

LCHS4002 Digital Skills and Research Methods

Topic: “The issues of skill gap in the use of technology in the care homes during the COVID-19 pandemic”

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Introduction

The report will discuss the different technologies which can be used in the care homes workplace. Concerning this the relevant issues or problems within the health and social care sector will be analysed. The report will then discuss the specific issue or gap related to the use of technology within the sector during the Covid-19 pandemic. Justification will be made concerning the topic chosen within the gap between the health and social care sector. Furthermore, the idea of the research will be formulated and methods will be chosen that can help to gain valuable insights on the chosen topic. The report will further analyse the research interest or motivation in which the common issues or problems the sector has been facing will be discussed. The report will further state the aim and objective of the research and present a credible source which can be used in the research in the future.

“Different technologies used in the modern health care workplace”

Health and social care is one of the most important industries in the world and developing this sector can help cure many rare diseases. It is the industry in which businesses exist which provide medical services, provide medical insurance, manufacture medical drugs and equipment and also facilitate healthcare provisions for patients. In today's time, technologies have been playing a crucial role in the healthcare sector as it has enabled personnel to get a deeper understanding of humanity. The technologies that are being widely used within the sector include-

Artificial intelligence: It is developing in many industries, especially in the healthcare sector which has enabled care homes to get access to several applications such as the examination of information the patient, developing the new medications, and improving the procedures of diagnostic effectiveness (Secinaro *et al.*, 2021). This technology is helping the sector to analyse CT scans to treat the effects of coronavirus.

Vaccine technology: It is one of the most advanced and latest technologies which has helped the world to protect from preventable diseases. This technology has been able to create mRNA vaccines during the pandemic which has helped to fight against the SARS-COV2. This technology has ensured that as the technology will develop and evolve, it will be possible for vaccines to be developed for several medical conditions.

Remote patient monitoring and virtual care: Virtual care technology includes the Internet of Things which has allowed the healthcare sector to ensure security, location services, secure messaging, wearable connectivity, 5G-enabled devices, and even remote patient monitoring (Mbunge *et al.*, 2021). The healthcare sector has been able to serve as a remote hospital for instance, the professionals can now conduct ultrasound examinations on pregnant women and even share data remotely for virtual cooperation.

Organ care technology & Bioprinting: The healthcare homes within the healthcare sector have been making use of 3D technology for Bioprinting as it helps to produce external personalised airway stents, prostheses, and cranial implants (Das *et al.*, 2023). This technology has helped professionals within the healthcare sector to develop value in the planning of surgical procedures of open-heart.

Augmented & virtual reality in Healthcare: This technology has helped the healthcare sector to connect the physical and digital environments in a multidimensional process. This technology mainly relies on artificial intelligence, where cancer-like diseases are detected through the recognition of images. This type of technology has many benefits and can be used in physical therapy such as mental trauma (Hathaliya *et al.*, 2019). The professionals within home care can

make effective use of technology to cure phobias. The 3D technology can be used to scan data from the body of the patients and also AR glasses can help to overlay CAT scans.

Thus, there are other various types of trends in the technologies that can be used by professionals or organisations within the healthcare sector to enhance medical services. The technologies can thus be used to manage the problems and uncertainties that affect the overall industry all around the world.

“Research Interest (Motivation)”

The introduction and emergence of new technologies during the Covid-19 pandemic has enhanced the operational activities of the healthcare sector but it has been facing issues such as skills gaps, shortages of skilled labours, high costs of operations, inequality in pay and opportunities. But among these, the most complex issue is the **skills gap** which implies the disparity between the expectations of the employers from the employees and the actual skills that the employees have. This mismatch has been creating complex issues within the healthcare sector to fill open positions and carry on medical operations efficiently.

“Problem Statement”

The most major issue found in the healthcare sector is the **skills gap** in the workers or staff. The workers within the healthcare sector are educated concerning the areas within the sector but are not skilled relative to the technology being introduced during the Covid-19 pandemic. The skills gap in the staff of the healthcare sector has been harming the productivity level of the firm and thereby is inflating the average labour costs because due to the skills gap, organisations now require more workers per unit of output. Thus the research will also analyse how the healthcare sector can implement strategies to overcome the skills gap due to the technological trends in the healthcare sector.

“Research Aim”

The main aim of the research is to examine the use of technology in care homes during the Covid-19 pandemic. The research will review how skills gaps are created due to the use of technology and are impacting the operational activities within the healthcare sector. The research is based on identifying the factors that enforce trends in the technologies within the care homes. The research will also depict the factors through which the identified issue which is the skills gap is influenced and can be eliminated through effective strategies during the Covid-19 pandemic.

“Justify the reason behind your choice”

The research topic is based on the examination of the latest and innovative technologies within healthcare homes during the Covid-19 pandemic. The research topic has been chosen as it will help the firms within the healthcare sector to understand how it can have an impact on the overall performances such as ensuring quality services to the patients, operating various medical functions during uncertainties such as the Pandemic and so on. This research will allow the audiences the negative side of the use of technology as well. Such as the issue considered is the skills gap, thus the information relevant to the skills gap will help the professionals to implement strategies and predict the threats that can affect the organisations in the future. The research will allow firms and professionals within the healthcare sector to understand the importance of technologies in providing quality services to patients. Moreover, the research will help the professionals within the healthcare sector to determine the benefits of using technologies during uncertainties such as the Covid-19 pandemic.

“Research Idea”

The research will be identifying the aim and objective that it will serve to the targeted audiences which are the professionals within the healthcare sector. The research will analyse the methods and strategies which can be applied in the research to ascertain valuable insights related to the research topic. The research will then assess the research design and philosophy which can allow us to gain an in-depth understanding of the chosen topic. Furthermore, ethical considerations will be developed to ensure that the audiences are not hurt mentally or physically due to the information or data presented in the research. Within the research, the adequate methods will be analysed such as secondary and primary which can help to gather information or data relative to the research topic.

“Methodology for your chosen research”

The research will be based on or developed based on a secondary data collection method as it will allow gaining information from other authors (Pandey and Pandey, 2021). The benefit of using this method is that it will allow us to gain information or data which already exists due to which time and money are not required to be devoted to the research. This type of method provides easy access to data or information and thereby provides a variety of perspectives and insights from experts. Within the secondary sources, both the *qualitative and quantitative* data will be collected which means that the *mixed method* will be applied in gaining data and information in the research (McBeath, 2022). The *benefits* of the mixed method are that it combines detailed

and specific insights and more generalised and easily replicable information. This method will allow us to gain stronger evidence and more confidence in the data collected.

However, the mixed methods include complexity in carrying out the research and thus one needs more expertise to analyse and collect the data from such methods (Kaur et al., 2019).

“Sources”

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“Explain/Discover how to find some credible sources to support your research”

Credible sources for research in the future can be gained by understanding an author's identity if they are an expert in the particular area or if they are a well-respected publisher. The citations will be recognised for the sources used in the research to identify their credibility. Relevant and up-to-date information and data on the research topic will be analysed. Furthermore, an unbiased analysis of the topic in the research will be done. For instance, more than one perspective will be examined concerning the topic chosen in the research. This will help to understand the most reliable source and thereby make comparisons between the two or more sources so that effective sources can be gained.

“Find some credible sources relevant to your research and describe the way (From where and how) you found them”

Credible sources have been found using Google Scholar where the keywords such as technologies used within the healthcare sector have been used. Furthermore, relevant sources have been searched on Google and further citations were created by studying the authenticity of the author and the information within the articles. The sources have been found by making comparisons between the perspective of two and more authors, this has been analysed to determine the credibility of the sources.

Conclusion

From the above analysis, it is analysed that Technological advancement within the healthcare sector of care homes is very important. This is because it helps to provide quality healthcare services to the patients and reduces the overall costs of operations. But with the new technologies come new issues such as the skills gap which can be overcome by providing adequate training and education facilities to the employees so that they can enhance their knowledge and skills and support the organisations to provide enhanced quality services. In the research secondary methods have been used within which both qualitative and quantitative analysis is done. The mixed method has been productive in ascertaining quick and relevant information based on past events. But for future use and more in-depth detailing of the data, primary sources can be used as they will provide factual information which will help to predict future events.

Reference

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