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Digital Skills and Research Methods
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Use of Technology in the Modern Health Care Workplace

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Introduction

In this report , the aim is to discuss the use of innovation and modern technology in hospitals which helps the healthcare system to improve its work with patients. In the current era rapid technological advances are made every day and this helps people who work in this field to do better diagnostics and improve the treatment of different diseases. Artificial intelligence, wearable technologies , mobile applications and websites, clinical data storage and sharing systems work hand by hand with specialists and healthcare workers all over the world. Technology also assists with the investigation of secondary data and analysis of the results into easily comprehensible formats

Different technologies used in the modern healthcare workplace

A proper idea as well as evaluation of the different technologies used in the healthcare sector can be effectively discussed as follows.

1. Remote automated and monitoring Healthcare system: This is basically the use of technology in which monitoring of the patient's health is conducted in an effective way (Wheel House IT, 2023). Different types of fitness tracking devices and smart watches using the latest technology of artificial intelligence ensure monitoring the heartbeat, blood oxygen level, glucose level and heart rate of the patients. Different latest devices are now being used by the Healthcare institutions in order to help the patients to ensure that they can continuously monitor their health conditions and evaluate the trend prevailing in the health care data. For example, one of the uses of technology is the connected inhalers in healthcare organisation which helps in saving the lives of the patients by helping them to maintain a healthy lifestyle and following a particular schedule.

2. Artificial intelligence Technology (AI): This is one of the latest uses of digital technology which is identified in the health care workplace through which the health care providers can take improved decisions and contribute to the improvement in the health of the patients. This use of technology basically ensures undertaken proactive care predictions which indirectly help in easy diagnosis of diseases by analysing the pattern of data. The efficient utilisation of trained artificial intelligence helps in diagnosing as well as recognising certain diseases easily within a very short period of time. This helps in taking preventive measures easily (NHS, 2023).



3. Use of mobile technology in modern healthcare organisation: Mobile Technology has been effectively utilised for providing maximum care to the patients by offering them streamlining care and by promoting best experience to the patients. There are a large number of mobile applications which are helping the patients to manage the health in an efficient way. This ensure communicating with the health care providers, promote scheduling of all the appointments with the health care providers easily and ensure effective assessment of the health information. This indirectly helps in promoting remote monitoring of the medical devices as well as health conditions of the patients easily. (NHS Digital, 2019)

4. Cloud analytics and Data Analytics: Nowadays in the field of healthcare sector a large number of data flooding takes place in the Health Care centres. Managing these data becomes a very hectic task. For this purpose, Data Analytics and cloud analytics technology is basically utilised in order to ensure maximum level of safety as well as security in the process of sharing as well as storing big data. This is basically the effective utilization of the cloud-based Technology which helps in integrating social data, research data and clinical data from various healthcare sources easily in order to speed up as well as advance the health care innovation level as well as the communication taking place in the health care sector. These contribute towards bringing efficiency in the activities of the modern Health Care organisations.

(Shaping Cloud, 2022)

5. 3D Bioprinting: 3D Bioprinting is considered to be a major technology advancement in the medical field which has high level of potentials to create human tissues, human organs, prosthesis and drugs. It has been evaluated that this technology has been able to successfully print human ears which was one of the most vital developments in the health care field. This basically ensures the use of the latest printing technology in order to conduct the health care activities efficiently in the modern Health Care Organisation. (Becher,2023)



6. Different technologies used in the modern healthcare workplace. Robotics: High level of enhancement in the capabilities of machine learning and artificial intelligence has promoted the effective use of robotics in the maintenance activities and care activities of the health care organisations. There are a large number of robots which have been developed having high level of artificial intelligence capabilities which can help in providing surgical assistant throughout the medical activities being conducted. The use of robotic Technology has helped in providing maximum level of healthcare support. There are group of instances in which it has been indicated that a lot of medical surgeries have been effectively as well as successfully assisted by robots and have been successful. (Haseltine, 2023)

7. Blockchain Technology: Blockchain is a latest technology development which is promoting improvement in the data security across different industries specially the health care sector. It is basically defined to be a set of shareable immutable ledger which helps in processing of different transactions easily in a business network. A proper tracking of all the valuable things can be effectively promoted with the help of a blockchain network. This not only helps in cutting cost but also promotes reduction of risk associated with the business. Hence data can be assessed easily and with maximum level of effectiveness (Daley, 2023)

Research Interest (Motivation)

Problem Statement:

- 1. Overview as well as analysis of the issues associated within a healthcare organisation:** It has been evaluated that one of the major issues which is prevailing in the Healthcare sector is lack of **motivation**. Motivation is considered to be the inner desire of an individual which compels an individual to conduct their activities in the most effective manner and with maximum level of effectiveness. There are a group of instances in which it is determined that limited motivation prevails in the health care sector in order to conduct the activities in the most efficient manner. Motivation is defined to be one of the most essential psychological processes through which it becomes possible for an individual to work in the most effective manner in order to achieve their long-

term goals as well as short term goals. Presence of limited motivation in the healthcare organisation has created a lot of obstruction for the organisation to conduct its activities effectively. This has led to ineffective care to the patients because of limited motivation prevailing among the health care providers as well as the working staff. There are certain circumstances in which it has been evaluated that limited measures are taken by the Health Care Organisation in order to provide maximum level of motivation to the human resources. This is creating a major obstruction in the efficient conduct of the business activities. (Ogbeivor, 2021)

2. Identification of a research topic which requires urgent necessity of further research: One of the research topics which requires urgent necessity for future research is the impact of digital technology on the conduct of the organisations operating in the health care sector . There are a group of situations which indicate that technology development is highly prominent in different sectors especially the health care sector. Hence the impact of technology on these sectors requires immediate research and development. Digital technology is basically defined to be a set of technology which involves the use of digital devices in order to conduct the activities in the most efficient manner and with maximum level of effectiveness.

3. Justification of the reasons behind selecting the topic: There are certain reasons behind selecting this particular topic for conducting the research activities. Firstly, it has been effectively evaluated that it is very much essential for the health care sector to identify the various ways in which digital technology can promote efficiency in the conduct of their business operations. This will help the organisation to prosper in their sector efficiently and effectively. Secondly, healthcare sector plays a major role in the economy. Hence it is a major requirement to ensure efficiency in the conduct of the organisation operating in the health care sector in order to promote economic growth as well as economic development.

Research idea: A proper idea as well as evaluation of the different technologies used in the healthcare sector can be effectively discussed as follows. The efficient utilisation of trained artificial intelligence helps in diagnosing as well as recognising certain diseases easily within a very short period of time. Mobile Technology has been effectively utilised for providing maximum care to the patients by offering them streamlining care and by promoting best experience to the patients. For this purpose, Data Analytics and cloud analytics technology is basically utilised in order to ensure maximum level of safety as well as security in the process of sharing as well as storing big data. 3D Bioprinting is considered to be a major technology advancement in the medical field which has high level of potentials to create human tissues, human organs, prosthesis and drugs. There are a large number of robots which have been developed having high level of artificial intelligence capabilities which can help in providing surgical assistant throughout the medical activities being conducted. Blockchain is a latest technology development which is promoting improvement in the data security across different industries specially the health care sector.

Methodology for the chosen research: The research methodology which will be used as the mixed research methodology. Mixed research method is basically considered to be a combination of qualitative research method and quantitative research method. The mixed research method will be selected because it is an efficient method of research which helps in solving complex situations easily. With the help of this methodology, it will become possible to solve the societal problem and promote society growth. Proper credibility is easily offered to the researcher during the use of this particular research methodology. This helps in strengthening the validity of the data collected. With the help of this research method, it becomes easier for the researcher to make the best utilization of theories and assumptions in order to answer the research questions in the easiest as well as effective manner.

(Gov.uk, 2020)

Sources:

1. Reasons through which credible sources for supporting the literature can be identified: It has been evaluated that reliable sources of information are used in order to find the data which are very much valid as well as relevant. Effective research and analysis are required to be conducted in order to ensure that the sources for collecting credible data are identified. Further registered websites as well as webpages should be used in order to promote credibility to the sources.

Conclusion

It can be effectively concluded that the report has played a vital part in analysing as well as evaluating the different technology is used in the modern Health Care work place. Further the most efficient research interest which has been selected is the area

of motivation. A proper idea about the problem statement have been put forward. A discussion in relation with the research idea has been identified. An efficient level of discussion in relation to the methodology used in the research have been provided. An efficient level of idea in association with the sources used in the research have been identified.

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