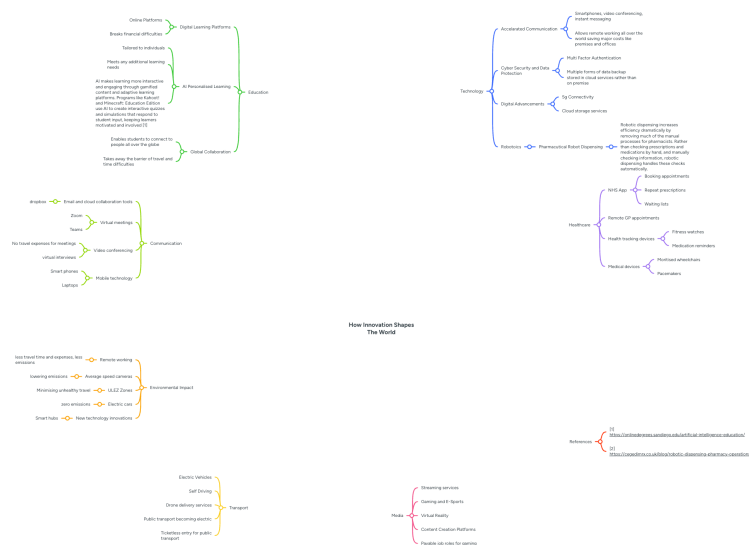


Tuesday, 20 May 2025 10:54

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Answer the following questions to create a **Mind Map**. Your mind map should be approx. 600 words, include citations and a reference list node (Approx. 4/5 sources). The mind map should be produced using freely available Mapping technology of your choice (e.g., Mindmeister.com) or an Office 365 Application. The areas covered in the following online topic can help you to answer the questions.

- **Q1.** Create a mind map that includes **some of the areas/concepts from Topic 1** of Unit 1 on Moodle and include **some project ideas** from areas of personal interest related to your programme of study.



Your answers to the questions below should refer to a project/research area of your choice (related to your programme of study). This task answer should be approx. 600 words with citations and a list of references (Approx. 4/5 sources). The areas covered in the following online topics can help you answer the questions below.

My project idea is 'Making the NHS Wales App as easy and as beneficial as possible for the patients and public'

- Q1. Create and document a single Aim and several Objectives** for your project.

The main aims and objectives of the NHS Wales App, from someone who is a developer on the app, are:

- 1. Simplify Access to Healthcare Services**
Provide a secure and convenient way for users to book appointments, request repeat prescriptions, and view their medical records—all in one place.
- 2. Empower Individuals to Manage Their Health**
Give people greater control over their health and wellbeing by offering easy access to personal health information and self-care tools.
- 3. Enhance Communication and Coordination**
Improve interactions between patients, GPs, and healthcare professionals by integrating digital services with existing NHS systems.

existing NHS system.

4. **Drive Innovation in Care Delivery**

Support the development of new, technology-enabled models of care that are more responsive and efficient.

5. **Ensure Inclusive and Accessible Design**

Make the app user-friendly and available in both Welsh and English, ensuring it meets the needs of diverse communities across Wales.

6. **Support the NHS's Digital Transformation Strategy**

Act as a foundational platform for future digital health services, aligning with broader goals to modernize healthcare in Wales.

The aim is to increase people's involvement in the management of their health and wellbeing to enable more positive health and social care outcomes for the people of Wales. The vision for the programme is wider than just providing an App. [1]

Q2. Identify an appropriate research philosophy for your project.

Online section: Unit 1 Topic 2 - How Do YOU Solve a Problem?

Research Philosophy for the NHS Wales App. Epistemology is the theory of knowledge. It is concerned with the mind's relation to reality. What is it for this relation to be one of knowledge? Do we know things? And if we do, how and when do we know things? [2]

Epistemological Considerations in the NHS Wales App

From looking at all the different research philosophy I think that Epistemology will be the best suited to my project idea which is the creation and purpose of the NHS Wales App.

1. The Source and Reliability of Health Information The NHS Wales App serves as a digital platform through which users can access a range of health-related data, including medical advice, prescription records, and screening results. From an epistemological perspective, this raises questions regarding the origin and reliability of the information provided. It is essential to consider how users can ascertain the accuracy of the content and whether the app's sources are sufficiently authoritative and evidence-based to support informed decision-making.

2. Formation of Justified Health Beliefs When individuals engage with the app to interpret test results or receive medical guidance, they inevitably form beliefs about their health status. Epistemology prompts an examination of whether these beliefs are justified. This involves assessing the quality of the data presented, the clarity of communication, and the extent to which users are equipped to critically evaluate the information they receive.

3. Accessibility and Equity in Knowledge Distribution One of the app's primary aims is to enhance accessibility to health knowledge across diverse populations. However, epistemological inquiry invites reflection on whether this goal is truly achieved. It is important to consider whether digital platforms like the NHS Wales App mitigate or exacerbate existing disparities in health literacy and access, particularly among individuals with limited digital proficiency or connectivity.

4. Trust, Identity Verification, and Epistemic Security The requirement for users to verify their identity before accessing personal health data introduces epistemological concerns related to trust and authenticity. The app must ensure that users can confidently engage with the system, knowing that the information is secure and that their interactions are with legitimate sources. This highlights the importance of epistemic security in digital health environments, where the integrity of knowledge and the credibility of its delivery are paramount.

I would also like to relate this to Pragmatism. Pragmatism research philosophy accepts concepts to be relevant only if they support action. Pragmatics "recognise that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities". [3]

Pragmatism is a flexible and outcome-oriented research philosophy that prioritizes practical solutions over rigid theoretical frameworks. When applied to digital health tools like the NHS Wales App, it encourages researchers to focus on real-world problems, such as data security, user trust, and system usability, and to use whatever methods best address those problems.

Security Issues in the NHS Wales App

The NHS Wales App has introduced features like:

- Secure messaging
- NHS Login integration

like the NHS Wales App, it encourages researchers to focus on real-world problems, such as data security, user trust, and system usability, and to use whatever methods best address those problems.

Security Issues in the NHS Wales App

The NHS Wales App has introduced features like:

- Secure messaging
- NHS Login integration
- Welsh Identity Verification Service
- Access to personal health records and prescriptions

These raise important security concerns:

- **Data privacy:** How securely is personal health information stored and transmitted?
- **Authentication:** Are login methods robust enough to prevent unauthorized access?
- **User trust:** Do users feel confident that their data is protected?

How Pragmatism Guides Research on These Issues

A pragmatic researcher would approach these questions by:

- **Combining methods:** Using both qualitative interviews (to understand user concerns) and quantitative analysis (to assess breach statistics or login failure rates).
- **Adapting tools:** Choosing research tools based on what works best for the problem—e.g., usability testing, penetration testing, or surveys.
- **Focusing on outcomes:** Prioritizing findings that lead to actionable improvements in app security, rather than abstract theories.

Q3. Select and document appropriate **search tools** including some specific **research databases** to identify research related to your project area and use **search strategies** to identify relevant research related to your project.

Online section: Unit 1 Topic 3 - Known Knowns.

How Databases and the NHS Wales App Link Together

The NHS Wales App and healthcare databases are connected because they both help improve patient care and support healthcare professionals.

1. Using Research to Build the App

The NHS Wales App is designed using trusted medical research. Databases like CINAHL, MEDLINE, and the Cochrane Library provide up-to-date information about treatments, symptoms, and best practices. This helps make sure the app gives safe and reliable advice to patients.

2. Helping Healthcare Staff

Healthcare workers in Wales can access databases through the NHS Wales e-Library. These databases help staff stay informed about the latest research. When staff use the app to support patients, they can trust that the advice is backed by evidence.

3. Connecting to NHS Services

The app links to NHS services like booking GP appointments, ordering prescriptions, and viewing health records. These services are part of a larger NHS Wales digital system, which also includes access to research databases. This helps make care more joined-up and efficient.

4. Supporting Learning and Health Education

The app gives patients basic health information. If they want to learn more, they can use NHS databases to explore topics in more detail. This is also useful for students on placement, who can use the e-Library to support their learning and understand how research links to real-life care.

TASK 3

Task 3: Research Strategies

Your answers to the questions below should refer to a project/research area of your choice (related to your programme of study). This task answer should be approx. 600 words with citations and a list of references (Approx. 4/5 sources). The areas covered in

words with citations and a list of references (Approx. 4/5 sources). The areas covered in the following online topics can help you answer the questions below.

Q1. Consider and document strategies to enhance **validity**, **reliability**, **generalisability** and **ethical considerations**.

Online section: Unit 2 Topic 2: Finding a Needle in a Haystack.

Figure 1. The CRAAP Test

Arash Emamzadeh

C urrency	1. When was the content written? 2. When was it published? 3. Has the content been updated?
R elevance	1. Why are you reading this article? 2. Does it deliver what it promises? 3. Are the language and coverage appropriate?
A uthority	1. Does the author have an academic degree in the field? 2. Is the writer experienced enough? 3. Does the writer use a systematic approach?
A ccuracy	1. Has the author cited his or her sources? 2. Are most of the sources scholarly and academic? 3. Have the results of these studies been replicated?
P urpose	1. What is the purpose of the article (e.g., inform, sell)? 2. Any evidence of conflict of interest or hidden agenda? 3. Is the topic controversial, attracting biased treatment?

Why Use the CRAAP Test?

- Helps filter out **unreliable or biased sources**
- Encourages **critical thinking** when researching
- Supports **academic integrity** by ensuring sources are credible
- Especially useful when navigating **online information**, where quality varies widely

Currency

- What is the publication date of the source?
- Are you expected to use information published within a specific timeframe?
- Is newer data or research available that may be more relevant?
- Has the content been updated, revised, or replaced by more recent findings or editions? [6]

Relevance

- Is the information relevant to your topic? Does it answer your question?
- Is the source of information aimed at a particular audience or is it pitched at a level that is appropriate for academic purposes?

Authority

Consider who wrote or published the information.

- Can you identify the author?
- Are they an expert in their field?
- What else have they written on the topic?
- Can you verify the author's credentials or the organisation they represent? [7]

Accuracy

- Examines the reliability of the content. Is the information supported by evidence, free from errors, and reviewed by experts?

Purpose

- Investigates the reason the source was created. Determine whether it aims to inform, persuade, entertain, or promote a particular viewpoint.

Q2. Select research strategies/**data collection methods** you would use to collect data for your project. And design a **pilot data collection** method appropriate for your project and acquire some feedback to improve the focus of your project (include in an appendix section/page and refer to in the main body of the proposal).

Research Strategies and Data Collection Methods for the NHS Wales App using Databases

To explore user experience, effectiveness, and security concerns related to the NHS Wales App, a combination of qualitative and quantitative research strategies is recommended. These strategies will help gather meaningful insights from both users and healthcare professionals.

My Research Strategies

Literature Review Using Databases

- Use databases such as CINAHL, MEDLINE, and the Cochrane Library to identify existing research on digital health apps, patient engagement, and NHS digital services.
- Apply Boolean search techniques (e.g. "NHS Wales App AND patient experience") and filters (e.g. UK-based, peer-reviewed, post-2020) to refine results.

User Surveys and Questionnaires

- Distribute structured surveys to app users to collect quantitative data on usability, satisfaction, and perceived security.
- Include Likert-scale questions and demographic data to support analysis.

Semi-Structured Interviews

- Conduct interviews with healthcare staff and patients to gather qualitative insights into how the app is used and perceived.
- Focus on themes such as accessibility, trust, and integration with NHS services.

Document Analysis

- Review official NHS Wales reports, digital strategy documents, and app usage guides to understand policy context and implementation goals.

Pilot Data Collection Method

The objective of this is to test the effectiveness of a mixed-methods approach in evaluating user experience and security concerns with the NHS Wales App.

Method Design

Sample Group: 10–15 patients registered with GP practices in Wales who actively use the NHS Wales App.

Tools:

- A short online survey (5–10 questions)
- Follow-up interviews with 3–5 participants

Topics Covered:

- Ease of use
- Trust in data security
- Access to services (e.g. prescriptions, appointments)
- Suggestions for improvement

Feedback Collection

After the pilot, participants will be asked to provide feedback on:

- Clarity of questions
- Relevance of topics
- Comfort level with sharing information

Feedback will be used to refine the survey and interview guide before full-scale data collection.

Q3. Outline some different types of quantitative and qualitative analysis.

Online section: Unit 4 Topic 1: It's All In The Numbers.

Online section: Unit 4 Topic 2: There's a Theme Here.

Qualitative research is distinct from quantitative research in its purpose, methods, and structure. While quantitative research focuses on producing measurable, numerical data within controlled settings, qualitative research seeks to explore and understand complex phenomena, social groups, or personal experiences that cannot be captured through statistical analysis. Rather than aiming for definitive answers or figures, qualitative research takes an exploratory approach, often relying on rich, descriptive data sources such as interviews, journal entries, photographs, and video recordings. [4]

Quantitative research serves as a foundational method, enabling researchers to explore phenomena using numerical data. By employing structured methodologies and statistical analysis, this approach offers a precise way to examine complex theories and hypotheses. It is particularly valuable in clinical and medical studies where the quantification of variables is critical. [5]

Appendices: Supplementary information

An appendix page/section can be used to include relevant supplementary information such as indirect supporting information to task answers, forum posts, tutorial activity answers, evidence of team-working.

Reference List

- [1] <https://apphelp.nhs.wales/about-us/> (2025)
- [2] <https://sheffield.ac.uk/hpdh/research/philosophy/themes/epistemology> (2024)
- [3] <https://research-methodology.net/research-philosophy/pragmatism-research-philosophy/> (2025)
- [4] <https://www.nu.edu/blog/qualitative-vs-quantitative-study/> (2023)
- [5] <https://casp-uk.net/news/what-is-quantitative-research/> (2024)
- [6] <https://libguides.bcu.ac.uk/critical-evaluation/checklist-approach> (2025)
- [7] <https://www.library.qut.edu.au/transcripts/craaptest.jsp> (2025)