

# Impact of Science and Technology on Effective and Functional Human Resource Management

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In recent years, there has been a shift of emphasis from personal function to human resources management function. It gains ground after mid 70s and 80; and in the mid 90. It is gaining strength after strength with the application of science and technology. The improved means of communication, technological advancement, computer, and Internet have brought the horizons closer and changed the functioning of the business world in a great way. Many business functions can be performed speedily and with much more accuracy with the aid of computers and the Internet. The impact of technology has been observed in all areas of business including human resources. Human resource management is no longer limited to recruitment and training. It has become an indispensable part of every organization. Technology and human resource management are closely associated to each other. Information technology has significant impact on increasing the efficiency of recruitment, maintenance, development, and decision-making functions.

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“Human Resources Management” is the term used to describe formal systems devised for the management of people within an organization. The responsibilities of a human resources manager fall into three major areas: staffing, employee compensation and benefits, and defining/designing work. Essentially, the purpose of human resources management is to maximize the productivity of an organization by optimizing the effectiveness of its employees. This mandate is unlikely to change in any fundamental way, despite the ever-increasing pace of change in the business world. As Edward L. Gubman (1996) observed in the *Journal of Business Strategy*, “the basic mission of human resources will always be to acquire, develop, and retain talent; align the workforce with the business; and be an excellent contributor to the business. Those three challenges will never change”.

A brief description of the challenges before human resources is given below:

- (1) Hiring is likely to be on rise and this would mean, competition for talent will increase;
- (2) Human resources people can spend more time on the human aspects of the workplace and less time chasing papers and emails;
- (3) Comprehensive human resources tools coupled with stunning point solutions for recruiting and performance management are coming of age and are increasingly accessible to smaller organizations;
- (4) As the technology improves and education makes its way, organizations will have more cost-effective options and will be able to put more choices into their employee’s hands.

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### **Principles of Human Resources Management**

Perhaps the paramount principle is a simple recognition that human resources are the most important assets of an organization; a business cannot be successful without effectively managing this resource. Another important principle, articulated by Michael Armstrong in his book *A Handbook of Human Resources Management*, is that business success “is most likely to be achieved if the personnel policies and procedures of the enterprise are closely linked with, and make a major contribution to, the achievement of corporate objectives and strategic plans”. Other human resources management factors that shape corporate culture, whether by encouraging integration and cooperation across the company, instituting quantitative performance measurements, or taking some other action, are also commonly cited as key components in business success. Human resources management summarized by Armstrong,

Is a strategic approach to the acquisition, motivation, development and management of the organization’s human resources. It is devoted to shaping an appropriate corporate culture and introducing programs which reflect and support core values of the enterprise and ensure its success.

### **Position and Structure of Human Resources Management**

Human resources management functions are ideally position near the theoretic center of the organization, with access to all areas of the business. Since the human resources management department or manage is charged with managing the productivity and development of workers at all levels, human resource personnel should have access to the support of key-decision makers. In addition, the human resources management department should be situated in such a way that it is able to communicate effectively with all areas of the company. In recent years, however, observers have cited a decided trend toward fundamental reassessments of human resources structures and position. “A cascade of changing business conditions, changing organizational structures, and changing leadership has been forcing human resource department to alter their perspectives on their role and function almost overnight”, wrote John Johnston (1996) in *Business Quarterly*.

“Previously, companies structured themselves on a centralized and compartmentalized basis; head of office, marketing, manufacturing, shipping, etc., they now seek to decentralize and to integrate their operations, developing cross-functional terms”. Today, senior management expects human resource to move beyond its traditional, compartmentalized “bunker” approach to a more integrated decentralized support function.

### **Survey of Literature**

A number of studies have been made and many books have been written regarding the role of IT (information technology) on human resources management. The use of information technology in human resources has grown considerably in recent years. A review of literature reveals that: The role of information technology in human resources management can be traced in the last decade of 20th century.

Ruel and Bondarouk (2008) had explored that the term “e-Human Resources Management” was first used in the late 1990’s when e-commerce was sweeping the business world and e-human resources management was internal application of e-business techniques. It helped to manage an increasing number of human resources management processes in an effective manner with the improved information technology, thereby contributing to the availability of information and knowledge. This in turn helped human resources management professionals to play a strategic role in attaining improved competitive advantage.

Attracting, retaining, and motivating employees, meeting the demand for strategic human resources function, and managing the “human element” of technology change in the future have been enabled by advancement in information technology to the challenges of human resources management (Ashbaugh & Miranda, 2002). Human resources management can meet the challenge of simultaneously becoming more strategic, flexible, cost-efficient, and customer-oriented by leveraging information technology (Snell, Stueber, & Lepak, 2001).

Adewoye and Obasan (2012) in their paper “The Impact of Information Technology (IT) on Human Resources Management (HRM): Empirical Evidence From Nigeria Banking Sector—Case Study of Selected Banks From Lagos State and Oyo State in South-West Nigeria” had mentioned that the interaction and intersection between IT and HRM lead to the emergence of HRM. It merged all HRM activities and process with the information technology field while the programming of data processing systems evolved into standardized routines and packages of enterprise resource planning software.

Walker (1982) stated that 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. It can support long-term planning in relation to manpower. It includes supply and demand forecasts, staffing, separations, and development with information on training program costs and work performance of trainee. It can also support compensation programs, salary forecasts, pay budgets, employee relations, contract negotiations, etc. Communication and information technologies have added value to Human Resource applications which helped in developing a human resource information system.

Pinsonneault and Krarmer (1993) observed that the use of IT in HRM to organization has helped to free the HR staff from routine roles and enable them to concentrate on strategic planning in human resources development. In the present context of increasing globalization, Tansley and Watson (2000) observed that the organizational environments have become increasingly complex. Managers in these organizations face growing difficulties in coping with worker forces as they are spread across a variety of countries, cultures, and political systems. Managers can utilize IT as a tool in general as well as human resourcing functions in particular to increase the capabilities of the organization.

### **Statement of the Problem**

Many researchers have been undertaken in the past to study the changing role of HR function. HR is no longer now restricted to procurement of manpower. HR professional are rather involved in complete transformation of HR processes with the use of latest technology. The use of IT in HR is likely to reduce cost, improve service, and achieve effectiveness. Keeping these facts in mind, the present study has been undertaken.

### **Methodology**

Secondary data have been for the present study. The secondary data have been collected from extensive desk research through library, different published materials, and the world-wide web.

The study has been made to examine the IT tools used for HR planning, recruitment, communication and engagement, maintenance, and development.

### **Objectives of the Study**

The study seeks to explore the answer of the following questions:

- (1) What are the functions performed by the traditional?
- (2) What changes have taken place in HR function in the recent past?
- (3) What is possible role of HRIT on the changing HR function?

### **Significance of the Study**

The study is of great significance to the business organization as it highlights the various technological tools applied by HR professional from time to time, the changing role of HR, and likely impact of technology on HR.

### **Analysis and Interpretation**

To achieve the above objectives, the study is divided into two parts:

- (1) Traditional vs. new HR functions;
- (2) Role of technology in HR.

### **Role of Information Technology in Human Resource**

The globalization and liberalization on the one hand and technological advancements on the other hand require the business organizations to rethink the role of their Human Resource function. The Human Resource professionals should effectively utilize the information technology for developing competencies of the people to face these challenges and for the growth of the business as well. The application of information technology can make value-addition and raise the status of the Human Resource professionals as a whole. The business world is becoming more and more competitive and faced with new challenges each day including business environmental change, technological change, customer satisfaction, growing competition and issues relating to reduction in cost and increase in productivity. It is the people who can meet the challenges of the present day market.

The technological advancement has been driving force for creating new roles for the Human Resource function to improve their business competence. Human Resource information technology has made it easier for the Human Resource department to integrate their databases and provide information on the policies, news, and publications, etc. It is the simplest form of implementation of the Human Resource Information Technology which could be accessible by anyone, anytime, and anyway within the organization. It has also enabled the employees to update the information and thus relieved the Human Resource professionals of the burden of maintaining and storing records.

### **Conclusions**

- (1) There is a shift in HR function from personnel function such as recruitment, selection, training and development, performance appraise, rewards to consultative strategic business issues, and policy formulation to some extent in 80's;
- (2) The scope of HR activities was widened in 90's with HR professional performing the role of strategic business partner, change agent, administrative expert, and that of employee champion;
- (3) During the first decade of 21st century, Human Resource professionals was assigned new roles including strategy partner, functional expert, employee advocate, human capital developer, and Human Resource leader with wide range of activities as mentioned by Ulrich. Later, with the globalizations and liberalization policies and increasing use of information technology in Human Resource, Human Resource

professional is now performing the role of strategy maker, organization developer, and internal consultant continuously monitoring Human Resource strategies and policies, keeping a track record of employee till retirement, managing employee talent, and passing instructions on Human Resource issues;

(4) The task of Human Resource professionals has been simplified with new technological tools, communication technologies, and new application software having been made and they can now spend more of their time on policy framework, strategic planning, and other such issues;

(5) Various HR functions of HR can be effectively managed through the use of computers and IT tools. For example, the function of recruitment, employee selection, employee management, and workforce planning are managed through Internet, web portals, video conferencing, data warehouse, etc., training, maintenance and performance evaluation, feedback, employee turnover, tardiness and absenteeism analysis, management and planning functions, succession planning, etc., through Internet, Intranet, employee portals, and company portals, etc.

It appears that the role of technology in HR management is likely to increase in the coming years. The significance of HR function in the organizations has increased much in the last 20 years. New roles are likely to be added with the changing scenario. Talent acquisition, competency mapping, never appraisal systems like 30 degree feed forward, retention, contractual, compensation, employee engagements, reward, etc., are the new roles being added. Never software and technological tools will certainly help the HR professional in these new assignment. Nevertheless, the role is HR has become more challenging in the organization.

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