Name: Maria Dinu
Student ID: 2225533
Module Code: LCHS4002_LON
Module Name: Digital Skills and Research Methods
Topic: "The use of contemporary technology in healthcare"
Lecturer: Amitave Banik

Overview

- Uses of contemporary technology in medical diagnosis
- Uses of contemporary technology in administrative and care support
- Future of contemporary technology in healthcare
- References

Uses of contemporary technology in medical diagnosis

- Nanotechnology is used in a range of diagnosis methods, such as **CT scans**, which can aid in the treatment of medical conditions before the appearance of symptoms (Jackson et al, 2017).
- The use of contemporary technology in medicine also offers a more accurate diagnosis, an example of this is gadolinium contrast in MRI;
- *Gadolinium dye* offers a very detailed viewing of the organs being screened, therefore aiding the clinician in giving a more accurate diagnosis.

Uses of contemporary technology in administrative and care support

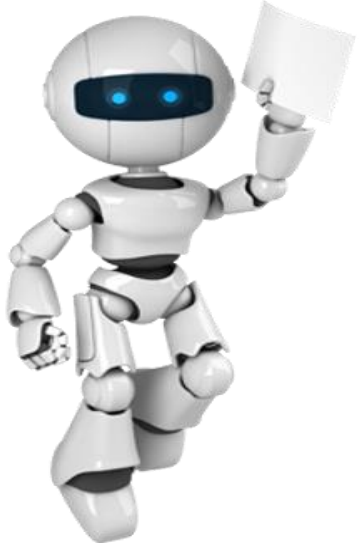
- In recent years, medical professionals have started to include more and more digital alternatives to appointments.
- This was clearly seen during the COVID-19 pandemic, when the danger of transmitting a deadly virus or its' mutations increased every time an individual left quarantine.

Some of the technology used in administrative and care support during the COVID-19 pandemic are:

- NHS Track and Trace app – informed individuals if they were required to isolate as a result of being in contact with a COVID-19 positive individual
- Zoom – virtual meetings/appointments more accessible
- Patient Access – virtual appointments/repeat prescription request
- Microsoft Teams – virtual meetings/appointments
- myGP app – virtual appointments/prescription request/access to medical history

Future of contemporary technology in healthcare

- AI is continuously evolving; this guarantees the increase of medical innovations;
- One of these innovations could be the use of AI robotics (hardware) in surgeries, which could radically change the different practices of surgeries and further advance the quality of patient treatment and care (Hashimoto et al, 2018).
- In addition, with the help of artificial intelligence, new digital healthcare applications are also expected to be developed as well as new treatments and drugs will be developed: potentially resulting in the end of antibiotics usage (Thimbleby, 2013).
- Ultimately, implantable procedures are expected to advance and eventually have the capacity to relieve the damage of severe paralysis as BCI technology is already in use and aiding patients suffering of severe paralysis due to loss of motor control (Consult QD, 2022).



Conclusion

- Contemporary technology in medical diagnosis: The use of contemporary technology in medicine offers more accurate diagnosis.
- Contemporary technology in administrative and care support: In recent years, a large amount of digital support has been developed with the motive of aiding patients to access healthcare easier and faster.
- Contemporary technology in healthcare: The advancement of contemporary technology in medicine will lead to the development of more useful innovations.

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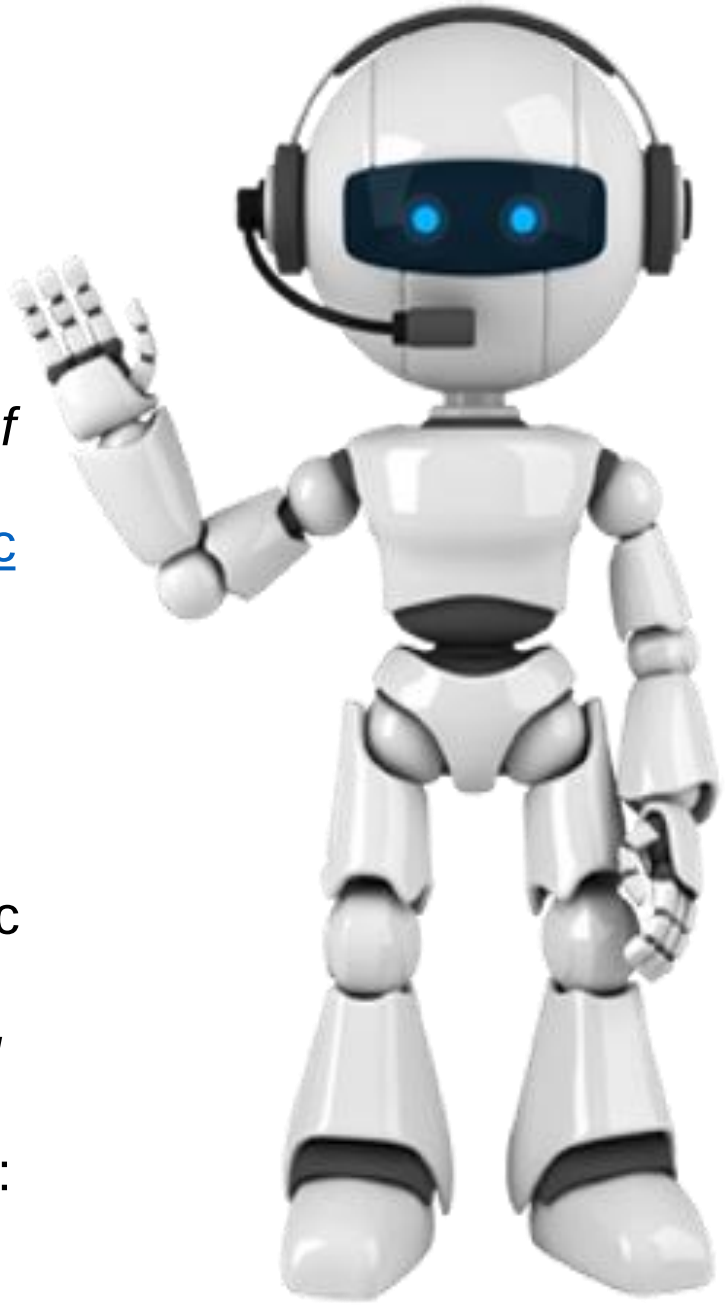

Name: Patience Edo
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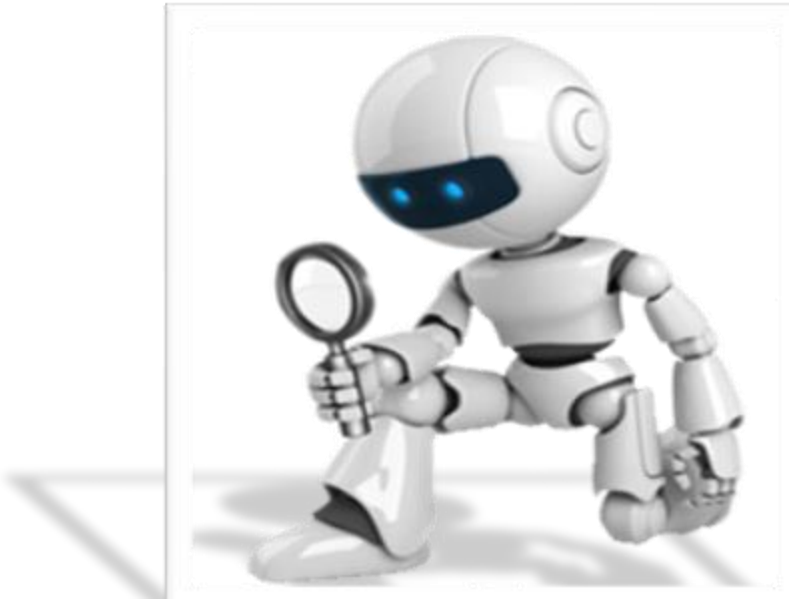
Module name: Digital Skills and Research Methods
Module code: LCHS4002_LON
Topic: "The use of technology during the Covid-19 pandemic"
Lecturer: Amitave Banik

Overview

- Digital technology and COVID-19
- The use of technology during the COVID-19 pandemic
- How has the use of technology affected healthcare?
- Conclusion
- References

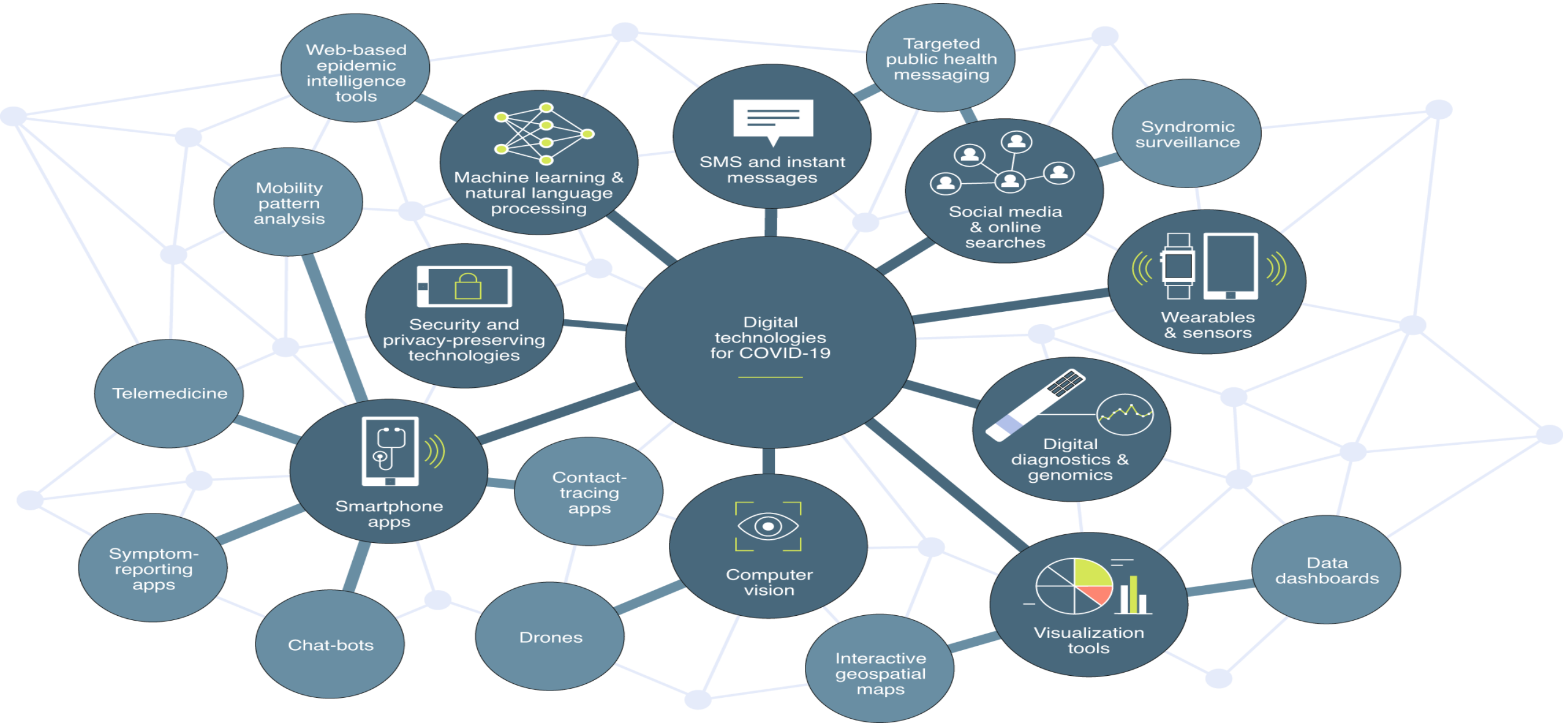


Digital technology and COVID-19

- COVID-19 (Coronavirus) is a communicable disease which is caused by a virus called "SARS-CoV-2" (World Health Organization, 2021).
- The symptoms of COVID-19 can range from coughs and sore throats to fevers and inability to breath; the virus can manifest itself as a common cold in some people or, in more severe cases, as pneumonia.
- COVID-19 has been the cause for 6.4 million deaths worldwide and has been classed as a "pandemic" by WHO in March of 2020.
- During this most recent pandemic, it was crucial that people isolated; this has increased the use of digital technology.
- Digital technology refers to the digital resources that create, process or stock data, these can range from game applications to social media and healthcare software applications (Victoria State Government, 2019).

Uses of digital technology for the duration of COVID-19 pandemic

Budd, J. *et al.* (2020)



How has the use of digital technology affected healthcare?

Positive Impact	Negative Impact
➢ COVID-19 enabled patients to have access to online consultation and digital-first primary care to be given ➢ Introduction of the TRIAGE system was used to identify and prioritise serious from non-serious health issues. ➢ Making sure healthcare was accessible to everyone ➢ Lowered the spread of the virus significantly ➢ Provided job for millions of people as new line of work such as Contact Tracing came in place ➢ A huge decrease in A&E attendance, dropped 42% in May 2020 compared to 2019 and falls in number of GP appointments. ➢ Controlling of the virus ➢ Time saving	➢ There was an increase in workloads for health care worker and organisation, therefore promoting high quality care which falls in line with the protection of patient's confidentiality and human right Act 1998 became harder ➢ There an increase in making sure healthcare workers are trained regularly and up to date with their Data Protection act, Equality Act 2010 and Diversity Act.

Conclusion

- **In conclusion there has been a significant increase in digital technology during the COVID 19 pandemic, especially on the following software applications;**
- Contact tracing apps (NHS Track and Trace).
- Online consultation (GP applications, such as myGP).
- Triage and many more.
- **Positive aspects of increase in technology use;**
- More job opportunities.
- Decrease in A&E visits.
- **Negative aspects of increase in technology use;**
- Increase in workloads for healthcare professionals due to training requirement to become digitally literate.
- People who have no access to technology have remained at a disadvantage.
- **Life after Covid-19;**
- Although people are back to living a pre-COVID lifestyle, there are still sanitary precautions that have remained in place, such as sanitising and social distancing.

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Name: Maria Fatima Mangue Mbomio
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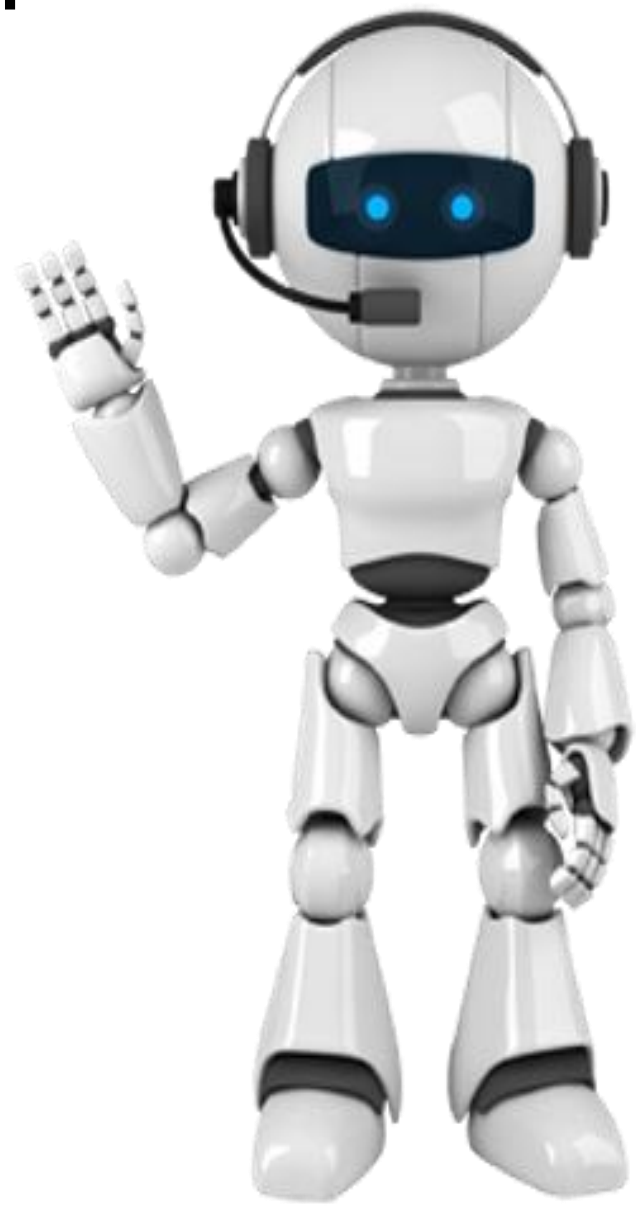
Module Code: LCHS4002_LON
Topic: "The use of digital communication, collaboration and participation"
Lecturer: Amitave Banik

Overview

- Digital communication and its importance
- Doctors and patients
- Conclusion
- References

Digital communication and its importance

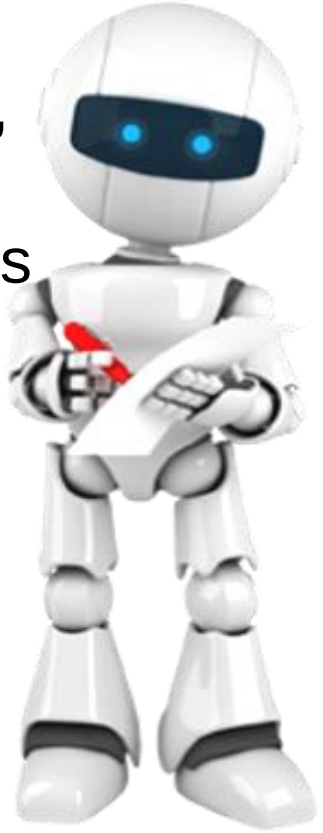
- Digital communication, collaboration and participation are necessary for successful involvement in digital settings (Onyema, 2019).
- The use of digital communication it is about creating connectivity between all professionals in healthcare sector as well as bringing science, brand data at the right moment.
- It is important to have a solid understanding of the most productive online communication networks and applications.
- One of the goal on digital participation it is to avoid people exclusion and ensure that all of them have the necessary skill to access safely to the health service information (Comstock, 2023).



Doctors and patients

- With the implementation of Telemedicine system in the hospitals, physician-patient communication has changed rapidly with a huge reduced patients and healthcare spending distant, wait times, increased access to distant.

•There are different types of tools, personal devices or digital applications, which have brought new expectation for patient engagement practice.
•Internet is transforming different ways of communication between patients and doctors virtually with greater development of technology utilising content created by users for other users to view in order to provide convenient platforms that engage patients to consult physicians online (Yang, Guo and Wu, 2015).
•Electronic health record is one of the physician, regulators use to approaches to patient autonomy, privacy and confidentiality; it is currently under development in US and Australia.



Conclusion

- Digital communication platforms such as email, social media messaging, and short message service (SMS) can be communicated individually or in groups of people.
- Even the most rudimentary kinds of involvement, such as reading the material of this presentation, are considered examples of digital communication.
- The expansion of the Telemedicine system within surgical care has changed the traditional communication way between patients and doctors.

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Name: Hristiyan Hristov

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Module code: LCHS4002_LON

Module Name: Digital Skills and Research Methods

Topic: "The use of digital literacy for employee well-being and their professional career development (Teaching, e-learning and self-development)"

Lecturer: Amitave Banik

Overview

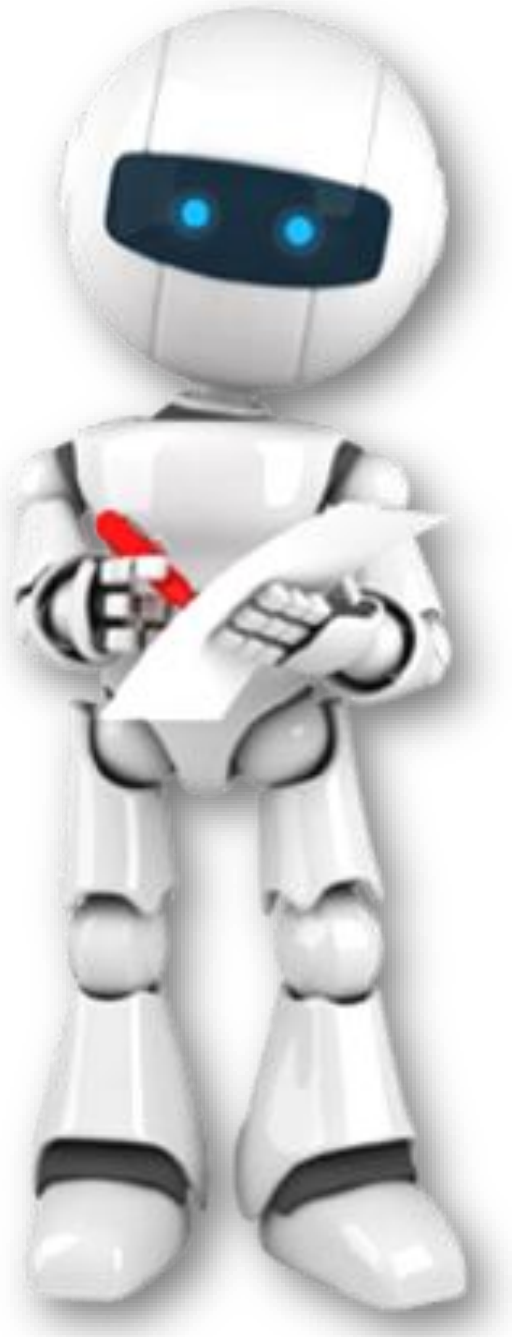
- Importance of being digitally literate
- Tools used for digital literacy
- Importance of digital literacy in the workplace

Importance of being digitally literate

- Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate and create information safely through digital technologies for employment, decent jobs and entrepreneurship.

Tools used for digital literacy

- Creativity
- E-Safety
- The ability to find and select information
- Functional skills
- Collaboration
- Critical thinking and evaluation
- Effective communication
- Cultural and social understanding

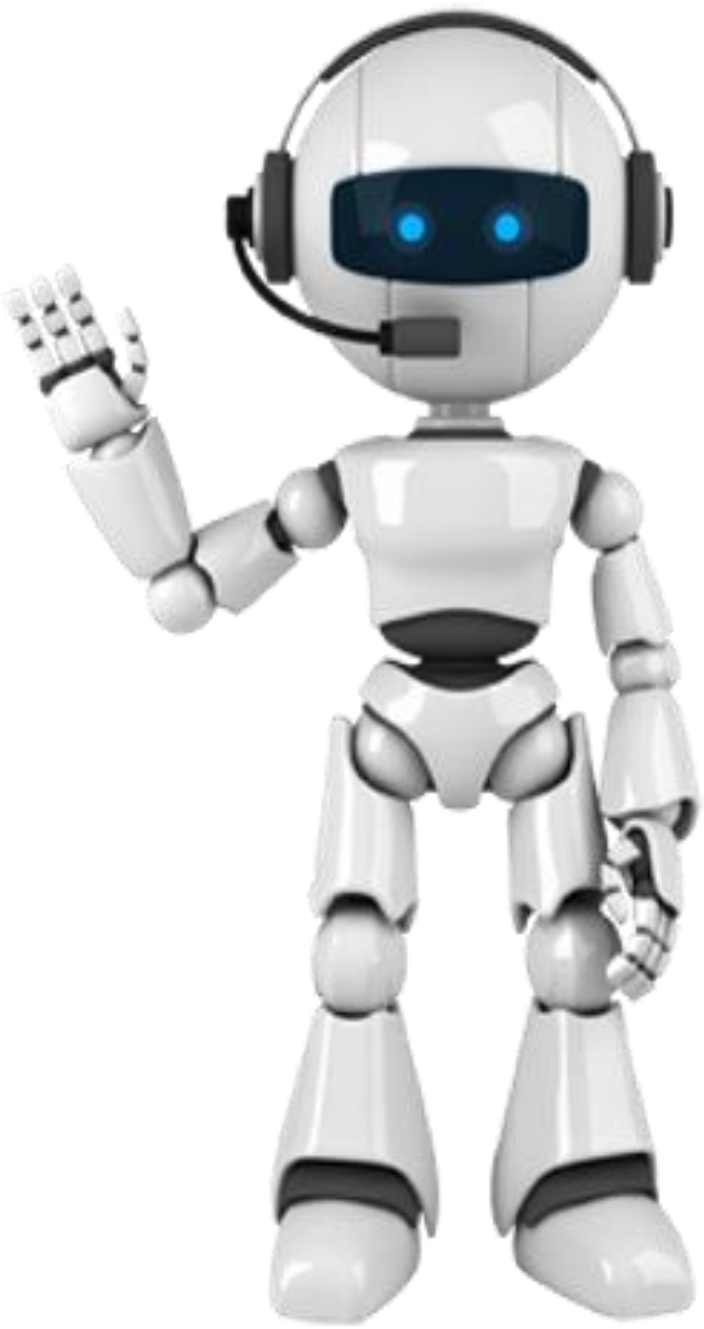


Importance of digital literacy in the workplace

- Not being digitally literate impacts job opportunities, work performance and organisation within the workplace: it can also prevent people from exceling in the workplace and therefore regulates the opportunity of better pay (Bejakovi
- Lack of digital literacy can also affect employee well-being because now most healthcare appointments and blood test request are online and not having access to these services will result in declining health and therefore low work performance.

Conclusion

- It is concluded that digital literacy is essential in order to not only keep up with new trends but also to maintain employability and well-being.



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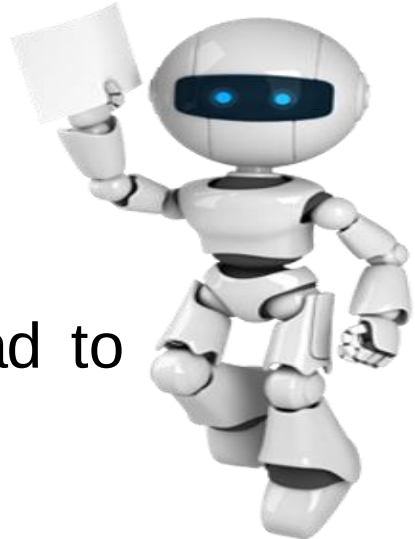
Module Name: Digital Skills and Research Methods
Topic: "The relevance of technical proficiency for data and information handling"
Lecturer: Amitave Banik

Overview

- The meaning of technical proficiency and its uses
- How technical proficiency is applied in data and information handling
- Conclusion
- References

The meaning of technical proficiency and its uses

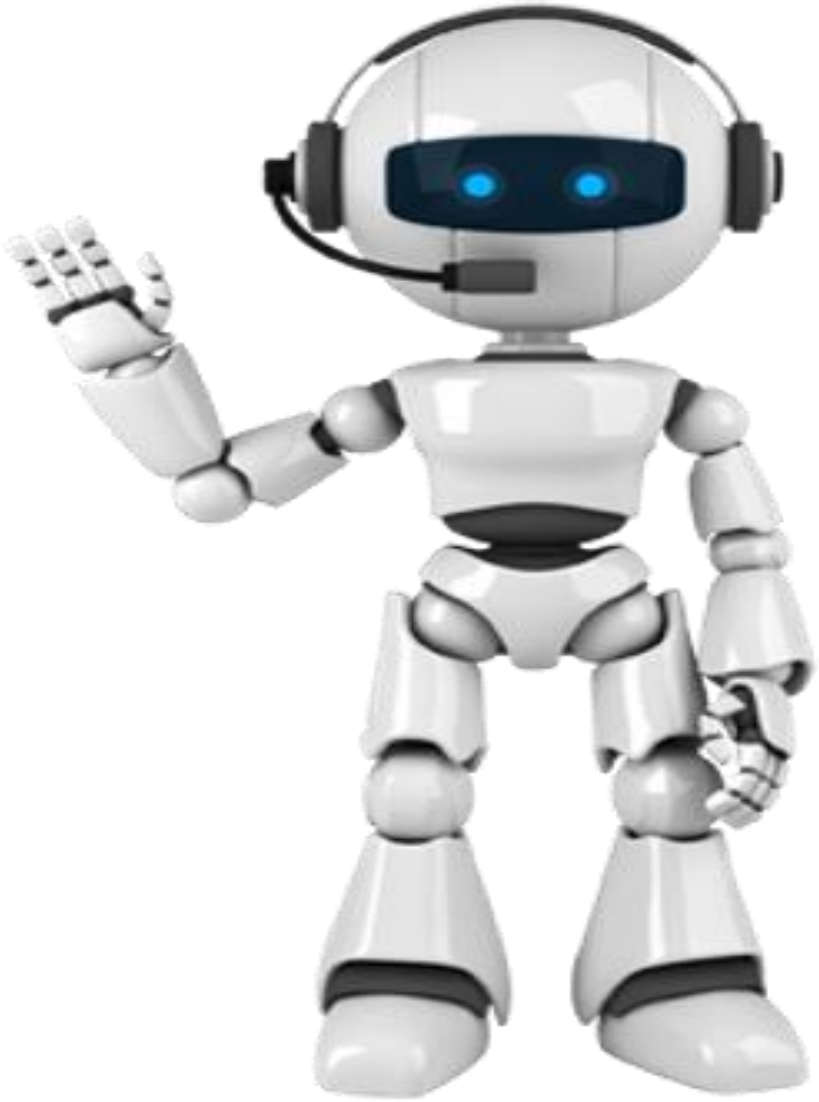
- Technical proficiency is a person's expertise and mastery of technical skills in a particular field and industry (Ismail, and Hassan, 2019).
- Technical proficiency involves deeply understanding the tool, techniques and technologies.
- In NHS, technical proficiency is essential for effective and efficient healthcare delivery (Hodes and Majeed, 2021).
- Technical proficiency can also lead to greater efficiency, productivity, and innovation in the workplace (Caruso, 2018).
- Technical proficiency is highly valued in the job market and can lead to better job opportunities and higher salaries.



How technical proficiency is applied in data and information handling

- Understanding data structures, algorithms and databases (Cho, Lee and Shin, 2020).
- Using software tools for data management analysis and visualisation.
- Ensuring data security and privacy (Kaaniche and Laurent, 2017).
- It allows healthcare workers to use digital systems and tools to access and share patient information securely and efficiently.
- Developing and implementing data-driven strategies for decision-making (Wingard, 2019).
- Communicating findings and insights effectively to stakeholders.
- Extracting insights from large and complex data sets (Hollander et al., 2021).

Conclusion



- It is concluded that technical proficiency is important for data and information handling.
- Technical proficiency involves having a deep understanding of the tool, techniques and technologies.
- Technical proficiency must be required for technical professional roles, such as engineers, technicians and programmers. It is also helpful for working efficiently and effectively.
- Technical proficiency is applied in many ways; it is used in software tools for data management analysis and visualisation and in developing and implementing data-driven strategies for decision-making.

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