Introduction respond to emergencies and other situations

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Introduction

Technology is a vital component of life in the modern world.

People are so dependent on technology that they cannot live without it. Technology is important and useful in all areas of human life today. It has made life easy and comfortable by making communication and transport faster and easier (Harrington, 2011, p. 35). It has made education accessible to all, and has improved healthcare services. Technology has made the world smaller and a better place to live.

Without technology, fulfilling human needs would be a difficult task. Before advent of technology, human beings were still fulfilling their needs. However, with technology, fulfillment of needs became easier and faster. It is unimaginable how life would be without technology. Technology is useful in

the following areas: transport, communication, interaction, education, healthcare and business (Harrington, 2011, p. 35). Despite its benefits, technology has negative impacts on the society. Examples of negative impacts of technology include development of controversial medical practices such as stem cell research, and the embracement of solitude due to changes in interaction methods.

For example, social media has changed the way people interact. Technological has led to introduction of cloning, which is highly controversial because of its ethical and moral implications. The growth of technology has changed the world significantly, and has influenced life in a great way. Technology is changing every day and continuing to influence areas of communication, healthcare, governance, education and business.

Technology in communication

Technology has contributed fundamentally in improving people's lifestyles. It has improved communication by incorporating the internet and devices such as mobile phones in peoples' lives. The first technological invention to have an impact on communication was the discovery of telephone by Graham Bell in 1875. Since then, other inventions such as the internet and the mobile phone have made communication faster and easier.

For example, the internet has improved ways through which people exchange views, opinions and ideas through online discussions (Harrington, 2011, p. 38). Unlike in the past when people who were in different geographical regions could not easily communicate, technology has eradicated that communication barrier. People in different geographical

regions can send and receive messages within seconds. Online discussions have made it easy for people to keep in touch. In addition, they have made socializing easy. Through online discussions, people find better solutions to problems by exchanging opinions and ideas (Harrington, 2011, p. 39).

Examples of technological inventions that facilitate online discussions include emails, online forums, dating websites and social media sites. Another technological invention that changed communication was the mobile phone. In the past, people relied on letters to send messages to people who were far away. Mobile phones have made communication efficient and reliable. They facilitate both local and international communication. In addition, they enable people respond to emergencies and other situations that require quick responses. Other uses of cell phones include transfer of data through applications such as infrared and Bluetooth, entertainment and their use as miniature personal computers (Harrington, 2011, p.

40). The latest versions of mobile phones are fitted with applications that enable them to access the internet. This provides loads of information in diverse fields for mobile phone users. For business owners, mobile phones enhance the efficiency of their business operations because they are able to keep in touch with their employees and suppliers (Harrington, 2011, p. 41). In addition, they are able to receive any information about the progress of their business in a short period of time.

Technology in healthcare

Technology has contributed significantly to the healthcare sector.

For example, it has made vital contributions in the fields of disease prevention and health promotion. Technology has aided in the understanding of the pathophysiology of diseases, which has led to prevention of many diseases. For example, understanding of the pathophysiology of gastrointestinal tract and blood diseases has aided in their effective management (Harrington, 2011, p. 49). Technology has enabled practitioners in the medical field to make discoveries that have changed the health care sector. These include the discovery that peptic ulceration is caused by a bacterial infection, and the development of drugs to treat schizophrenia and depressive disorders that afflict a greater portion of the population (Harrington, 2011, p. 53).

The development of vaccine against polio and measles led to their total eradication. Children who are vaccinated against these diseases are not at risk of contracting the diseases. The development of vaccines was facilitated by technology, without which certain diseases would still be causing deaths in great numbers. Vaccines play a significant role in disease prevention. Technology is used in health promotion in different ways.

First, health practitioners use various technological methods to improve health care. eHealth refers to the use of information technology to improve healthcare by providing information on the internet to people. In this field, technology is used in three main ways. These include its use as an intervention tool, its use in conducting research studies and its use for professional development (Lintonen et al, 2008, p.

560). According to Lintonenet al (2008), " e-health is the use of emerging information and communications technology, especially the internet, to improve or enable health and healthcare". (p. 560). It is largely used to support health care interventions that are mainly directed towards individual persons.

Secondly, it is used to improve the well-being of patients during recovery. Bedside technology has contributed significantly in helping patients recover. For example, medical professionals have started using the Xbox computer technology to develop a revolutionary process that measures limb movements in stroke patients (Tanja-Dijkstra, 2011, p. 48). This helps them recover their manual competencies. The main aim of this technology is to help stroke patients do more exercises to increase their recovery rate and reduce the frequency of visits to the hospital (Lintonen et al, 2008, p. 560).

Technology in government

The government has utilized technology in two main areas.

These include the facilitation of the delivery of citizen services and the improvement of defense and national security (Scholl, 2010, p. 62). The government is spending large sums of money on wireless technologies, mobile gadgets and technological applications. This is in an effort to improve their operations and ensure that the needs of citizens are fulfilled. For example, in order to enhance safety and improve service delivery, Cisco developed a networking approach known as Connected Communities. This networking system connects citizens with the government and the community.

The system was developed to improve the safety and security of citizens, to improve service delivery by the government, to empower citizens and to encourage economic development. The government uses technology to provide information and services to citizens. This encourages economic development and fosters social inclusion (Scholl, 2010, p. 62).

Technology is also useful in improving national security and the safety of citizens. It integrates several wireless technologies and applications that make it easy for security agencies to access and share important information effectively. Technology is widely used by security agencies to reduce vulnerability to terrorism. Technologically advanced gadgets are used in airports, hospitals, shopping malls and public buildings to screen people for explosives and potentially dangerous materials or gadgets that may compromise the safety of citizens (Bonvillian and Sharp, 2001, par2). In addition, security agencies use surveillance systems to restrict access to certain areas. They also use technologically advanced screening and tracking methods to improve security in places that are prone to terrorist attacks (Bonvillian and Sharp, 2001, par3).

Technology in education

Technology has made significant contributions in the education sector.

It is used to enhance teaching and learning though the use of different technological methods and resources. These include classrooms with digital tools such as computers that facilitate learning, online learning schools, blended learning and a wide variety of online learning resources (Barnett,

1997, p. 74). Digital learning tools that are used in classrooms facilitate learning in different ways.

They expand the scope of learning materials and experience for students, they improve student participation in learning, they make learning easier and quick, and they reduce the cost of education (Barnett, 1997, p. 75). For example, online schools and free learning materials reduce costs that are incurred in purchasing learning materials. They are readily available online.

In addition, they reduce the expenses that are incurred in program delivery. Technology has improved the process of teaching by introducing new methods that facilitate connected teaching. These methods virtually connect teachers to their students. Teachers are able to provide learning materials and the course content to students effectively.

In addition, teachers are able to give students an opportunity to personalize learning and access all learning materials that they provide. Technology enables teachers to serve the academic needs of different students. In addition, it enhances learning because the problem of distance is eradicated and students can contact their teachers easily (Barnett, 1997, p. 76).

Technology plays a significant role in changing how teachers teach. It enables educators to evaluate the learning abilities of different students in order to devise teachings methods that are most efficient in the achievement of learning objectives. Through technology, teachers are able to relate well with their students and they are able to help and guide them. Educators assume the role of coaches, advisors and experts in their areas of teaching. Technology helps make teaching and learning enjoyable and gives

it meaning that goes beyond the traditional classroom set-up system
(Barnett, 1997, p. 81).

Technology in business

Technology is used in the business world to improve efficiency and increase
productivity. Most important, technology is used as a tool to foster
innovation and creativity (Ray, 2004, p.

62). Other benefits of technology to businesses include the reduction of
injury risk to employees and improved competitiveness in the markets. For
example, many manufacturing businesses use automated systems instead of
manual systems. These systems eliminate the costs of hiring employees to
oversee manufacturing processes. They also increase productivity and
improve the accuracy of the processes because of reduction of errors (Ray,
2004, p. 63).

Technology improves productivity due to Computer-aided Manufacturing
(CAM), Computer-integrated Manufacturing (CIM), and Computer-aided
Design (CAD). CAM reduces labor costs, increases the speed of production
and ensures a higher level of accuracy (Hunt, 2008, p. 44).

CIM reduces labor costs while CAD improves the quality and standards of
products and reduces cost of production. Another example of the use of
technology in improving productivity and output is the use of database
systems to store data and information. Many businesses store their data and
other information in database systems that make accessibility of information
fast, easy and reliable (Pages, 2010, p. 44). Technology has changed how
international business is conducted. With advent of e-commerce, businesses

became able to trade through the internet on the international market (Ray, 2004, p. 69). This means that there is a large market for products and services.

In addition, it implies that most markets are open for 24 hours a day. For example, customers can shop for books or music on Amazon. com at any time of the day. E-commerce has given businesses the opportunity to expand and operate internationally.

Countries such as China and Brazil are taking advantage of opportunities presented by technology to grow their economy. E-commerce reduces the complexities involved in conducting international trade (Ray, 2004, p. 71). Its many components make international trade easy and fast. For example, a BOES system allow merchants to execute trade transactions in any language or currency, monitor all steps involved in transactions and calculate all costs involved such as taxes and freight costs (Yates, 2006, p. 426).

Financial researchers claim that a BOES system is capable of reducing the cost of an international transaction by approximately 30% (Ray, 2004, p. 74). BOES enable business to import and export different products through the internet. This system of trade is efficient and creates a fair environment in which small and medium-sized companies can compete with large companies that dominate the market.

Negative impact of technology

Despite its many benefits, technology has negative impacts. It has negative impacts on the society because it affects communication and has changed the way people view social life. First, people have become more anti-social

because of change in methods of socializing (Harrington, 2008, p. 103). Today, one does not need to interact physically with another person in order to establish a relationship. The internet is awash with dating sites that are full of people looking for partners and friends. The ease of forming friendships and relationships through the internet has discouraged many people from engaging in tradition socializing activities.

Secondly, technology has affected the economic statuses of many families because of high rates of unemployment. People lose jobs when organizations and businesses embrace technology (Harrington, 2008, p. 105). For example, many employees lose their jobs when manufacturing companies replace them with automated machines that are more efficient and cost effective.

Many families are struggling because of lack of a constant stream of income. On the other hand, technology has led to closure of certain companies because the world does not need their services. This is prompted by technological advancements. For example, the invention of digital cameras forced Kodak to close down because people no longer needed analog cameras. Digital cameras replaced analog cameras because they are easy to use and efficient.

Many people lost their jobs due to changes in technology. Thirdly, technology has made people lazy and unwilling to engage in strenuous activities (Harrington, 2008, p. 113). For example, video games have replaced physical activities that are vital in improving the health young people. Children spend a lot of time watching television and playing video games such that they have little or no time for physical activities.

This has encouraged the proliferation of unhealthy eating habits that lead to conditions such as diabetes. Technology has elicited heated debates in the health care sector. Technology has led to medical practices such as stem cell research, implant embryos and assisted reproduction. Even though these practices have been proven viable, they are highly criticized on the grounds of their moral implications on the society. There are many controversial medical technologies such as gene therapy, pharmacogenomics and stem cell research (Hunt, 2008, p. 113). The use of genetic research in finding new cures for diseases is imperative and laudable.

However, the medical implications of these disease treatment methods and the ethical and moral issues associated with the treatment methods are critical. Gene therapy is mostly rejected by religious people. They claim that it is against the natural law to alter the gene composition of a person in any way (Hunt, 2008, p. 114). The use of embryonic stem cells in research is highly controversial unlike the use of adult stem cells. The controversy exists because of the source of the stem cells. The cells are obtained from embryos.

There is a belief among many people that life starts after conception. Therefore, using embryos in research means killing them to obtain their cells for research. Use of embryo cells in research is considered in the same light as abortion: eliminating a life (Hunt, 2008, p. 119).

These issues have led to disagreements between the science and the religious worlds.

Conclusion

Technology is a vital component of life in the modern world. People are so dependent on technology that they cannot live without it. Technology is important and useful in all areas of human life today. It has made life easy and comfortable by making communication faster and travel faster, made movements between places easier, made actions quick and eased interactions. Technology is useful in the following areas of life: transport, communication, interaction, education, healthcare and business. Despite its benefits, technology has negative impacts on the society.

Technology has eased communication and transport. The discovery of telephone and the later invention of the mobile phone changed the face of communication entirely. People in different geographical regions can communicate easily and in record time. In the field of health care, technology has made significant contributions in disease prevention and health promotion.

Development of vaccines has eradicated certain diseases and the use of the internet is vital in promoting health and health care. The government uses technology to enhance the delivery of services to citizens and the improvement of defense and security. In the education sector, teaching and learning processes have undergone significant changes owing to the impact of technology. Teachers are able to relate to different types of learners and the learners have access to various resources and learning materials. Businesses benefit from technology through reduction of costs and increased efficiency of business operations.

Despite the benefits, technology has certain disadvantages. It has negatively affected human interactions and socialization, and has led widespread unemployment. In addition, its application in the health care sector has elicited controversies due to certain medical practices such as stem cell research and gene therapy.

Technology is very important and has made life easier and more comfortable than it was in the past.

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