**Impact of Information Technology on Human Resource Management**

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**ABSTRACT**

Human resources management is among those professional occupation segments that technological changes had influenced. Technology has transformed the role of human resources management professionals to a large extent. More and more human resources management functions within the human resource department are being performed electronically to improve the administrative efficiency and responsiveness of human resources management to their internal clients, employees and managers. Today, HR is not treated as a single function. It's a collection of highly specialized capabilities - each with distinct objectives, tasks and needs. There is an ever-increasing pressure on Human Resource (HR) function to support strategic goals and to focus on value adding activities. Organizations have realized the growing importance of using Information Technology (IT) in leveraging their Human Resource (HR) functions. This takes the form of e-HRM (Electronic Human Resource Management). The e-HRM revolution relies on cutting edge information technology, ranging from Internet-enabled Human Resources Information Systems (HRIS) to corporate intranets and portals. The driving forces are intensifying competition, need to manage workforce on a global level, to improve HR service delivery and to bring cost savings. Applicant Tracking System is one of the emerging areas of application of IT in HRM. This paper focuses on the impactof technology on human resources management.

#### Keywords

Human Resource Management (HRM), Electronic Human Resource Management (e-HRM), Human Resource Information System (HRIS), Information Technology (IT)

**INTRODUCTION:**

Information technology (IT) increasingly affects virtually every aspect of work. Information Technology has been hailed as one of the most important technological developments in recent history. It has been argued that advances in automation and Information Technology will result in increased productivity and product quality as well as increased market shares.

In the present context of increasing globalization, employing organizations and their environments have become increasingly complex. Managers in these organizations face growing difficulties in coping with workforces that may be spread across a variety of countries, cultures and political systems. Given such trends, Information Technology has considerable potential as a tool that managers can utilize, both generally and in human resourcing functions in particular to increase the capabilities of the organization.

Substantial benefits of communication and information technologies can seamlessly migrate to Human Resource applications. Those managing the human resource functions have not ignored such advice and, as a result a widespread use of human resource information systems (HRIS) has taking place. A Human Resource Information System is a systematic procedure for collecting, storing, maintaining, retrieving and validating the data needed by an organization for its human resources, personnel activities and organization unit characteristics. HRISs can also provide the management with a decision-making tool rather than merely a robust data base.

Information Technology plays a critical role in leveraging and complementing human and business resources. The importance of using the Human Resource Information Technology tools, are as follows: in organizations, despite increasing needs for technological advancement, human and cultural factors play a more important role than before. However, technology is often seen by management as essential means to compete in the global market. To that technology, including information technology, brings the desired results, the most important issue for an

organization is how to manage the technology with respect to human organizational aspects, how to analyze and understand human factors guided by the norms, shared beliefs, and assumptions of the organization, as well as by individuals’ unique values-all together known as“ culture.

Information systems in Human Resource can according, provide better services to line managers, serve as a pipeline connecting a personal policy and personal processes in all organization and thus facilitate personal management in the company, provide important data for a strategic personal decision-making and enable a quick acquiring and analysis of information for Human Resource Assistants, and Reduce cost labors at performance of personal activities.

Considerable benefit is an immediate possibility to create various reports and finally to see if company fulfills the target of a key performance indicator. One of the last advantages of Information Technology online system is that it helps to provide availability of improvement proposals anytime and thus enables to avoid paper form. Above mentioned gives overview how technologies can assistance Human Resource processes in order to reach the business targets.

In nowadays, managers realize that human capital has become the last competitive benefit and Information Technology recruiting can broadly support efficient hiring together with forming the workforce. In order to attract the best candidates, it is vital that both Human Resource and Information Technology departments cooperate together. The Human Resource role in Information Technology recruiting is of key importance, including time of crisis. The Human Resource Information Technology tools can support hiring and retaining a high potential. It begins with launching the career website what is a very good promotional tool.

Technology has changed the business world many times over. In the Information Age, the advent of computers and the Internet has increased that impact significantly. Many businesses cannot even function without the use of computer technology. This impact is seen in nearly all areas of business, including human resources, where technology continues to have a significant impact on HR practices.

**IMPACT OF IT ON HRAM:** The impact of Informational Technology on HRM is as under:

**Operational efficiency:** Reducing overhead costs, enhancing the accuracy of data, eliminating the costs of printing and disseminating information, minimizing Information Technology infrastructure costs by moving towards a common Human Resource service platform and enhancing the ability to distribute Human Resource information and services globally.

**Relational impact:** Change the nature of the relationship between Human Resource, line managers and employees.

**Transformational impact:** Transform Human Resource’s role into that of a strategic business partner, adding greater value to the business by increasing Human Resource’s influence as customer focused consultants, enabling new, flexible and responsive methods for delivering Human Resource services expanding Human Resource’s reach as the experts of an organization’s people processes and developers of value propositions for different employee groups.

An automating technology seeks to deskill the processes that make up the work. With this type of technology, greater control and continuity over the work process can be achieved through substituting technology for human labor. An information technology, on the other hand, is designed to upgrade or enrich the work processes. Through removing the most boring, repetitious, dangerous and mindless tasks from the work, human labor is left to perform the creative, challenging, intellectual and satisfying aspects of the work.

**Recruiting:**

One way in which human resources has been significantly impacted by technology is in the area of recruiting. Before the Internet, HR recruiters had to rely on print publications, such as newspapers, to post jobs and get prospects for open positions. Other methods such as networking also were used, but HR recruiters did not have the ability to post a job in one or more locations and have millions of people see it all at once. Technology has made recruiting more efficient and, in the hands of the right recruiter, more effective as well.

**Training:**

Information technology makes it possible for human resources professionals to train new staff members in a more efficient manner as well. The ability to access company information and training programs from remote locations eliminates the need for trainers to work directly with new hires on all training. Some interaction will always be necessary on some level, of course, but training in virtual classrooms makes it possible for the HR professionals to train a large number of employees quickly and to assess their progress through computerized testing programs.

**Data Storage and Retrieval:**

Human resources professionals generally process a considerable amount of paperwork and also have to keep much of that paperwork on file for a considerable period of time. The use of electronic imaging has made it possible for companies to store and retrieve files in an electronic format. Technology also makes it possible for human resources professionals to simply print the forms that are needed for employees. Printing on demand eliminates the need to dig through an endless number of files in the file cabinet to find what is needed.

**Performance Management:**

Enhanced performance management is another byproduct of technological improvement. Human resources professionals can use computer technology to assess employee performance and also to get employee feedback to be used for the betterment of the organization. Various software programs make it possible for human resources professionals to examine employee performance using metrics to ensure that employees are meeting performance standards. Employees that don't measure up can be subjected to additional training or let go in favor a replacement who can come in and do the job.

**E-HRM:**

Electronic Human Resource Management System (E-HRM) System is a web-based solution that takes advantage of the latest web application technology to deliver an outline real-time human resource management solution.

The objectives of E-HRM are to offer an adequate, comprehensive and on-going information system about people and jobs at a reasonable cost. E-HRM also facilitates monitoring of human resources demands and supply imbalance. It is also aimed at automating employee related information. It helps to provide support for future planning and also for policy formulation.
E-HRM enables faster responses to employee related services and faster Human Resource related decisions and it offer data security and personal privacy.

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 Human Resource. Effectiveness can be affected by improving the competence of both managers and employees to make better, quicker decisions. This is done through; collection and store of information regarding the work force, which will act as the basis for strategic decision-making, providing integral support for the management of human resources and all other basic and support processes within the company and can be used to provide prompt insight into reporting and analysis.

The reasons behind an organization’s decision to adopt technology within its Human Resource function may vary. The reasons for adopting e-HR as including cost cutting and adding operational efficiency, the desire of the Human Resource function to change the nature of its relationship with employees and line managers, the transformation of Human Resource into a customer-focused and responsive function and the ability to produce comprehensive and consistent management information.

**THE IMPACT OF E- HRM ON ORGANIZATION PERFORMANCE**

Human Resource Information System has increasingly transformed since it was first introduced at General Electric in the 1950s. Human Resource Information System has gone from a basic process to convert manual information-keeping systems into computerized systems. Because of the complexity and data intensiveness of the Human Resource Management function, it is one of the last management functions to be targeted for automation (Bussler & Davis, 2001/2002). This fact does not mean that Human Resource Information System is not important; it just indicates the difficulty of developing and implementing it compared with other business functions (e.g., billing and accounting system). Powered by information system and Internet, almost every process in the every function of Human Resource Management has been computerized today. Currently, Human Resource Management System encompass: payroll; time and attendance; appraisal performance; benefits administration; Human Resource management information system; recruiting; learning management; training system; performance record; employee self-service; scheduling; and absence management.

Information Technology can bring numerous improvements to organizations. Information Technology has the potential to lower administrative costs, increase productivity, lower speed response times, improve decision making and enhance customer service, simultaneously. The effective management of human resources also has an important role to play in the performance and success of organizations. However, despite evidence of the increasing use of Human Resource-related technology by individual firms, there has been little theory development in this area and academia has failed to give the impact of Information Technology on Human Resource in organizations from different sectors the attention it deserves.

The current generation of Human Resource Information System automates and devolves routine administrative and compliance functions traditionally performed by corporate Human Resource departments and can facilitate the outsourcing of Human Resource. More recent research shows greater use of Human Resource Information System in support of strategic decision making by Human Resource. With an appropriate Human Resource Information System, Human Resource staff enables employees to do their own benefits updates and address changes, thus freeing Human Resource staff for more strategic functions. Additionally, data necessary for employee management, knowledge development, career growth and development, and equal treatment are facilitated. The managers can access the information they need to legally, ethically, and effectively support the success of their reporting employee.

Another benefit of using Information Technology in Human Resource Management as noted by many scholars is the freeing of Human Resource staff in the organization from intermediary roles, thus enabling them to concentrate on strategic planning in human resource organization and development. Information Technology can automate other routine tasks such as payroll processing, benefits administration, and transactional activities, so that Human Resource professionals are free to focus on more strategic matters such as boosting productivity.

**APPLICATION OF E-HRM TOOLS:**

The utilization of Information Technology tools help not only to fulfill defined company’s goals but to optimize the work processes as well. Trends and results of the contemporary studies constantly confirm contribution of the Information Technology tools in Human Resources (HR) area i.e. to accomplish assigned Human Resource tasks by using the source of Information Technology capabilities. They are discussed as below;

**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 Human Resource 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 Human Resource professionals can be overwhelmed by the breadth and scope of internet recruiting. E-Recruiting Methods: Job boards, Professional/Career, websites, Employer Websites.

The web-based technology used by e-recruiting helps organizations attract a stronger and more diverse applicant pool. The choice to move to an e-recruiting model is driven by several business objectives, including the need to; improve recruiting efficiency and reduce costs, increase quality and quantity of applicants, established, communicate and expand brand identify, increase the objectiveness of, and standardize, recruiting practices and increase applicant convenience.

Web-based recruiting who is considered an applicant: The individual expresses interest in an advertised position through the internet or related technology, the contractor considers the individual for employment in a specific position. The individual expressing interest specific that he or she meets the basic qualifications for the position and the selection process before receiving an offer does the individual remove his or her name from consideration or indicate that the position is no longer of interest

Potential pit falls of E-recruiting include; increase in application quantity but not application quality and loss of personal relationships with applicants.

**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-Selection uses technology to help organs more efficiently manage the process of identifying the best job candidates – those who have the right knowledge, skills and abilities for each job and who may best fit the organ.

**E-LEARNING:**

E-Learning refers to any programmed of 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.
**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.

The characteristic of E-Training include: rich learning interface, personalized training programs, training from work place/home, virtual and 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-performance management uses technology to automate the collection of performance data, monitor employee work and support the development and delivery of performance appraisal. Organizations have many motivations for implementing e-performance management including; improving access to performance data, providing data that can make performance appraisals more objectives and valuable, reducing biases in appraisal and linking performance information to other Human Resource data.

**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.
E-compensation uses web enabled technology to help managers, design, implement and administer compensation process.

**E-BENEFITS:**

An e-benefits approach uses the web to communicate information on benefits to employees and allows them to elect and manage their benefits to employees and allows them to elect and manage their benefits online. Motivation for using e-benefits include; reducing the costs for delivering benefits, improving employee access to benefits information, streamlining benefits administration and empowering employees to manage their own benefits.
 **E-HRM CHALLENGES**

It is observed that many organizations have problems when implementing new technologies due to many barriers. These barriers include:

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

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

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

**Improper use due to rigid mindset:** Threat to Human Resource itself. The probability of being dependent on technology will reduce the reliance on manpower, thus it poses a great risk on the basic foundation of Human Resource, where the Human Resources are considered as an asset and capital to achieve original objectives and fulfill the mission and vision of the company.

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

**Threat to Human Resource 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 Human Resource, where the Human resources are considered as an asset and capital to achieve organizational objectives and fulfill the mission and vision of the company.

**STRATEGIES TO ADDRESS THE E-HRM CHALLENCES**

* Redesign and streamline Human Resource processes when implementing e-HR tools. Remember, e-HR is a powerful way to implement a Human Resource strategy but in and of itself, e-HR is not and Human Resource strategy.
* Automate basic Human Resource administrative tasks and use the Human Resource Information System to support managerial decision making.
* Communicate with employees so they understand how and why e-HR data are being collected and used.
* Use data from the Human Resource Information System to ask more complex and strategic Human Resource questions metrics matter, and the Human Resource Information System can offer powerful analytic tools to help managers make tough choices.
* Empower employees to control their own data via the Human Resource website and delegate basic Human Resource transactions to employees. Design the Human Resource website to have timely information, make it easy to navigate and make it aesthetically pleasing. Make the Human Resource web presence consistent with employees’ expectations. If employees cannot find what they need on the website, they will call Human Resource.
* Balance technology with person-to-person contact. Do not let technology manage the relationship with your employees. Losing a personal link with applicants and employees is a real risk with a strong e-HR strategy.
* Use non-technological solutions when appropriate. Though e-HR should be a central component of an organization Human Resource strategy, it should not be the exclusive solution. Technology is not a replacement for sound Human Resource strategy and strong employees.
* Remember that e-HR is not just for large organizations. Small and medium-sized businesses also can benefit from technological support of Human Resource. As vendors continue to develop more solutions for such companies, opportunities will only grow.

**CONCLUSION:**

E-HRM is a web-based tool to automate and support Human Resource process. The implementation of E-HRM is an opportunity to delegate the data entry to the employee. E-HRM facilitates the usage of Human Resource market place and offers more self-service to the employee. E-HRM is advance business solution which provides a complete on-line support in management of all processes activities, data and information required to manage human resource 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 organs use E-HRM technology, that promises to provide a useful, efficient and increase performance through this E-Human Resource Management technology in spite of all barriers it has to face. E-HRM is a way to implementing Human Resource strategies, policies, and practices in organs 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 description, hiring process, employee’s personal pages and annual interviews with employees. Therefore, E-HRM is a way of doing Human Resource Management.

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