

## **TECHNOLOGICAL ADVANCEMENT AND HUMAN RESOURCE MANAGEMENT IN NIGERIA: PROSPECTS AND CHALLENGES**

**Dr. (Mrs.) Osondu F. Okwueze**

Dept. of Public Administration & Local Government,  
University of Nigeria, Nsukka

&

**Chris O. Ugwuibe**

Dept. of Public Administration & Local Government,  
University of Nigeria, Nsukka

### **Abstract**

*Technological advancement is slowly but surely changing just about everything in our lives, especially how we work. These days, most employees not only do a large amount of their work on a computer, but many work remotely, learn new skills in online courses, and even find jobs through social sites and web based job hunts. All of these things must be managed and developed through those working in human resources. The paper discussed prospects and challenges of technological advancement and human resource management in Nigeria. The study holds that rapid advancement of technology has changed the way the world operates. Data for the study were gathered through secondary sources. The study revealed that globalization, workforce diversity, changes in political and legal environment among others pose grave consequences to technological advancement in Nigeria. It recommends among others things that Training and retraining of Human Resource Information System (HRIS) should be given to the HR managers or HR professionals so that they can overcome technological advancement challenges.*

**Keywords:** Technology, Human Resource, Organizations, Management

### **Introduction**

The rapid advancement of technology has changed the way the world operates. Technology now allows people the opportunity to communicate from opposite ends of the globe. According to Wolak, Mitchell and Finkelhor (2002), the Internet is now another means where people can expand their social networks and form close interpersonal relationships. E-mail, one of the earlier forms of Computer-Mediated Communication (CMC), enables people to connect with one another (Zakin, 1996), and instant messaging (IM) allows

people the opportunity to communicate in real-time with one or more Internet users (Kindred & Roper, 2004). The rapid and ground breaking developments in technology and globalization and the development of a knowledge-based economy over the past few decades have necessitated tremendous, concomitant changes in the human resource (HR) space. (Watkins, 2012). The word technology in the first instance, (from Greek word, meaning "art, skill, cunning of hand",) is the making, modification, usage and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a preexisting solution to problem, achieve a goal, handle an applied input/output relation or perform a specific function (Wikipedia, 11/4/2013). It can also refer to the collection of such tools, including machinery, modifications, arrangements and procedures. Technologies significantly affect human as well as other animal specie's ability to control and adapt to their natural environments. The term can either be applied generally or to specific areas, examples include construction technology, medical technology, and information technology.

Technological advancement has affected society and its surroundings in a number of ways. In many societies, technology has helped develop more advanced economies (including today's global economy) and has allowed the rise of a leisure class. Also, various implementations of technology influence the values of a society and new technology often raises new ethical questions. Examples include the rise of the notion of efficiency in terms of human productivity, a term originally applied only to machines, and the challenge of traditional norms. Technological advancement on the other hand has also changed the business world many times over. In the information age, the advent of computers and the internet has increased the impact significantly. Many businesses cannot even function without the use of computer technology (Lewis, 2012). This impact is seen in nearly all areas of business, including human resources, where technology continues to have a significant impact on HR practices.

Over the past half century, HR function has gone through a massive change. The changing face of HR management is the result of the globalization, technological development and the concept of knowledge-based economy. Many of the responsibilities of the human resource managers are now transferred to the line managers. As a result, the HR managers now need to focus on more strategic manners. In fact, human resource services are no longer considered as standalone personnel function. The use of technology within human resource management has grown

considerably over the last decade with the majority of the organizations now using some form of Human Resource Information System (HRIS). For instance in Europe, Watson-Wyatt (2002) found that 70% of the organizations surveyed used the internet or intranet to deliver HR services to employees with most respondents planning to enhance substantially their e-HR capabilities over two years after the survey (Parry, 2009). According to him, HRIS can perform a number of functions from the simple storage and communication of information to more complex transactions. As technology advances, the range of functions that a HRIS can undertake increases. Earlier, HR management was more of an administrative function and was mostly a back end job. However, it has come to the front end in the recent years and has been undertaking more value-added activities. Human resource services are more focused now and involved in the actual business process of the company.

Resisting the impact of technology on human resource is futile because eventually, technology is going to eliminate most human resource jobs as they exist today. Technology, with all its self-service and anytime-anywhere communication capabilities, coupled with outsourcing, guarantees that there will be fewer HR people in corporations. This gives the reason why HR professionals should become more strategic. Technology continues to impact on us profoundly, both in our personal lives and in the workplace, and it will continue to evolve. While most of its impact has been overwhelmingly progressive and positive, there are some downsides to its effect on our personal and work lives. Cell phones, e-mail, messaging and Blackberry-type devices have blurred the lines between work life and home life. Now we seem to be always on call, always reachable in our cars, in the air, at home, virtually everywhere.

To today's young professionals, computers, PDAs cell phones, etc, have become appendages, keeping them constantly connected. Weblogs or blogs are favored by this group. Companies cannot afford to ignore their use especially in the Banks, private firms even in our various institutions. Everyone wants to be logged on or have a website. In fact, a web tracking site called Techno-ratio reported tracking over 7.8 million weblogs tracked in October 2012 (Wikipedia,9/17/2013). In fact, the blogosphere is doubling in size about once every five months. New employees can self-manage activities previously handled by human resource professionals. This is a cost-saving and time saving benefit to organizations and it enables the HR practitioners to focus on more strategic issues.

There is little or no room for argument of the motion that "people" are one of the key assets determining the success or failure of an organization and hence the importance of the knowledge, skills, attitudes and behaviors of those people for the betterment of an organization. People are the key asset that is capable of growth and development. Though an organization does not have absolute power over this asset, they can make use of certain tools and techniques to exert some vital influence over the way they perform towards achieving the mission of the organization. The adoption of technology in delivering human resource practices due to the digital revolution in the world is such tools that organizations can employ to manipulate the performance and behavior of the people on whom they rely on to achieve the organization's goals and objectives.

Since the dawn of the information era, organizations are increasingly incorporating Information Communication Technology (ICT) in their work processes through different tools and techniques. With the evolution of Human Resource Management (HRM) from largely a maintenance function to a source of sustainable competitive advantage, it has become a challenge. Recent technological developments have made business at the speed of a thought and a paperless office a reality and has created a real time, information based, interactive work environment. Human Resource professionals used technology to make accurate, detailed information available to managers and employees and today as it has evolved over the years, it is possible to deliver almost any human resource service through the use of technology.

But the question that comes to mind is, can a company operate without people? Managers and economists traditionally have seen human resource management as a necessary expense, rather than a source of value to their organizations. Economic value is usually associated with capital-equipment, technology, and facilities. However, research has demonstrated that HRM practices can be valuable (Cascio, 1991). Decisions such as whom to hire, what to pay, what training to offer, and how to evaluate employee performance directly affect employees' motivation and ability to provide goods and services that customers value. Companies that attempt to increase their competitiveness by investing in new technology and promoting quality throughout the organization also invest in state-of-the-art staffing, training and compensation practices (Snell et al, 1996).

### **Objective of the Study**

The advent of technology has met mixed reaction with regard to Human Resource Management (HRM) systems in Nigeria. Traditionally human resource management had a people-oriented approach. Today, the competitive demands of the marketplace require a reorientation of strategic human resource philosophies and practices. Emphasis is now on knowledge-based administration using technology as a tool. Employees' knowledge values depend on their ability to contribute to the achievement of organizational competitive advantage.

Assessing the impact of the advancement in modern technology especially ICTs on human resource management forms the broad objective of this work. While specifically, this work tries to investigate and x-ray the adverse effect of ICT on workforce and human capital development in Nigeria; like in the area of downsizing and also the benefits of this modern technology on human resources. Recommendations are also made on the way forward.

### **Research Methodology**

The research methodology of this paper is totally depend upon secondary data like journals, books, newspapers and various website from internet that are related to the subject as the study involved an extensive literature review which critically examined the prospects and challenges of technological advancement and human resource management in Nigeria. The content analysis approach was utilized for analysis.

### **Conceptual Analysis**

#### **Human Resource Management (HRM)**

Human resources mean the employees of an organization. It has been proved by various scholars as the most vital aspect of management; manpower could be used interchangeably as human resources, human capital, personnel, employees etc. Ejete-Iroh (2010) opined that human resources are the most important assets of every organization as policies and programmes of the organizations are solely integrated and articulated by them towards achieving the desired organizational goals. Human resources at the organizational level, according to Ikeanyibe (2009) is the entire staff, personnel, manpower or employees of the organization. Human resource denotes the infinite differences in the relative capability of people who may be employed or are

actually employed in an organization and the relative quantity and quality of output, which they could be used to achieve.

Onah (2008) had observed that the efficiency with which an organization can perform will depend to a large extent, on how its human resources can be managed and utilized. Every manager must, therefore, be able to work effectively with people and also be able to solve the various problems the management of people may entail. According to him, he observed that the type of leadership which characterized our organizations in the first half of the 20th century is no longer sustainable in the present working environment. The leadership was arbitrary and autocratic in its relationship with subordinates. Today, things have changed. Employees are better educated and their orientation and value system are no longer the same as those of the past. In addition, most organizations are becoming more complex in nature and, therefore, leaders in these organizations are expected to have greater technical competence and a better understanding of human behaviour. The effective use of people in organizations can provide a competitive advantage. Human resources, has been recognized as the most important out of the resources required for the production of goods and services, and are the key to rapid socio-economic development and efficient service delivery. According to Barney (1995), human resources include all the experiences, skills, judgment, abilities, knowledge, contracts, risk-taking and wisdom of individuals and associates in an organization. Without an adequate, skilled and well-motivated workforce operating within human resource management programme, development and efficient service delivery is not possible. Further, the concept of human resource is more frequently used today to refer to organizational personnel.

According to Onyishi, Eme and Emeh (2012), management in simple terms means the act of getting people together to accomplish desired goals. It comprises planning, organizing, resourcing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources, and natural resources. Thus, human resource management is today more frequently used to describe the handling of the people is aspect of management. Human resource management is a distinctive approach to employment management which seeks to achieve competitive advantage through the strategic development of a highly

committed and capable workforce using an integrated array of cultural, structural and personnel techniques (Storey, 1992).

Beer *et al* (1984) defined HRM as a strategic approach to the management of human resources that involves all management decisions and actions that affect the relationship between the organization and employees. While Armstrong (2004) defines HRM as a strategic, coherent and comprehensive approach to the management and development of the organisation's human resources in which every aspect of that process is wholly integrated within the overall management of the organisation. Human Resource Management (HRM) are the policies, practices, and systems that influence employees' behavior, attitudes, and performance. Many companies refer to HRM as involving "people's practices" (Raymond *et al*, 2004). There are several important HRM practices which include, analyzing work and designing jobs, attracting potential employees (recruiting), choosing employees (selection), teaching employees how to perform their jobs and preparing them for the future (training and development), evaluating their performance (performance management), rewarding employees (compensation), creating positive work environment (employee relations), and supporting the organizations strategy (HR planning and change management). An organization performs best when all of these practices are managed well. At companies with effective HRM, employees and customers tend to be more satisfied, and the companies tend to be more innovative, have greater productivity, and develop a more favorable reputation in the community (Tsui *et al*, 1998).

### **Theoretical Foundation of the Study**

The general theoretical perspectives of this study are based on sociology, economics, management, and psychology that focus on different aspects of the domain of HRM Context (Wright *et al*, 1992). We begin by offering brief summaries of the perspectives that have guided most of the literature reviewed in the study and which we feel are most likely to drive future research in this area.

### **General Systems Theory**

In general systems theory, the unit of analysis is understood as a complex of interdependent parts (Von Bertalanffy, 1950). An open (vs. closed) system is dependent on the environment for inputs, which are transformed during input to produce outputs that are exchanged in the environment. Open

systems models seldom address organizations or large units within organizations. Katz & Kahn's (1978) is an exception in that it treats HRM as a subsystem embedded in a larger organizational system. The open systems view of HRM has been developed further by Wright and Snell (1991), who used it to describe a competence management model of organizations. Skills and abilities are treated as inputs from the environment; employee behaviours are treated as input; and employee satisfaction and performance are treated as outputs. In this model, the HRM subsystem functions of acquiring, utilizing, retaining, and displacing competencies are achieved.

Similarly, Snell (1992) description of HRM as a control system is based on open systems theory. In a more narrow discussion, Kozlowski and Salas (1994) presented a multilevel organizational systems approach for understanding training, implementation and transfer. Many of the more specific theories used to understand HRM in Context assume that organizations function like open systems.

### **Human Capital Theory**

Organizations can use HRM in a variety of ways to increase their human capital (Cascio 2005, Flamholtz et al, 1981). In human capital theory, contextual factors such as market conditions, unions, business strategies, and technology are important because they can affect the costs associated with alternative approaches to using HRM to increase the value of the organization's human capital and the value of the anticipated returns, such as productivity gains (Boudreau et al, 1985, Russell et al, 1993).

### **The Development of HR Systems**

Technological advancements in the HR field followed the development of the HR functions' business contribution. The key development eras can be viewed as:

- ***The personnel administration era*** – during which the record-keeping of transactional events was the primary focus;
- ***The personnel management era*** – during which the different HR functions were more clearly segmented, and started to develop as unique and specialised functions.



- **The HR management era** – during which the integration of HR functions transformed personnel management into a strategic business entity (Amaeshi, 2013).

The evolution continued into recent Human Resource Management System (HRMS) and the latest is e-HRMS applications (collective term for a wider spectrum of electronic HRM applications). The development of technology especially the internet and variants like intranet and extranet has significantly redefined the HR systems' landscape.

In the economics literature, human capital refers to the productive capabilities of people (Becker et al, 2006). Skills, experience, and knowledge have economic value to organizations because they enable it to be productive and adaptable; thus, people constitute the organization's human capital. Like other assets, human capital has value in the market place, but unlike other assets, the potential value of human capital can be fully realized only with the cooperation of the person. Therefore, all costs related to eliciting productive behaviours from employees-including those related to motivating, monitoring, and retaining them-constitute human capital investments made in anticipation of future returns (Flamholtz *et al*, 1981). However, there are numerous good prospects for technological advancement on human resource management in Nigeria. The following major areas suggest the range of applications that technological advancement can serve to management/work environment in Nigeria.

### **Technology and Human Resource Management**

Human Resource Information System (HRIS) can provide a number of benefits to the HR function, line managers and the wider organization. On one level, the use of technology has been shown to lead to faster, more accurate and more efficient processes, and reduced HR costs. Technology can also be used to provide HR information and to enable managers and employees to perform simple HR tasks themselves. On the other level, the use of HRIS to reduce the administrative and transactional burden on the HR function can lead to a change in the structure of HR and allow the function to play a more strategic role in the organization (Parry, 2009).

Organization introduce HRIS with various reasons ranging from the need to facilitate efficient processes or cut costs, to improving communication and customer service, or the desire to create a shift in the role of the HR function from one that is mainly administrative to the one that

is more strategic. There are other specific areas like, in training human resources, recruitment and selection, Data storage and retrieval, in performance management, communication technology, healthcare system etc.

### **Recruitment and Selection Processes**

In simple terms, recruitment is understood as a process for searching and obtaining applicants for jobs, from among the available recruits. Recruitment forms the first stage in the process, which continues with selection and cease with placement of the candidate. Recruitment makes it possible to acquire the number and type of people necessary to ensure the continued operation of the organization (Baret, 2013). According to Baret, a company is known by the people and its employees. "Human resource is the combination of quantitative and qualitative assessment of human beings in the society". It does not mean only the number of people working in the organization, but it is the aggregate of employees, employee skills, knowledge, ability, talents, aptitude and creativity. The success and failure of an organization depends to an extent as to how much efficient, experienced, and capable employees are procured and recruited. Social networking has more than a conceptual role in HR today, particularly when it comes to recruitment. According to a survey conducted jointly by global recruitment consultant, Harvey Nash and the department for work and pension in June, almost a quarter of employers are regularly using sites such as face book and LinkedIn to recruit staff.

Selection on the other hand is the process by which the organization attempts to identify applicants with the necessary knowledge, skills, abilities, and other characteristics that will help the organization to achieve its goals (Noe, Hollenbeck, Gerttart and Wright, 2007). Based on job analysis and design, an organization can determine the kind of employees it needs. With this knowledge, it carries out the function of recruiting and hiring employees. An organization makes selection decision in order to add employees to its workforce, as well as to transfer existing employees to new positions.

One way in which human resources has been significantly impacted on by technological advancement 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.

Technological advancement has made recruiting more efficient and in the hands of the right recruiter, more effective as well (Lewis, 2001).

### **Training and Development of Human Resources**

Training and development is the field which is concerned with organizational activity aimed at bettering the performance of individuals and groups in organizational settings (Harrison, 2005). Those who sponsor training and development in organizations are senior managers. Line managers are responsible for coaching, resources, and performance.

Training and development refers to the practice of providing training, workshops, coaching, mentoring, or other learning opportunities to employees to inspire, challenge and motivate them to perform the functions of their position to the best of their ability and within standards set by local, state, and organizational guidelines. In today's social media driven world, the way in which training can be delivered is much more varied than in the past. For example, web casts, webinars, and computer based trainings are the order of the day to ensure maximum participation in a cost effective manner. The real wealth of a nation is its people. And the purpose of development is to create an enabling environment for people to enjoy long, healthy and creative lives. This simple but powerful truth is too often forgotten in the pursuit of material and financial wealth" (Venkatesh, 2010).

The inescapable pressure to do more with less the recession has awakened employers to the true power of human potential. With the right people in the right place at the right time. Organizations can achieve all they did before and more. These new pressures are creating a scenario where the only way to adapt, evolve and rebuild will be through the determination of the human spirit (Barselaar, 2012). The single-minded focus on reducing costs is creating innovation like we have never seen before. Companies that can act now to harness this, and individuals who can truly engage with it to participate in the human age will be those that get ahead. Employers need to adjust their mindset to ensure that they have the right work models and people practices in place to attract, retain and unleash this inner human potential of the right people to succeed in the human age.

As the global economy shifts into recovery, we are seeing huge growth centered on developing economies, meaning that the demand for specific skills and behaviors are outstripping supply and training capacity. More nations are moving from developing to developed status and the ranks of affluent middle- classes are spreading. These emerging power centers

need more highly skilled individuals trained to international standards that currently exist. Unfortunately, this exact talent is becoming increasingly difficult to find. Creating a mismatch between the talent that is available and that needed by employers. Talents is not just people, it is people with the specific skills, behaviors and the way of operating. For example, in a chaotic global environment that fits the needs of an organization. Rapid change in emerging economics and the break neck pace of technological evolution means that skills quickly become outdated.

Therefore, information technology makes it possible for human resource professionals to train new staff members in a mere 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. Technological advancement has made it possible for organizations to organize an online training with less stress even though at some point, some close interaction may be necessary.

### **Data Storage and Retrieval**

All the human resource activities described so far required substantial record keeping. Infact, all aspects of human resource management require a careful and discreet record keeping. From the preparation of employee handbooks, to processing job applications, performance appraisals, benefits enrollment, and government mandated reports, handling records about employees required accuracy as well as sensitivity to employee privacy. Whether the organization keep records in file cabinets or on a sophisticated computer information system, it must have methods for ensuring accuracy and for balancing privacy concerns with easy access for those who need information and are authorized to see it.

Human resources professionals, as we all know, 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 lately has made it possible for companies to store and retrieve files in an electronic format. Technological advancement also makes it possible for human resources professionals to simply print the forms that are needed for employees. Recently, most institutions and organizations conduct what we call biometric verifications where the bio data of all their staff are collected and stored for future references. One just needs to click on an individuals' name and all the information needed about him or her appears on the

screen. Printing on demand eliminates the need to dig through an endless number of files in the file cabinet to find whatever is needed.

### **Human Resource and Performance Management**

According to Noe et al, (2007), performance management is the process of ensuring that employees' activities and outputs match the organization's goals. Managing human resources include keeping track of how well employees are performing relative to objectives such as job descriptions and goals for a particular position.

In modern business context, the role of human resource services has significantly changed. The new role played by human resource services is often described as strategic partner. For example, HR management employs centralized wage fixing system, conciliation and arbitration for workplace negotiation rather than using dispute settlement. As a result, the skills required for HR managers and executives are changing. It is gradually becoming more of human capital management rather than managing personnel industrial relations which was its main task few decades back. In fact, it is a complete evaluation of the HR management – from a just department managing administrative and employee related issues to an entity that play a strategic role in the development and success of the organization.

Earlier, HR services focused mainly on administration process of the organization. However, it has shifted its focus on employee engagement in order to obtain the best performance from employees. Enhanced performance management is another by product of technological improvement. Human resources professionals use computer technology to assess employee performance and also 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 do not measure up can be subjected to additional training or let go to favour a replacement with someone who can come in and do the job (Lewis, 2013).

### **Human Resource and Modern Communication Technology**

Communication is one of the major tools used by human resource managers. Any person living in the 21<sup>st</sup> century, is for sure, a dependent on the wave of technological advancement that has become the norm in today's life. The

constant changing lifestyle has clearly showed that the thought of living without technological advancement such as televisions, the internet and cell phones is impossible. The modern citizens are full of technological thoughts that are very revolutionalising.

Technological advancement has indeed contributed widely in regards to the modern form of communication. It has the capability to remove the banners that are bound to be caused by space and time, thereby, creating a platform that enhances interaction among individuals in different parts of the world effectively. It is only through the utilization of the modern tools of communication that one is able to communicate with someone else who is very far. People's lives have been highly influenced by the improvement in technology.

The modern technology began with telegrams, then came the snail mails, after which came the invention of the telephones that was then followed by mobile phones. Initially, people write letters to their loved ones, send it through the post office which may take days, weeks and months to deliver but now, one can sit in the comfort of his home, office or anywhere, type a text and within seconds, the message is delivered. There by reducing the stress of waiting endlessly for the postmaster. Televisions and radios have also been very influential in enhancing communication to far places that would otherwise be unreachable. Nevertheless, in the modern society, the internet, telephones and cell phones have been the main form of communication tools. For example, the internet comes with a number of forums such as video chats, online chats, blogs and video conferencing among others. These channels of communication are very effective in enhancing communication in human resource management. Human resource managers can now easily set up a one on one discussion with another individual in another country or region that is far away through communication tool that is known as video conference. Communication technology has made it much easier for human resource managers to remain connected to the rest of the world and thus be able be at par with all the happenings of the world (Technieday, 2012).

### **Information Technology and the Healthcare System**

Some benefits of ICT has been realized in the healthcare sector. This is strengthened by the fact that most healthcare institutions have already realized some efficiencies by incorporating aspects of ICT, such as

institutional electronic health record, Picture Archiving and Communication Systems (PACS) for digital imaging (Anvari, 2007). However, in most institutions around the country, ICT is still at its rudimentary stage. Only partial electronic health records exist. Most institutions still rely on paper reports and charts. From empirical observation, there are very few private hospitals in Nigeria that booking for consultations are done online, even in drug prescriptions and administration etc. It is believed that in the next decade, we will undoubtedly see the development and deployment of comprehensive electronic health information systems incorporating all aspects of in-hospital and out-of-hospital care. This is already taking place in some developed world. These systems will allow health providers at all levels to access information improving both patient care outcomes and operational efficiency. It is believed that in the next two decades, the health information technology is expected to implement or achieve the following:

- a) Electronic lifetime health records which will store data from many sources (eg, text and voice notes, medical images, laboratory values) and accessible from any location providing seamless care for patients and reducing expensive duplication.
- b) Picture Archiving and Communication Systems (PACS) will capture, store and provide access to diagnostic images (X-ray films, magnetic images, computed tomography scans) from any location.
- c) Radio Frequency Identification (RFID) systems will use radio waves to wirelessly track hospital patients, and microchips to carry information on medications, laboratory tests, imaging studies and medical devices
- d) Automated systems will track and manage inventories of pharmaceuticals and other medical and general hospital supplies.
- e) Decision support systems will give healthcare providers real-time advice on diagnosis and treatment options based on continuously updated information (Anvari, 2007).

Achieving these in hospitals will, it is believed, go a long way in improving the quality of patient care by streamlining processes, reducing duplication and minimizing the risk of medical errors, such as the administration of the wrong drugs, dosage or even the performance of the

wrong surgery. According to a 2003 study of medication errors in pediatric settings, 70% of all errors could potentially be avoided if a computerized provider order entry system were used (Potts et al, 2004).

ICT, together with other advances in medical technology, will undoubtedly have a major impact on the nature of medical care provided for a wide range of medical conditions over the next two decades. Advances in genetics, proteomics, robotics, nanotechnology, biomaterials and biophotonics are expected to dramatically change the ways in which we diagnose and treat illness.

### **Challenges to Technological Advancement and HRM in Nigeria**

Technological advancement is a challenging task of adapting workplace to rapid technological changes which influence the nature of work and generate obsolescence. Advanced technology has tended to reduce the number of jobs that require little skill and to increase the number of jobs that require considerable skill, a shift we refer to as moving from touch labor to knowledge work. This is a new working technology. In this situation organizations have to change it technology. New technology creates unemployment and in other hand, there comes scarcity of skilled manpower. Like this, technological change brings difficulties and challenges in organization especially in areas like:

- Globalization
- Workforce Diversity
- Changes in political and legal environment
- Changes in the Economic Environment
- Mobility of Professional Personnel
- Revolution in Information Technology.
- Technological advances
- Downsizing, etc.

### **Recommendations**

1. Technology has changed each and everything to a great extent, the methods of production, the process of recruitment, the training techniques, new equipment and technology should be introduced and purchased by the organization and training should be provided to young and educated workers.



2. HR should adopt the change at internet speed.
3. Shifting HR strategy with changing economy – strategy of HR should be agile, capable of flexing and adaptive to changes in the economy.
4. Training of Human Resource Information System (HRIS) should be given to the HR managers or HR professionals so that they can overcome technological advancement challenges.
5. Proper performance evaluation system and proper career development plans should be used in the organization to reduce professional mobility.

### **Conclusion**

The impact of technology advancement has fundamentally changed the face of human resource. It has enabled human resource to decrease its involvement in transactional activities, increase its focus on the customer and also increase its delivery of strategic services. As a result, several core competencies have emerged that are critical to the development of the human resource. The ability to adapt to the changing work conditions is the key for individual and organizational survival. Change is inevitable and it is the only element of human phenomena that is constant. Today's, business environment requires to undergo changes almost constantly if they are to remain competitive.

Therefore, we must not lose sight of our base premise that the cardinal aim of technological advancement is to increase the value of human life by maximizing happiness and minimizing suffering. The study puts it across that the human resource has significantly been impacted on by technological advancement in diverse ways such as increase in employee performance, increase job skill, etc. In the area of information, technology has brought about the decentralization of communications and shake-up of existing paradigms of human interaction in the organization. Satellite communications, computers, and networking system, tax machines and other devices are facilitating rapid change. Today, technological advancement and human resource management are the main forces driving the present day business environment and complying with the government mandates.

## References

- Amaeshi, U.F (2013) Human Resource Management and Technology Transition for Firm Competitiveness in Nigeria's telecommunication industry. *International Journal of Advancements in Research & Technology*, 2 (12):83-111
- Anvari, M. (2007) Impact of Information Technology on Human Resources in Healthcare. <http://www.Longwoods.com>. Retrieved 3/17/2013.
- Armstrong, M.(2004) *A Handbook of Human Resource Management Practice* (9<sup>th</sup> Ed), London: Kogan Page.
- Baret, M (2013): Recruitment & Other Human Resource Responsibilities at MFSL. <http://www.goo.wbqury> Retrieved 3/17/2013.
- Barney, J.B (1995), Looking Inside for Competitive Advantage, Academic of Management Executive.
- Becker, B.E. and Huselid, M.A. (2006). Strategic Human Resource Management: Where do we go from here? *Journal of Management*, 32(6): 898–925.
- Beer, M., Spector, B., Lawrence, P. R., Mills, D.Q., and Walton, R. E. (1984), A Conceptual View of HRM. in *Managing Human Assets*. Free Press, New York.
- Boudreau, J.W, and Berger, C.J. (1985). Decision theoretic utility analysis applied to employee separations and acquisitions. *J. Appl. Psychol.* 70:581-612
- Cascio, W. (2005). "From Business Partner to Driving Business Success: The Next Step in the Evolution of HR Management". In M. Losey, S. Meisinger, & D. Ulrich (eds.), *The Future of Human Resource Management: 64 Thought Leaders Explore the critical HR Issues of Today and Tomorrow*. Hoboken, NJ: John Wiley & Sons.
- Cascio, W.F, (1991) *Costing Human Resources: The Financial Impact of Behaviour in Organization* (3<sup>rd</sup> ed) Boston: PWS Kent
- Ejete-Iroh, C.J. (2010) *The Impact of Training and Development Policy on Job Satisfaction*. Pankshin: College Publishers.

- Flamholtz EG, Lacey JM. (1981). *Personnel Management, Human Capital Theory, and Human Resource Accounting*. Los Angeles: Institute of Industrial Relations, University of California.
- Harrison, R. (2005) *Learning and Development*.. London: Chartered Institute of Personnel and Development (CIPD) Publishing.
- Ikeanyibe, O. M. (2009) *Principles and Practices of Public Personnel Administration: A Nigeria Perspective*. Onitsha: Perfect Image.
- Katz, D and Kahn, R.L. (1978). *The Social Psychology of Organizations*. New York: Wiley.
- Kindred, J., and Roper, S. L. (2004) Making Connections via Instant Messenger (IM): Student use of IM in the Maintenance of Personal . *Qualitative Research Reports in Communication*, 45-54.
- Kozlowski, S.W and Salas E. (1994). A Multilevel Organizational Systems Approach for the Implementation and Transfer of Training. In *Improving Training Effectiveness in Work Organizations*, ed. JK Ford & Associates. Hillsdale, NJ: Erlbaum
- Lawis Jared (2012): How Does Technology Impact Human Practices. <http://smallbusiness.chron.com>. Retrieved 8/23/2013.
- Noe, R., Hollenbeck, J., Gerhart, B., and Wright, P. (2007). *Fundamentals of Human Resource Management* (2nd Ed.). Boston: McGraw-Hill.
- Onah, F.O. (2008). *Human Resource Management*. (2nd Ed). Enugu: John Jacob's Classic Publishers Ltd.
- Onyishi, A.O, Eme, O.I and Emeh, I.E (2012) Problems of Personnel Management in Nigeria: The Nigerian Local Government System Experience. *Arabian Journal of Business and Management Review*, 1(6):36-49.
- Parry, E, (2009): The Benefits of using Technology in Human Resource Management. <http://www.igi-global.com>, Retrieved 3/19/2014.
- Russell, C.J, Colella A, and Bobko P. (1993). Expanding the Context of Utility: The Strategic Impact of Personnel Selection. *Pers. Psychol.* 46:781-801

- Snell S.A. and Dean, J.W. (1996) "Integrated Manufacturing and Human Resource Management: A Human Capital Perspective". *Academy of Management Journal* Vol. 35 : 467-504.
- Snell, S.A. (1992). Control Theory in Strategic Human Resource Management: the Mediating Effect of Administrative Information. *Acad. Manage. Rev.* 35:292-327
- Storey, J. (1992) *New Developments in the Management of Human Resources*. Oxford: Blackwell Publishers.
- Techieday (2012): The Importance of Technology Tools in Modern Communication. <http://www.techieday.com>. Retrieved 6/17/2014.
- Tsui, A. & Gomez-Mejia (1988) "Evaluating Human Resource Effectiveness", in Dyer (ed.), *Human Resource Management: Evolving Rules and Responsibilities*, Washington, D.C. BNA Books.
- Venkatesh, B. (2010): Challenges Faced by Human Resource Managers in the Era of Globalization. <http://www.theskillportal.com>. Retrieved 7/21/2013.
- Von Bertalanffy, L. (1950). The Theory of Open Systems in Physics and Biology. *Science* 111:23-29
- Watkins, A (2012) The Changing Face of Human Resource Management. <http://www.articlecity.com>. Retrieved 3/27/2014.
- Wolak, J. Mitchell, K. J. and Finkelhor, D. (2002). Close Online Relationships in a National Sample of Adolescents. *Adolescence*, 37(147): 441-455.
- Wright PM, and McMahan, G.C. (1992). Theoretical Perspectives for Strategic Human Resource Management. *Journal Of Management review* 18:295-320
- Wright, P.M and Snell, S.A. (1991). Toward an Integrative view of Strategic Human Resource Management. *Human Resource Management Review*. 1: 203-25
- Zakin, R. H. (1996). Hobbes' Internet timeline. Retrieved November 10, 2014 from the PBS website: <http://www.pbs.org/opb/nerds2.0.1/timeline>