

## Chapter 7

# Technological Advancement Strategy and Job Performance of Managers

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### **Introduction**

Curohoak & Parzyeh (2003) defined technological advancement strategy as the entire field of investigation design, development, application and method of rendering or processing information through self-acting or self-moving machines and that the office technological advancement refers to those self-regulating process through which work is done with a minimum of human effort.

According to Dew (2002), early in the 1990s, most of the activities was done or performed manually. A good and quality handwriting was an additional qualification/advantage for holding a position in an institution, but manual organizational activities were greatly slow. Over the years, several efforts have been made in other to improve the functionality of employees in carrying out their daily functions in their various institutions. The invention of the typewriting machine and its use in the office was almost revolutionary in its effect upon the office and particularly, typesetting works of the organizations would be done quickly, more attractively and more economically. The author extended his view by further stating that a typewriter as a machine for writing characters like those made by printer's type when more than a few copies are needed. The author added that this machine (typewriter) consist of a keyboard that controls impression made in any sequence from tape arranged on separate reds or on the periphery of a disc, or other. In the machines of early days, the term "typewriter was also applied to the operator, later the operator become known as typist.

After the invention of a typographer in 1929, several typewriter models followed, but despite some improvement such as introduction of cylinder, most are large and cumbersome, they were all slower than handwriting in operation. Finally, in 1867, the American inventor Shales constructed what become the first practical typewriters its second modern was made in 1865 and was faster than pen.

The need to meet the demand of increased institutions activities, led to the development of typewriters and other devices that could quickly and automatically produce individually typed copies of institution's documents that looked manually typed original.

Jagero & Komba (2012) in their study defined the word processing system as a kind of system which involves a word processing unit consisting of a typewriter with a standard keyboard attracted to a magnetic tape or disc and a playback unit records the material. When a mistake is made the operator backspace and strikes over the incorrect words, this process erases the error.

### **Concept of Technological Advancement Strategy**

Technological advancement strategy is the process of combining and reorganizing knowledge to generate new ideas. The development of technology has an impact on firm

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performance (Mumford, 2000). Technological advancement comes from internal advancement and internal advancement comes from employee capability. So there is a close relationship between technological advancement strategy and employee performance (Huselid, 2005). Technologies can only lead to increased productivity or improve performance when combined with other resources effectively by human resources or when done effectively, and use technology productively and ethically (Dauda & Akingbade, 2011). Advancement makes employees more effective and firm more efficient (Lawless and Anderson, 2006). Technological advancement strategy can improve firm performance as well. Employee can more rapidly acquire new knowledge and further advancement competencies through training (Chi, Bassock, Lewis, Reitman and Glaser (2009). Motivation of the employee has direct influence on technological advancement strategy (Hennessey & Amabile, 2008). Employee's performance is closely linked with technological advancement strategy. Technological advancement strategy can be managed effectively through employees. Resource-based theory suggests that a firm's resources are extremely important for the firm's development, and that human capital is a key resource of a firm. The function of this resource depends on the employees' ability and enthusiasm, and on efficient human resource management (Mumford, 2000). Technological advancement strategy has enormous influence on employee performance. Technological advancement strategy is important factor for influencing the improvement of performance (Hitt et al., 2007). Most of studies have repeatedly shown a positive relationship between a firm's technological advancement strategy and performance, and concluded that technological advancement strategy is important for employee performance (Foster, 2006).

### **Importance of Advancement in Technology**

Modern technological gadgets such as printers, photocopier, desk organization, Smartphone, faster windows operating systems (Windows 8 and 10), laptops and tablets are being used by many managers and are helpful in terms of making their work very flexible and easy. Hritzuk and Jones (2014) posited that we live in an era of tablets, phones and computers, and IT has become an enabler for greater convenience. Users can access the most popular types of computer software programs, like word processing programs which help with the writing and editing of letters and reports, and data management programs which help us to work with long lists of data and spread sheets every day on our tablets, Smartphone and laptops, thus, making some management tasks easier (Hritzuk & Jones, 2014). Boxall (2000) in his study posited that it is important to note that technology is not static, but dynamic. Therefore, it is essential that, while office managers are planning to use (advanced technology) modern technologies, great care should be taken with regard to their changing nature. Money should not be invested in technology that is likely to become obsolete in a short period of time. It is believed that for a new technology, that is, to be installed in any organization, it has to win the goodwill of everyone, since they will be the ones to use it. The use of modern office technology can lead to enhanced job performance, and there are other factors that modify the relationship between advance technology and job performance. However, if technology is bought and placed in an office, it will not necessarily help the organization to improve the job performance. That is why factors that modify the relationship between advance technology office and job performance have to be considered, as they can help to change the relationship so that it is a positive one. The first thing to take into consideration is that as technology advances, it becomes more complex. For example, a person who grew up using old computers and software will have difficulties using modern technologies. In this case, universities have to provide

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training to make a user familiar with advance technologies. Training benefits the organization because universities will gain skills that can help them to use technology in a way that will result in the best outcome for the institution (university).

### **Usefulness of Office Technology**

Another factor that influences office managers' job performance is the usefulness of office technology. The change that office technologies bring to the institutions/organizations depends on how useful they are. For instance, telephones and other computers gadgets are more useful than a paper shredder and electric sharpener. This implies that office managers under a tight budget will have to buy a telephone and a computer because they can benefit more from these gadgets. However, this does not mean that other gadgets with fewer benefits will not increase job performance of office managers; benefits will vary with how useful office technologies become. Billhif (2006) posits that, if technologies are useful, they will tend to be used every day.

### **Computer Gadgets**

Over the years, rapid changes have been taking place in all facets of human life, including technology, as a result of technological advancement (Davenport, 2013). Margaret & Pac (2009) posited that for an institution/organization to run smoothly, facts and accurate information are necessary for quick decision-making, and modern office technologies can assist office managers be focused and in contact with their co-workers. It can, therefore, be said that having advanced technologies can increase an office manager's job performance, because such technologies make work flexible. According to Ndlovu (2009), organizations need to be managed effectively so that they have highly productive employees executing goals aligned with the organization's strategic objectives. Technologies play a part in helping organizations meet these strategic objectives. Modern technologies need to be managed effectively, because during their use, an organization's most important information can easily be lost. In an organization, an effective way to improve productivity is to raise the level of technology. Management support plays a vital role; office managers are the key in ensuring that technology is used to benefit the organization. Kao et al. (2006) mentioned that technology is more beneficial when supported by good management systems, and that technology has a limited contribution to productivity. Office managers play a critical role in planning, controlling, coordinating and leading their employees in organization, to ensure that the right technologies are brought into the organization.

### **Internet Facilities**

Internet is a set of computers that links together with telephone lines, fiber optics, Satellite lines and or other transform environment. They have not any central management or Ownership. Internet is a base for electronic communication expansion especial in the developed countries. The Internet is an information technology (IT) that diffuses at exponential rates among the business-to-business organizations (Avlonitis & Karayanni, 2000). The Internet should be viewed as a channel for distribution, trade, and communication, and it is an efficient medium for information access, organization, and communication. In addition, it helps to store data in an inexpensive way, collect information rapidly and cheaply, provide information interactively in accordance with consumer needs, and, in comparison with printed marketing materials, it offers a greater sensory experience and can serve as a medium for trade (Peterson et al., 2007). The Internet's core advantage

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lies in its great capacity of fast, efficient, integrated, and interactive exchange of information. Thus, the Internet facilitates the information exchanges between organizations, concerning issues such as discovery of new customer needs, trends of the local and global markets, competitive moves, joint development of products, joint selling activities, etc (Avlonitis & Karayanni, 2000). Internet is an information system in the shape of a network that can encompass many different technologies" (Bay, 2017). Researchers discovered that using the Internet is a vital source of information, while it does not hinder the use of traditional sources, such as books and articles (Large & Beheshti, 2000, as cited in Irvine, 2002). Initially, Internet technology was designed mainly for the needs of the U.S military and then it rose to serve office, academic and research communication (Leiner, 1994). Internet as a tool helps office managers to build networks for interaction with their colleagues, bosses and share ideas about subject matters, and communication in the office (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Patahuddin, 2013). Therefore, the Internet becomes more and more important to how office managers and others work and live (Fang & Yen, 2006). Multiple scholars throughout the years have claimed that having accessibility to the Internet at universities or in the work environment opens many new visions for office managers to absorb many aspects of managing and relating in their universities, and easy accessibility to the Internet provide many resources of knowledge and information for office managers without need of leaving the institutions (Dede, Mushayikwa & Lubben, as cited in Patahuddin, 2013). Furthermore, effective use of the Internet to support office management and communication can lead to broad changes in institutions. These changes not only result in a progressed and developed knowledge and education and quality of content but also contribute to saving time and space (Anderson, 2006; Chirwa, 2018).

### **Network Virtualization**

Network Virtualization (NV) refers to abstracting network resources that were traditionally delivered in hardware to software. NV can combine multiple physical networks to one virtual, software-based network, or it can divide one physical network into separate, independent virtual networks (Reisman, 2006). Network virtualization software allows network administrators to move virtual machines across different domains without reconfiguring the network. The software creates a network overlay that can run separate virtual network layers on top of the same physical network fabric (Sazali&Raduan, 2011). According to Sung & Gibson (2000), network virtualization is rewriting the rules for the way services are delivered, from the software defined data center (SDDC), to the cloud, to the edge. This approach moves networks from static, inflexible, and inefficient to dynamic, agile, and optimized. Modern networks must keep up with the demands for cloud-hosted, distributed apps, and the increasing threats of cybercriminals while delivering the speed and agility you need for faster time to market for your applications. With network virtualization, you can forget about spending days or weeks provisioning the infrastructure to support a new application. Apps can be deployed or updated in minutes for rapid time to value.

### **Job Performance**

Job performance as one of the most vital dependent variables has studied by scholars of different stratifications for a very long time. According to Borman & Motowidlo (2003) stated that there are two types of employee behaviour that are necessary for organizational effectiveness: task performance and contextual performance. Task performance means

behaviours that are directly results in producing goods or service, also activities that provide indirect support for the organizations core technical processes (Werner, 2000). When researchers study dimensions of job performance, they often measure job performance using subjective supervisor ratings. Given that individual job performance is a multifaceted and complex construct that may not be captured with subjective assessments, we included objective indicators of performance for the following reasons: First, compensation research highlights the effectiveness of an organizations objective performance measures in guiding employee behaviour as the role expectations are clearly defined (Spreitzer, 2005). Second, objective job performance measures limit both intentional and unintentional biases that occur in performance evaluation processes. In this study, modified Mustapha & Naoum (2008) & Igarria (2001) Performance Evaluation Questionnaire (PEQ), which contains 24 attitude statements was used by supervisors to measure the performance of professionals who work directly under them. Job performance is a multifaceted term. It is not able to measure job performance by a single criterion. A set of criteria has to be employed. The study employed a more practical approach that was to select key job performance criteria from prior empirical studies. After a review of the relevant literature, two studies that had tested different sets of job performance criteria were identified.

There is a general understanding among scholars that performance is an important variable in work organization (Suliman, 2001) and has become a significant indicators in measuring organizational performance in many studies (Wall et al., 2004). Employee performance can also be measured through the combination of expected behavior and task-related aspects (Motowidlo, 2003), even though performance is often determined by financial figures. In reality, performance that is based on an absolute value or relative judgment may reflect overall organizational performance (Gomez- Mejia, Balkin & Cardy, 2007; Wall et al., 2004). However, Wiedower (2001) asserted that performance measure that is based on the performance appraisal items offers higher reliability in evaluating performance. High performance employees pursue higher level of individual and organizational performance which involve quality, productive, innovation rate and cycle time of performance (Bharadwaj, 2005) and therefore they will be able to assist organisation to achieve its strategic aims and sustaining the organisation competitive advantage (Dessler, 2011). Thus, in order to attract and sustain higher employee satisfaction and performance, employer need to treat their workers as the most important internal resources and gratify them (Jin, 2007) because committed and satisfied employees are normally high performers that contribute towards organizational productivity (Samad, 2007).

### **CONCLUSIONS**

Based on the analysis and findings of the study, it was concluded that there is a significant relationship between the dimensions of technological advancement strategies and job performance of office managers in public universities in Rivers State. This shows technological advancement strategies such as computer gadgets, internet facilities, network virtualization influences job performance of office managers in public universities in Rivers State.

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