist of the following: Certification, Honor/Award, Membership, Education, Past Work Experience, Assignment Skills, Competency, Employee Assignment Rules, Employee Availability, Employee Exception Hours, Employee Utilization, Employee tools, Job information, Sensitive job Information, Service Details, Calendar, Calendar Administration, Employee Locator.

E-Recruitment: Organizations first started using computers as a recruiting tool by advertising jobs on a bulletin board service from which prospective applicants would contact employers. Then some companies began to take e-applications. Today the internet has become a primary means for employers to search for job candidates and for applicants to look for job. As many as 100,000 recruiting web sites are available to employers and job candidates and which to post jobs and review resumes of various types. But the explosive growth of internet recruiting also means the HR professionals can be overwhelmed by the breadth and scope of internet recruiting. E-Recruiting Methods: Job boards, Professional/Career, websites, Employer Websites.

E-Selection: Most employers seem to be embracing Internet recruitment with enthusiasm, the penetration of on-line assessment tools such as personality assessments or ability tests, has so far been limited. A survey has shown that although more than half respondents organizations already use either psychometric or other assessment during the recruitment process, only few of these companies use on-line assessments prior to interview. Fewer still include a core fit questionnaire in the recruitment pages of their websites.
E-Learning: E-Learning refers to any programmed learning, training or education where electronic devices, applications and processes are used for knowledge creation, management and transfer. E-Learning is a term covering a wide-set of applications and processes, such as web-based learning, computer-based learning, virtual class room, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio-and videotape, satellite broadcast, interactive TV, CD – Rom, and more. Training program provides.

Characteristics of E-Learning:

- E-Learning outcomes extend beyond learning to strategic outcomes.
- E-Learning is much more than e-training for skill outcomes.
- E-Learning involves information and communication technology.
- E-Learning is about people learning in a given context.

E-Training: Most companies 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 (instructors, printed materials, training facilities), and indirect costs (travel time, lodging and travel expenses, workforce downtimes). Attracted by these significant and measurable advantages, companies start to look for ways to make the most of their existing core training available online, and to manage and measure the utilization of the new capabilities.

Characteristics of E-Training:

- Rich learning interface.
- Personalized training programs.
- Training from workplace/home
- Virtual
- Class room.

E-Performance Management System: A web-based appraisal system can be defined as the system which uses the web (intranet and internet) to effectively evaluate the skills, knowledge and the performance of the employees.

E-Compensation: All companies whether small or large must engage in compensation planning. Compensation planning is the process of ensuring that managers allocate salary increases equitably across the organization while staying within budget guidelines. As organizations have started expanding their boundaries, usage of intranet and internet has become vital. The usage of intranet and internet for compensation planning is called E-Compensation Management.

VIII. ADVANTAGES OF E-HRM

The E-HRM business models are designed for human resources professionals and executive managers who need support to manage the work force, monitor changes and gather the information needed in decision-making. At the same time it enables all employees to participate in the process and keep track of relevant information. E-HRM has the potential to influence both efficiency and effectiveness. Efficiency can be obtained by reducing the cycle times for meting out paper work, increasing data precision, and reducing excess HR. Effectiveness can be affected by improving the competence of both managers and employees to make better, quicker decisions.

- Collection and store of information regarding the work force, which will act as the basis for strategic decision-making.
- Integral support for the management of human resources and all other basic and support processes within the company.
- Prompt insight into reporting and analysis.
A more dynamic workflow in the business process, productivity and employee satisfaction

- A decisive step towards a paperless office
- Makes the work to get over fast
- Amplified and easy access to HR data and ease in classifying and reclassifying data.
- E-HRM can save costs while maintaining the quality of data

IX. DISADVANTAGES OF E-HRM

- **Lack the time and space:** They generally feel that they lack the time and space needed to work quietly and thoughtfully with web-based HR tools and so, if there is no need, they will not do it.

- **Guaranteeing the security:** Guaranteeing the security and confidentiality of input data is an important issue for employee in order that they should feel ‘safe’ when using web-based HR tools.

- **Specialized Knowledge:** one of the advantages of E-HRM is that it may help the organization to reduce the cost HR personnel, though it could increase the requirements for technical staff with knowledge specific technology and functional area as well.

- **Data Entry Errors:** E-HRM can only perform as good as its human programmers and end users.

- **Improper use due to rigid mindsets:** In order to make proper use of E-HRM, it becomes very necessary for the staff to change their mindsets, as many people still have certain inhibitions in using technology in certain facets of their profession. If this transformation in technology is not synchronized with transformation in the mind set and culture of the organization it can lead to a financial fiasco.

- **Threat to HR Itself:** The propensity of being dependent on technology will reduce the reliance on manpower, thus it poses a great risk on the basic foundation of HR, where the Human resources are considered as an asset and capital to achieve organizational objectives and fulfill the mission and vision of the company

X. E-HRM OUTCOMES

According to Beer et al (1984) all E-HRM activities, will implicitly or explicitly be directed towards distinguish four possibilities:

a) High commitment,

b) High competence,

c) Cost effectiveness, and

d) Higher congruence.

These outcomes, in turn, may change the state of HRM in an organization, or through individuals and/or groups within an organization actually result in a new HRM state. This closes the circle. With the addition of the E-HRM outcomes, the building blocks which are needed to finalize our E-HRM model have been identified (Figure 2).

Literature suggests that the various goals of E-HRM and the different types of E-HRM are expected to result in outcomes including more efficient HRM processes, a higher level of service delivery and a better strategic contribution. Such expected
outcomes can be "encapsulated" in one concept, which could be counted as HRM effectiveness. E-HRM, as the matter of fact, is expected to contribute to the effectiveness of HRM, which consequently could help achieve the organization’s goals.

XI. CONCLUSION

E-HRM is a web-based tool to automate and support HR processes. The implementation of e-HRM is an opportunity to delegate the data entry to the employee. e-HRM facilitates the usages of HR marketplace and offers more self-service to the employees. e-HRM (Electronic Human Resource Management) is an advance business solution which provides a complete on-line support in the management of all processes, activities, data and information required to manage human resources in a modern company. It is an efficient, reliable, easy – to use tool, accessible to a broad group of different users. With the various advantages and little disadvantages it can be recommended that all the organizations use E-HRM technology, that promises to provide a useful, efficient and increased performance through this e-HRM technology in spite of all barriers it has to face. E-HRM is a way of implementing HR strategies, policies, and practices in organizations through a conscious and directed support of and/or with the full use of web-technology-based channels. It covers all aspects of human resource management like personnel administration, education and training, career development, corporate organization, job descriptions, hiring process, employee’s personal pages, and annual interviews with employees. Therefore e-HRM is a way of doing HRM.

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