# Emerging Trends in HR Technology (A study based on IT applications in HR)

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## **ABSTRACT**

The advent Information technology and Computers played a cardinal role in easing the transactional work of handling enormous data. From the HR's perspective, this has strategically aided HR work comprising of talent management, payroll, time attendance, record processing, performance management, T&D, employee engagement etc. With the help of using various software, cloud commuting ERP etc., HR can preserve the record and retrieve easily for making strategic decisions. HR has travelled from the routine time and record keeping function to strategic role HR has become crucial in determining organizations success. The Paper is based on secondary data and has attempted to identify the recent trends and developments in technological advancement in HR function. The paper will present various aspects of HR and IT technology and how it is impacting HR in strategic role of HR. This paper will also analyze the challenges faced by HR Managers due to the advancement of technology.

**KEYWORDS:** Human Resources Management and Technology, HR in future, Human resource management functions, Impact of Technology on HR,

#### INTRODUCTION

The IT driven technology that is used in various functions of like recruitment & selection, compensation management, payroll, performance management, training and development, maintain human resources, support HR administration, and optimize HRM is referred as HR Technology. The application of this technology is in different types of human resource information systems (HRIS) and also used by various stakeholders, such as managers, employees, and HR professionals. There can be access to this technology in different ways. Technology has made it easier and faster to gather, collate, and deliver information and communicate with employees. Also, it has the potential to reduce the administrative burden on the HR department so it is better able to focus on more meaningful HR activities, by aiding the managers with the required expertise for making effective decisions. Research has indicated that companies who effectively use technology to manage their HR functions will have a significant advantage over those who are still not technologically upgraded. The technology of the future will be about speedy access to accurate current information, and the ability to access this information via multiple systems will give organizations a strategic edge. HR is expected to relinquish its role as sole owner of HR information so that managers and employees can use this information to solve their own problems using Web-based systems. This new system will not necessarily mean a reduction in HR staff. The new system will enable HR professionals to focus on transforming information into knowledge that can be used by the organization for decision making; it will be about HR and IT working together to leverage this technology. Althoughthe advent of technology has added value to HR and eased the work processes, it has also raised the benchmark of HR professional's IT competency.

# Objective of the Study:

- 1. To understand how technology is impacting HR functions.
- 2. To present contemporary trends of technology in HR.
- 3. To identify challenges to be faced by HR Managers due to Technology.

#### Research Methodology

The research is based completely upon the secondary sources of data, which is exploratory related to the subject of the research. Sources of this research include e-journals, web portals and text books.

#### **Literature Review:**

Technology has changed the work pattern of HR with the advent of the digital information. One the trend influencing HR technology is Big Data. This aids the HR professionals to know their customers, target audience and market. It also sets the platform for communication from the customers perspective. The Big Data can also be integrated with other technologies which help to have indepth insight and allows HR professionals to make effective decisions in time bound period. Big Data also gives a comprehensive picture of the entire workforce and aids in analytical decision making. Not all organizations require a sophisticated system and there are many different vendors in the marketplace who offer every size and type of product imaginable. Some considerations for organizations include cost, the number of employees, the degree of efficiency, and the company's existing hardware and software.

A recent study by the Hackett Group, a business process advisory firm, found that high-performing organizations spend 25 percent less than their peers on HR because they use technology effectively. According to Calhoun et al., IT is an important component of the organizational decision process. The use of IT is always based on the needs of an organization and the nature of information systems varies depending on the particular form taken by the organization. Some researchers investigated the relationship between organization characteristics and the use of IT, and factors influencing the use of IT in organizations.

According to a survey by Towers Watson "One-third (31%) of organizations intend to increase their spending on HR technology in the next year in order to boost growth and improve efficiency. According to Laursen, it is unlikely that new innovative HRM practices will be equally effective across different sectors. On the other hand, Budhwar and Boyne compared HRM practices in public and private sector organizations and their results showed a number of differences in the HRM systems in these sectors. The key areas of their analysis include recruitment and selection, pay and benefits, training and development, employee relations with emphasis on key HRM strategies. These may be taken as evidence of the fact that the impact of IT on HRM functions may show differences between sectors.

Appelbaum (2001), Human resource management practices is the management of people within the internal environment of organizations, comprises the activities, policies, and practices involved in planning, obtaining, developing, utilizing, evaluating, maintaining, and retaining the appropriate numbers and skill mix of employees to achieve the organization's objectives.

Calhoun et al, studied the impact of national culture on information technology usage in organizations and reported the association between some organizational characteristics and use of IT. Khan (2010), revealed that in energetic business atmosphere, there is a need of an approach to achieve better performance, to originate and implement HRM practices. In considerable and insubstantial extent the organizations need to invest in such practices to get a competitive advantage.

Stahl et al., (2012), examined the extent of use of IT in various small and medium business organizations in Brunei Darussalam. Their study attempted to assess the depth and breadth of IT usage in business. They concluded that the chief executive's computer knowledge is positively associated with the use of IT and that businesses in different sectors have different information processing needs.

Managers may require information on performance appraisal, time and attendance, succession planning, skills testing, and employee scheduling, and employees may use the system to aid in career development and self-serve applications. Midsize firms require greater data integration and better backup and recovery capability. In addition, they have many users and require local area network and server-based operations. Typically in these midsize systems, all HRIS functions flow through the single system; therefore, data redundancies can be identified and eliminated. Some popular HRIS for small to midsize organizations is sold by such vendors as Spectrum Human Resource Management Systems, Genesys Software Systems, Best Software Inc., Ultimate Software (UltiPro workforce management), People Track Inc., and Organization Plus.

## Electronic HR (e-HR)

Electronic HR (e-HR) is a term that identifies a form of technology that enables HR professionals to integrate an organization's human resources strategies and processes in order to improve overall HR service delivery. Since the mid-1990s organizations have been embracing ways to incorporate electronic and computer functions into their HR strategies. Companies are always looking for better ways to manage costs, provide better service, and effectively manage human capital, and e-HR has become integral to helping organizations achieve these goals. One of the most successful innovations is the migration of HRIS applications onto an intranet. An intranet is a network that is interconnected within one organization, using Web technologies for sharing information electronic HR (e-HR) A form of technology that empowers HR professionals to incorporate organization's HR strategies, processes, and human capital for improving overall HR service delivery aiming 100% customer satisfaction. The Internet has enabled organizations to harness Web-based technology and use Web-based applications to enhance HR services. Most of the companies are currently using the Web for HR purposes.

#### Social Media

Social media plays an active in HR today, especially when it comes to recruitment. Around a quarter of employers are using social media channels like Facebook and LinkedIn to recruit staff. HR departments can use social media not only for recruitment and also for employee engagement. It is considered as a prime source for companies to reach their HR goals. Enterprises can use social media channels to reach the target audience with job postings and other company related information. Few organizations use social media to tell their organization's success story through photos, blog posts, Tumblr and Pinterest pages. And, job seekers are using these social networks to find about the company. It's a good source to know what current and potential employees are saying about r company. Research has shown that companies can reduce hiring cycle times by as much as 25 percent when using online recruitment tools.

The most common practices used for online recruiting are adding recruitment pages to the Web site of the organization, using specialty recruitment Web sites (job portals and online job boards), developing tools that are interactive so applications can be processed (auto-responding), and adopting online screening tools (e.g., personality assessments and interviews). Some advantages of online recruiting are reduced time for management of the recruiting process, communication of the company brand, access to a larger number of qualified candidates, reduced recruitment costs from using a standard process, reduced hiring cycle times, and use of the system's reporting functions to analyze the effectiveness of the recruitment strategy. Some disadvantages can be a loss of face-to-face contact and discrimination against people who do not have access to the Internet or to information about privacy regarding personal information submitted over the Internet Social media offers countless benefits to HR professionals and lets them keep up with the news, technology and trends. can nurture relationships by sharing the industry knowledge. All these reasons have made it an ideal platform to engage employees, build relationships and bolster communications in the workspace. Many companies will consider integrating applications with Facebook or LinkedIn rather than developing corporate applications in the future.

# **Cloud-Based Applications**

In any web application or a native application, SaaS apps play a vital role in every sector including the Human Resource Department. Cloud-based applications are inevitable in today's business environment. Collection and data storage have been so difficult until the evolution of cloud. With the help of cloud technologies, all the information such as documents and other pertinent information can be easily accessed online. Employee information can be archived and organized in a secure location, However, before deploying cloud-based solutions, it is required to understand whether the technology fits well for r current requirement and if it can add a real value to the business. One needs to weigh potential challenges against the benefits to understand whether cloud can overcome the business risks. Also, it is important to consider whether the business procedures can migrate with the cloud applications. By centralizing the data, the workflow and operations can be streamlined across the enterprise. The cloud solutions can have a progressive impact on various streams of operations ranging from product development, workforce management and business integration. This is one of the reason of switching of many organizations to cloud-based applications.

## Contemporary trends of technology in HR.

**ADP Workforce Now** is a human capital management solution for companies with more than 50 employees. The core capabilities of the solution include human resources management, payroll, benefits, talent management, compliance, time and labor management and analytics and benchmarking. The fully integrated suite is built on a single database, which automates data synchronization across different components and helps users to minimize manual administrative tasks. The platform also integrates with other HR and business applications via the ADP Marketplace.

**Workforce Ready by Kronos** is a human resources (HR) platform that combines workforce management with human capital management (HCM) capabilities and is suitable for businesses of all sizes. Kronos Workforce Ready is a single cloud-based solution that incorporates recruiting, onboarding, performance management, compensation planning, time and attendance, scheduling, absence management, payroll and more.

BambooHR is a cloud-based human resources (HR) software service for small and midsize businesses. BambooHR offers small and growing companies a human resource information system (HRIS) that includes an applicant tracking system (ATS) and HRIS tools to manage all aspects of the employee lifecycle.BambooHR provides HR process automation tools that are accessible in several languages and multiple currencies. The platform allows HR professionals and managers to track organizational data such as employee turnover and retention.BambooHR also provides customization services, multiple administrator seats, user support and the ability to maintain inactive employees.

**Jobvite Hire** is a cloud-based applicant tracking system (ATS) that enables users to manage hiring processes including job distribution, screening, interviewing and sending out offers. It's suitable for midsize and enterprise recruiting companies. Jobvite enables company to build a branded career site for candidates. The solution offers a variety of tools for managing the onboarding experience and compliance. Jobvite includes a customer relationship management (CRM) and recruitment marketing module that

allows users to build talent pools of passive candidates that can be sent branded campaigns and communications. Jobvite's ATS was named a leader in the "Forrester Wave for Talent Acquisition, Q3 2015."

**BizRun**is cloud-based human resources (HR) software with an emphasis on the visual. Managers and employees interact with a living org chart to accomplish daily HR tasks and view the entire organization's structure. Core features include employee self-service, PTO and leave management, timekeeping, photoboard, compensation, centralized employee records and organizational planning. BizRun's configurable workflow backbone automates the routing, review, and approval of promotions, transfers, leave and more. Users can associate custom task lists with each transaction, which is particularly helpful for onboarding and terminations. The application uses role-based security and offers numerous customizations to administrators.

## **Software as a Service Applications:**

- *LinkedIn Recruiting Service*: LinkedIn is termed as a processionals network and helps to recruit professionals by providing the resources required to find and recruit candidates. In this way, a recruiter can easily find candidates with relevant profiles.
- *Lucid chart*: . It is mainly used to create organizational chart and mind-mapping. Lucid chart is a SaaS application that allows users to draw flowcharts and diagrams
- *Google Docs*: One area where Google Docs play a key role in HR is performance evaluation. Google Docs helps streamline the process and make data collection much easier. Google Docs eases informationsharing across businesses.
- Google Forms: Google Forms allows HR departments to send every employee a question and response form with questions. When employees submit their responses, the results will be saved in Google Doc template. The Google doc will be emailed to the respective manager for further review. In this way, a performance review process can be made more efficient and paperless. This is just a case, and there are thousands of other options where Google Docs can streamline HR processes.

## Wearable Technology

Wearable technology, wearables, fashionable technology, wearable devices, tech togs, or fashion electronics are smart electronic devices that can be worn on the body as implants or accessories

Top companies like Google, Apple, and Microsoft have started introducing wearable technology in all the devices. These wearable devices can make employees stay connected and improve time management. In fact, wearable technologies provide a wealth of opportunities for employee engagement, including increased productivity, benefit incentives and security. Wearable devices not only improve communication and also enhance operational efficiencies. And, some businesses are exploring new ways to turn the wearable device into a powerful tool.

## Implications of Technological Disruption

Digital drives many significant implications for both business and human resource department. Take a look at few advantages:

#### For Business

- HR department takes more strategic role.
- Employees will become the decision makers.
- Talent management process becomes better.
- Talent practices will play a key role.

# For Human resource

- Almost every aspect of the HR will be streamlined.
- Collaboration and New organization structure will be evolved.
- HR can analyze employee data, and create customized talent offerings.

# Challenges to be faced by Human Resource Managers due to Technology

#### **Resistance to Change**

Technology introduction to prevailing work practices may result in unrest which may lead to resistance by the employees. As these technical changes can be perceived as a threat by the employees, they might interpret that their roles in the organization shall be replaced by the machine or the computer.

## Training

A new system of work pattern due to technology, new machines, procedures and practices will generate need of training for the employees to adapt and conveniently use the new technology. This might increase the cost of training to the employees.

# **Information Security and Privacy**

Due to technological advancement in the organization, the privacy and security aspects related to the technical changes could be at risk. As there is a high possibility of crucial confidential data leakage among the employees or competitors.

#### **Expensive and Time-consuming**

Software requires updating, continuous IT support and monitoring. For an instance the timekeeping software may seem inexpensive at the first instance, however, if the cost of trained staff, hiring a special IT person or an expert and software up gradation customization charges can be expensive. As the basic raw data is transferred through manual data entry which is a time-consuming activity at the same time proximity of errors, data inconsistency may result in improper results in software. And therefore maintenance cost, software inter-linkages with some existing software purchasing add on software might be a time consuming and costly affair. Inadequate data If the business still relies on disparate HR systems, gathering and interpreting business data is probably manual, clunky and time-consuming. The standard reports available from old, non-integrated HR software may no longer be sophisticated enough to meet business needs. This can make it difficult to manipulate data so that it provides the information and analytics need to be agile in the decision-making.

#### Conclusion

The HR function, with its newly developed strategic focus, is expected to demonstrate a measurable impact on business results. The expectation is that HR is transforming data into insights and the ability to provide "quality" data that will transcend the need for information and focus key decision makers on relevant information that is meaningful to the business. Today's HR professionals must be technically savvy and be able to speak the language of business. They must understand the business environment and the major drivers relating to workforce productivity as determined by management. Such techniques as benchmarking and the use of balanced scorecards will be increasingly important for HR. These tools will provide HR with feedback as to whether they are truly listening to the organization and providing customer-focused services. Finally, how HR utilizes technology to evaluate its own effectiveness and how HR decides to leverage emerging technologies to drive productivity and the management of human capital will make the difference between a mediocre HR department and one that is truly a business partner. While technology plays a crucial role in transforming human resources management software and operations from personnel management to business execution, technology itself does not create this change. HR managers must leverage technology to drive a real value to the business. Digital technologies facilitate greater integration and flexibility, thus allowing employees to have a great voice and share their work experience. Technology is at a verge of disrupting HR. Today HR endures to adopt the change, it will make the organizations smarter. By the virtue of technology, HR is playing a true leadership role in business execution.

#### References:

- 1. Human Resource Management: David Lepeak (Pearson)
- 2. HRM (Principles & Practices): K K Chaudhary (Himalaya)
- 3. International Journal on Arts, Management and Humanities 2(2): 43-47(2013) Impact of Technology Advancement on Human Resource Performance Kamal and Ashish Kumar Department of Management, MDU Rohtak, (HR) Haryana School of Business, GJU S &T, Hisar, (HR).
- 4. International Journal of Advanced Research in Computer and Communication EngineeringVol. 4, Issue 3, March 2015 Emerging Trends in Changing HR Technology and its Landscape by Dr. N. Muthu, R. Kishore Kumar.
- 5. https:///financesonline.com/6-technological-trends-redefine-human-resource-management/
- 6. https://catalogue.pearsoned.ca/assets/hip/us/hip\_us\_pearsonhighered/samplechapter/0132270870.pdf
- 7. https://softwareadvice.com
- $8. \quad \underline{\text{http://smallbusiness.chron.com/challenges-faced-human-resource-managers-because-technical-changes-61058.html}\\$
- 9. https://www.insperity.com/blog/hr-technology-challenges.