

Example of technology essay

[Business](#), [Management](#)



Introduction

Work is essential to the society as it is the major source of production.

Therefore, work and production are related, and this relationship is essentially interrelated with the technology. The three main components of technology used for services and goods production in the society include the knowledge, materials, and operations technology. Technology pervades each aspect of the contemporary business enterprise. The operations technologies have essentially turned out to be an inherent component of working lives within the contemporary organizations. In the modern world, the process, content, and structure of work have changed. In essence, work is now more cognitively complex, more team-based as well as collaborative, and more dependent on the technological competence. The technological breakthroughs, as well as competitive pressures, have made the contemporary organizations very different. According to Daft (2001), the advancing technology and globalization in the present-day have hastened the pace at which the organizations ought to roll out new services and products to remain competitive. In fact, the present-day organizations are constantly reorganizing to gain or maintain competitive advantage. In addition, they are learner due to the new technologies. What's more, the new technologies have made it less expensive, quicker, and easier for all individuals around the world to communicate.

The “ visual workplace” and “ virtual corporation” have become ever more common organizational form due to the new technologies. It is imperative to well-understand technology due to its importance in the contemporary organizations. The application of technology in today's businesses allows

them to expand efficiently and quickly. In essence, a virtual office technology, social networks, and video conferencing, among other business technology have eliminated the workplace boundaries, which limited the expansion of organizations in the past. With the modern technology, organizations can aim a broader customer base and develop to higher levels. For this reason, this paper analyzes the subject of technology and links its utilization within the modern organizations. The paper starts by analyzing technology and organizational theory to get a detailed understanding of the subject. The paper then elucidates the role of technology in the development and change of organizations. The next section of the paper discusses the effect of new technology on management practices and organizational performance. The paper then describes how organizations use technology to train their customers and employees and enhance service and communication to their customers. The paper then concludes with a discussion of the impact of technology on organizational structure and design.

Technology and Organizational Theory

Organization theory is essentially multidisciplinary, with engineers, psychologists, biologists, political scientists, sociologist, and economists contributing to the theory. Technology has a role in the theories of organization. There are important variations in the technologies across organizations. Woodward, Hatch, Perrow, Thompson, Adler, and Keller made most influential contributions in the classic works on the technology and organization. The three categories of core technology as well as related labor processes that Joan Woodward distinguished included the continuous

process technology, large batch and mass production, and small batch and unit production. She described continuous process production as the highest category of technology complexity. According to her, this technology takes raw materials and subjects them to a nonstop transformation process that cannot be separated into distinct operations. She described large batch and mass production as the technologies with moderate complexity that manufactures plenty of similar items at an equivalent time. Finally, she described small batch and unit production as the technologies with least complexity that manufactures a single item at a time (Hull & Collins, 1987). Woodward went further and linked the three categories of organizational technology with varied management structures. According to her, continuous processing and small batch technologies work well when coupled with the decentralized management structures while mass production technologies work well when they are coupled with bureaucratic and centralized management forms.

Charles Perrow proposed the other framework for organizational technology analysis. In classifying the organizational technologies, Perrow utilized two dimensions including task analyzability and task variability. Perrow's model can be applied to various activities and tasks beyond core technologies. His two dimensions of classifying organizational technologies yield four categories of organizational technologies including engineering technology, craft technologies, non-routine technologies, and routine technologies.

Therefore, his model conceptualizes the task-related technologies in rational bureaucratic principles context. He maintained that organizations experience some uncertainty degree in their efforts to have predictable standardized

demands, as well as inputs. James Thompson suggested a technique for classifying the categories of technology that service and manufacturing organizations use (Gerwin, 1979). According to him, mediating technologies are the ones that organizations, which link customers or clients who have an interest in engaging in a transaction use. He described long-linked technologies as the technologies that are most frequent in manufacturing. He finally described intensive technologies as the forms of knowledge and hardware that are used to change some specific object. The classic technology typologies of all the above individuals offer a means to both classify and differentiate the organizational technologies.

The role of technology in organization development as well as change

Organization development is essentially a data-driven process for change. The utilization of information technology has an impact on the successful application of tools and interventions of organizational development. In fact, information technology connects individuals, organizations, and social systems in the contemporary world. Technology has become imperative in the modern world as it drives organizational communications, organizational development efforts, and standard human resource processes. The technology and in particular the web-based and internet technologies have an impact on the organization development practice as well as on the change efforts within the modern organizational settings (Cummings & Worley, 2014).

Technology has affected the practice of organization development in three major areas including connectivity, communications, and teamwork,

management and staff development efforts, and quantitative data-based evaluation tools and techniques. It is now evident how technology has affected the connectivity, communications, and teamwork area of organization development. Information Technology has transformed the way managers and employees within the contemporary organizations communicate and work together. The new forms of complex organizational structures and flexible work arrangements are in part responsible for a larger reliance on the technology. The organizations now focus more on modern forms of communication and connection with their workers. For instance, the shared web-based and electronic applications are making more team members and coworkers to work together even in different parts of the world.

Teamwork, management and staff development is the other organization development area where technology has affected. Of late, the role of technology in this area has increased drastically. In essence, there have been new applications and approaches to individual development as a result of new technologies. For instance, technology has led to the development of complicated software programs in the modern organizations that help the practitioners devise learning objectives, relate content to objectives, and develop mastery tests. In addition, technology has led to the emergence of interactive training as well as work simulations online (Huber, 1990). With regards to quantitative data-based applications area, the information technology has considerably affected how the organization development practitioners, as well as their customers, work with the quantitative evaluation-based techniques and tools.

Nonetheless, there have been some negative consequences that technology has brought in organization development efforts. For one, the advancement of technology has resulted into decreased participation. Technology has made employees who lack experiences feel isolated, and as a result, they have been reluctant towards organization development. In addition, technology has come with various forms of technical glitches that in one way or another have been very challenging for the operational development employees and practitioners. As a result, there employees and practitioners have become frustrated hence there has been a decrease in productivity within the organizations. Another problem that technology has brought in the organization development efforts is employees' lack of confidentiality and faith in the system.

The information technologies have an impact on the organization change (Cummings & Worley, 2014). The information technologies surfacing gives rise to the processes of production that a number of critical features characterize. For one, the efficiency depends on the ability to mechanize both standard procedures and routines while simultaneously devoting human energy to making decision, analysis, system feedback activities, and reprogramming. Second, innovations in product development activities and production process generate value added. It is worth noting that information technology application in the organizations improves the process of production besides enhancing the real delivered service or product's versatility. In addition, the use of information technologies, which allows feedback, simulations, and advanced forecasting within the organizations

can better manage and balance most organizational choices like integration or differentiation and lower costs or high costs.

The impact of technology on management practices and organizational performance

The benefits that technologies offer in the contemporary organizations depend upon the way they are integrated into the organizations. In the modern organizations, technology has an extensive range of potential effects on the management practices. For one, the new technologies have led to the reorganization of the management operations. A good example of the industry where there has been the reorganization of the management operations is the banking industry. Within this industry, the organizations have been using technologies such as the Web, toll-free call centers, and automated teller machines to decrease the cost of serving their customers. The reduction in cost can be accredited to the drop in the labor amount as a result of advancement in technology. Secondly, the advancement of technology has resulted to improved customer service. The World Wide Web development has improved the customer care services in the contemporary organizations. Technology has equally resulted to the creation of new products and markets besides reducing the costs of operations within the organizations. Many companies have used modern technology to lower their administrative and manufacturing costs (Thompson & Paris, 1982).

The contemporary organizations are essentially taking advantage of the technological advances to improve their performances. The modern technology is influencing the organizations' shape. The influence of technology goes beyond enhancing relations in organizations to enhancing

the ability of these organizations to service their clients. In essence, technology has significantly improved the performance of contemporary organizations. In these organizations, technology enhances the efficiency of screening, enlisting, and hiring potential job candidates. Organizations utilize internet to advertise job openings. The management then uses technology in determining the appropriate candidates and thus, this improves the organizational performance as only competent candidates are employed. Therefore, the organizations use technology as screening and assessment tools. Additionally, the office technology assists in saving time through speeding up the process of workflow. For instance, computers are used to correct mistakes instantly and digital file systems help in saving the space, printing, and paper costs. What's more, technology reduces the costs incurred in travelling since organizations can set virtual meetings. As a result, technology improves the organizational performance.

How organizations use technology to educate or train their customers and employees

Training is one of the services that the modern organizations provide to their employees and customers via the internet. The training that the organizations provide is both efficient and applicable as they embrace the newest available technologies when providing this service. The new technologies have reduced the training costs within the organizations. In training their employees, organizations utilize their company intranet. Among the several training forms that the modern organizations use including computer-based training, synchronous correspondence, asynchronous correspondence, and interactive video, among others.

Additionally, the modern organizations are using their company internet websites to offer training for the customers. Through the organizations' internet websites, customers sign up for the computer-based training classes. In fact, the use of technology by the modern organizations in training has led to saving of costs and time. For instance, Huber (1990) asserts that query answering technologies might be able to offer the information hence avoiding the necessity to plan a later meeting. The modern organizations use asynchronous video classroom environment to interact with their customers and employees at different parts of the world. The notion of corporate universities has expanded within organizations of late. Corporate universities are essentially the strategic business units that are designed to offer opportunities for the staff in organizations to develop knowledge and skills via innovative means. The modern organizations have aligned with the universities to offer services for their workers. Nonetheless, there have been concerns regarding the value of training through the use of multimedia technologies. As a result, there have been extra studies that have included cognitive engagement, technology usefulness, and student participation and involvement. Organizations have included new methods such as interaction between instructors and students and utilization of rich media to make learning more effective. In all the areas both externally and internally, modern organizations are implementing technology to communicate with their employees, as well as the world. The modern organizations continue moving in new directions due to the dynamic nature of the technology. In fact, the technology continues playing a role in both defining and shaping the modern organizations.

How contemporary organizations use technology to enhance service and communication to their customers.

In improving service and communications to their clients/customers, the contemporary organizations are embracing the use of extranets. The organizations use extranets when communicating business-related information to the customers, distributors, or vendors. On the other hand, they use intranets for internal communication with their employees. The contemporary organizations utilize extranets to enhance their customer service. Many modern organizations that desire to remain the frontrunners within the industry invest heavily in extranet solutions, which assist the sharing of resources with their customers and partners. Vendors or customers obtain information in a timely manner with the use of extranets. In addition, organizations receive feedback from the vendors and customers and take the necessary actions. The computer-assisted communication technologies within organizations let the lower-level units elucidate information on time (Huber, 1990). The internet opens more communication channels between organizations and offers training and education forum. What's more, internet improves responsiveness of the organizations to the concerns of their customers.

The impact of technology on the organizational structure and design

All organizations and their technologies require structure. The organizations systematize themselves to accomplish all their tasks and attain their goals. Organizations ought to take into consideration the infrastructure, functions, and technologically-related operations to ensure that their organizational

structures are truly viable. Organizational structure is formed by the groupings of the organization's operations, positions, and functions. An interrelated system of roles may represent organizational structure (Gerwin, 1979). Organizations get a clear understanding of their current activities and their deal functioning when they focus on the organizational structure. When revising the organizational structures, the managers within organizations should initially take the entire inventory of the goals and tasks of the organizations. Therefore, they must consider all duties, positions, and aspects, including the information technology. In fact, information technology is very central to the way the organization functions. Structure is dependent upon the multiple technologies (Gerwin, 1979). The organizations using sophisticated and multiple computers, as well as technological systems, frequently structure and divide their employees under the IT departments into specialties. For instance, a single system might need special programming while others that are crucial to security and safety might demand all time monitoring by the employees who have special training. Consequently, the organizational structures ought to take account of all the organizational needs and define the way organizations are addressing them. As various organizations acquire other organizations or develop new lines of operations, they frequently decide to systematize their different functions into various divisions. On the other hand, these divisions run a bit autonomously where each has its approaches, structure, and leadership. In addition, these divisions report to the top management within the organization.

Technology is essentially an important factor to consider in the

organizational design. The technology management field is intended to allow the contemporary organizations to control their technological fundamentals to generate competitive advantage. The contemporary organizations are complex adaptive systems, which comprise a combination of technological and human interactions. The academic interest of information management and technology as a key element of organizations developed during the 1950's and 1980's. However, the transformation of technologies over time has changed the academic interest of information management and technology. Virtual organization is a good example of a technological structure that has come out of the newer technological developments. Virtual organizations subsists in a network of alliances that all use internet. In addition, technology has impacted the supply chain management. For instance, technology can essentially affect the decisions regarding transportation such as contracting, routes, and frequency that can essentially have a considerable impact on the organizational design. What's more, technology can similarly have an effect on other longstanding elements of organizations. For instance, the information systems have made the organizations' managers take a much more analytical examination of their organizations than previously like by the balanced scorecard system. In addition, Halachmi & Bouckaert (1994) imply that a more intensive utilization of sophisticated IT gives the managers a larger freedom of movement from a single operation mode to the other.

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