

Activity 3.2 Create a high-fidelity UX design prototype and develop a usability testing plan

Access course FAQ chatbot (<https://lms.griffith.edu.au/courses/24045/pages/welcome-to-the-course-chatbot>)

Module 3 - Design user experience (UX) and conduct usability testing

The video player displays a woman with long brown hair, wearing a red blouse, standing and smiling. The video title 'Abby's introduction to: Activity 3.2' is overlaid on the right side. The video progress bar shows 0:00 / 1:41. The Griffith University logo is visible in the bottom right corner of the video frame.

What is this activity?

In Activity 3.2, you will create a high-fidelity UX design prototype and develop a usability testing plan for an application scenario. Building upon the knowledge and skills you acquired in Activity 3.1, you will now apply UX design principles and best practices to create an interactive prototype that showcases your application's user interface and user flows. You will also develop a detailed usability testing plan to validate your design decisions and gather valuable feedback from representative users.

The final output of Module 3 is a detailed report section that designs the user experience (UX) and conducts usability testing for the your chosen assignment scenario

(<https://lms.griffith.edu.au/courses/24045/assignments/93487>). It should include high-fidelity UX design

prototypes, comprehensive usability testing plans, and a thorough analysis of user flows and journey maps.

Why is this activity important?

By engaging in this activity, you will gain hands-on experience in translating your UX design ideas into tangible, interactive prototypes that effectively communicate your vision to stakeholders and development teams. You will also learn to plan and structure usability testing sessions that yield actionable insights and help you refine your designs based on real user feedback.

Some key benefits of this activity include:

Bringing your UX design ideas to life - By creating a high-fidelity prototype, you will be able to visualise and interact with your application's user interface, making it easier to identify areas for improvement and communicate your design decisions to others.

Validating your design decisions through usability testing - A comprehensive usability testing plan will enable you to gather valuable feedback from representative users, helping you validate your design choices and identify potential usability issues early in the development process.

Developing your skills in prototyping and usability testing - Through this activity, you will gain practical experience in using industry-standard prototyping tools and techniques, as well as planning and conducting effective usability testing sessions.

Iterating and refining your UX design based on user feedback - By incorporating insights from usability testing into your design process, you will learn to create user-centred application systems that meet the needs and expectations of your target users.



Case study

- ▶ MyHealthMate - Mobile Health Application



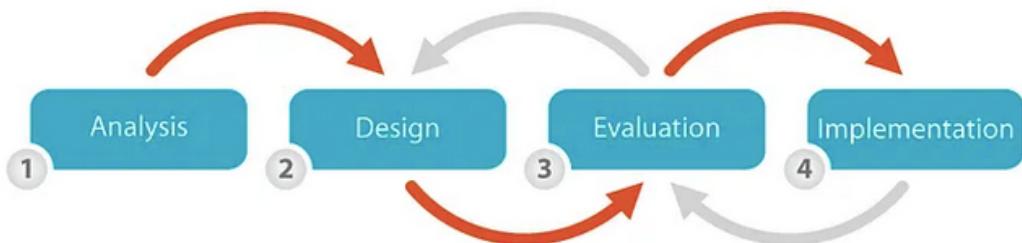
Supporting content for this activity

You should then work through the content elements below. These will reinforce the principles and elements from the MyHealthMate case study and will provide you with the knowledge and tools that you

need to successfully complete this activity.

▼ Supporting content A - Understanding user requirements and personas

The importance of user-centred design in application system development



User-centered design ([Image source ↗ \(https://medium.com/redcatstudio/user-centered-design-method-28e3aafc8c8a\)](https://medium.com/redcatstudio/user-centered-design-method-28e3aafc8c8a))

User-centered design (UCD) is a critical approach in application system development that places the needs, wants, and limitations of end-users at the forefront of the design process. This methodology ensures that the final product is not only functional but also intuitive and enjoyable to use, thereby increasing user satisfaction and adoption rates. By focusing on the user experience (UX), developers can create applications that align with user expectations and behaviours, making it easier for users to accomplish their tasks efficiently and effectively.

Incorporating user-centered design principles from the early stages of development helps in identifying **potential usability issues** and areas for improvement before significant resources are invested in the project. Through iterative design and user feedback, developers can refine the application, ensuring that it meets the needs of its intended audience. This process not only leads to a more polished product but also reduces the likelihood of costly redesigns or feature changes post-launch.

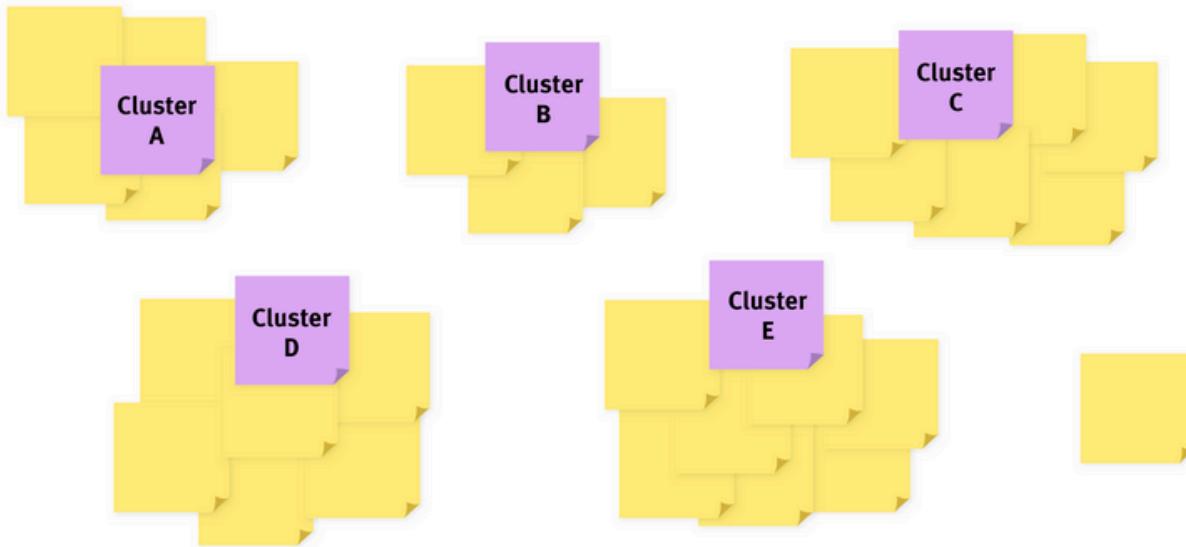
Moreover, user-centered design fosters a **competitive edge** in the market. As users have a plethora of options to choose from, applications that demonstrate a clear understanding of user needs and provide a superior experience are more likely to stand out. This user-centric approach can lead to increased customer loyalty, positive word-of-mouth, and ultimately, a stronger market presence for the application. Therefore, user-centered design is not just a methodological choice but a strategic imperative for the success of any application system development.

Techniques for gathering and analysing user requirements

Gathering and analysing user requirements is a fundamental step in the design process, ensuring that the final product meets the needs of its intended users. One effective technique for gathering requirements is through **user interviews**, where designers engage directly with potential users to understand their experiences, pain points, and expectations. This qualitative method provides rich,

in-depth insights that can inform the design direction. Another technique is **usability testing**, where users interact with a prototype or existing product to observe their behaviour and gather feedback. This not only helps in identifying usability issues but also in validating design decisions.

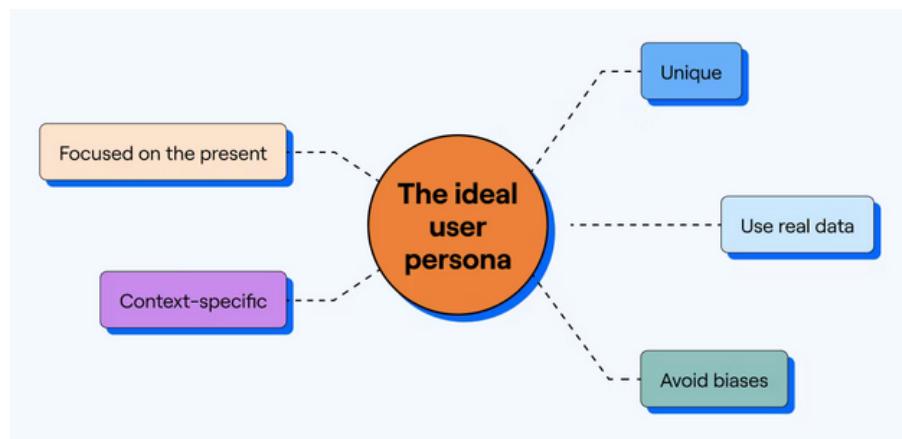
Surveys and questionnaires are also valuable tools for collecting quantitative data from a larger user sample. They can help in understanding user preferences, identifying common behaviours, and quantifying the importance of different features. Analysing this data can reveal trends and patterns that may not be apparent from qualitative methods alone. Additionally, **personas** and **user journey** maps can be created based on the collected data to represent the typical users and their interactions with the product, providing a focused target for the design process.



Affinity diagramming ([Image source ↗\(https://www.nngroup.com/articles/affinity-diagram/\)](https://www.nngroup.com/articles/affinity-diagram/))

To analyse the gathered requirements effectively, it is important to categorise and prioritise them based on user needs and business goals. **Affinity diagramming** can be used to organise similar requirements into groups, while the MoSCoW method (Must have, Should have, Could have, Won't have) helps in prioritising features based on their importance and feasibility. By combining these techniques, designers can ensure that the user requirements are not only understood but also **actionable**, leading to a product that is both user-centric and aligned with business objectives.

Creating effective user personas to guide UX design decisions



User personas ([Image source ↗\(https://maze.co/guides/user-personas/\)](https://maze.co/guides/user-personas/))

Creating effective user personas is a crucial step in UX design as it helps designers to understand and empathise with the end-users, ultimately guiding design decisions that cater to their needs and behaviours. A **user persona** is a fictional character that represents a segment of the target user base, encapsulating their goals, skills, motivations, and pain points. To create effective personas, designers must conduct thorough user research, which can include interviews, surveys, and observations of potential users interacting with similar products or services. This research provides the raw data needed to identify patterns and commonalities among users, which are then distilled into a set of representative personas.

When crafting user personas, it is important to go beyond demographics and create rich, **detailed profiles** that bring users to life. This includes incorporating user goals, scenarios of use, quotes from actual users, and specific pain points that the design should address. By adding this level of detail, personas become more relatable and actionable for the design team. Designers should also **prioritise personas** based on their relevance to the product and the potential impact of their needs on the overall user experience. This prioritisation helps in focusing design efforts on the most important user segments and ensures that the design decisions are aligned with the key user requirements.

Effective user personas serve as a constant reference throughout the design process, influencing decisions at every stage, from concept development to final iterations. They help in evaluating the design's effectiveness by providing a benchmark against which the design can be measured. For example, designers can ask themselves, "Would this design meet the needs of our primary user persona?" or "How would this feature benefit our secondary user persona?" By keeping personas at the forefront, designers can ensure that the user experience remains centered around the actual users, leading to more successful and user-centric products.

Best practices for aligning UX design with user needs and expectations

Aligning UX design with user needs and expectations is essential for creating successful and satisfying user experiences. Here are some best practices to achieve this alignment:

1. Conduct Thorough User Research:

- Begin with extensive user research to understand the target audience's behaviours, needs, and pain points. Use a mix of qualitative and quantitative methods such as interviews, surveys, usability tests, and analytics.
- Create detailed user personas and journey maps to represent different user groups and their interactions with the product.

2. Set Clear Design Goals:

- Establish clear, user-centric design goals that are aligned with the users' needs and the business objectives.
- Prioritise these goals to ensure that the most important user needs are addressed first.

3. Iterate and Prototype:

- Develop low-fidelity prototypes early in the design process to test concepts with users.
- Iterate based on user feedback, making adjustments to the design to better meet user needs and expectations.

4. Follow Usability Heuristics:

- Adhere to established usability heuristics, such as visibility of system status, match between system and the real world, user control and freedom, and consistency and standards.
- These heuristics help in creating intuitive and user-friendly interfaces.

5. Accessibility and Inclusivity:

- Design with accessibility in mind to ensure that the product is usable by individuals with disabilities.
- Consider different user capabilities and scenarios to create an inclusive experience for all users.

6. Test with Real Users:

- Conduct regular usability testing with real users throughout the design process.
- Observe how users interact with the product and gather feedback to identify areas for improvement.

7. Gather Continuous Feedback:

- Implement mechanisms for continuous feedback collection after the product launch.
- Use this feedback to make iterative improvements and ensure that the product evolves with the users' changing needs and expectations.

8. Stay Updated with Trends and Technologies:

- Keep abreast of the latest design trends, user behaviour patterns, and technological advancements.
- Incorporate new insights and technologies into the design to enhance user experience and stay competitive.

9. Foster a User-Centric Culture:

- Encourage a culture where user needs are always considered first within the organisation.
- Involve stakeholders and team members in user research and design activities to ensure a shared understanding of user needs.

10. Measure and Analyse User Experience:

- Use analytics and user experience metrics to measure the effectiveness of the design.
- Analyse data to understand how well the product meets user needs and expectations, and use this information to guide future design decisions.

By following these best practices, UX designers can create products that not only meet the functional needs of users but also delight them with an intuitive and enjoyable experience.

▼ Supporting content B - Creating high-fidelity UX design prototypes

Overview of industry-standard prototyping tools

Creating high-fidelity UX design prototypes is a critical step in the design process, allowing designers to visualise and simulate the user experience of a product before it's built. There are several industry-standard tools that designers use to create these prototypes, each with its own set of features and strengths. Here's an overview of some of the most popular ones:

1. [Figma](https://www.figma.com/) (https://www.figma.com/):

- **Cloud-based:** Figma is a web-based tool that allows for real-time collaboration, making it easy for teams to work together on designs from anywhere.
- **Vector Networks:** It uses a vector-based design system that enables precise control over shapes and lines.
- **Prototyping:** Figma has robust prototyping capabilities, allowing designers to create interactive prototypes with transitions and animations.
- **Auto Layout and Constraints:** These features help in creating responsive designs that adapt to different screen sizes.
- **Component Libraries:** Designers can create reusable components and styles, which helps in maintaining design consistency across projects.
- **Design System Support:** Figma is well-suited for creating and maintaining design systems, which is essential for large-scale projects.

2. [Adobe XD](https://helpx.adobe.com/xd/get-started.html) :

- **Integration with Adobe Suite:** Adobe XD integrates well with other Adobe Creative Cloud applications, making it a preferred choice for designers already using Adobe products.
- **UI Kits and Templates:** It comes with a variety of UI kits and templates that can speed up the design process.
- **Repeat Grids:** This feature allows designers to create and manage lists and grids efficiently.
- **Voice Prototyping:** Adobe XD supports voice prototyping, which is useful for designing voice-activated interfaces.
- **Auto-Animate:** This feature automatically transitions between artboards, creating smooth animations without the need for manual frame-by-frame design.

3. [InVision](https://www.invisionapp.com/) :

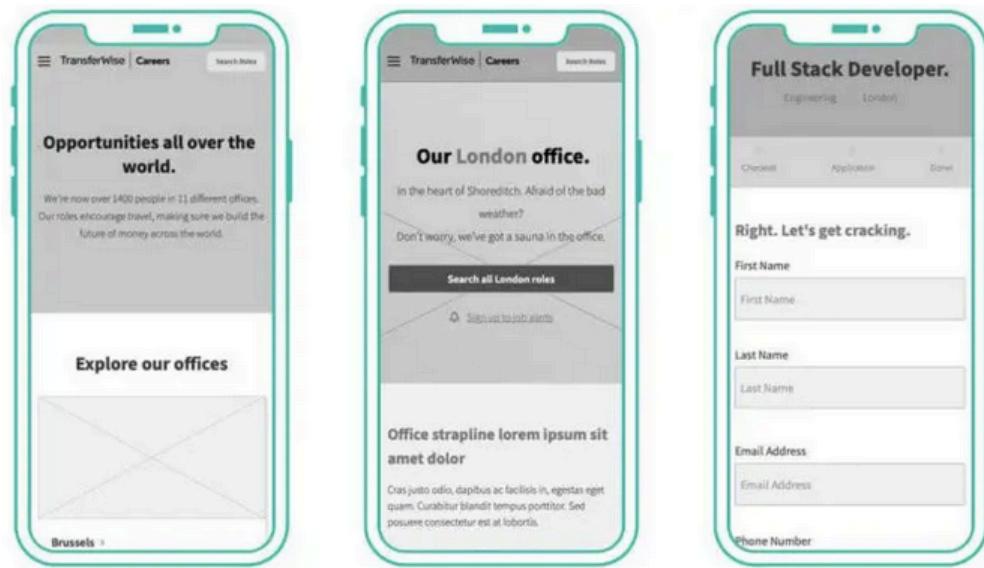
- **Collaboration and Feedback:** InVision is known for its strong collaboration features, allowing stakeholders to provide feedback directly on the prototype.
- **Linking and Animations:** It offers a simple way to link screens and create animations, making it accessible for designers who may not have a background in coding.
- **Craft Plugin:** The Craft plugin for Sketch and Photoshop extends the functionality of these tools, allowing for seamless integration with InVision.
- **InVision Studio:** This is a separate tool by InVision that focuses on creating high-fidelity animations and micro-interactions.
- **InVision Cloud:** It provides a cloud-based platform for sharing and reviewing designs, which is great for remote teams.

4. [Sketch](https://www.sketch.com/) :

- **Symbols and Libraries:** Sketch allows designers to create reusable symbols and manage shared libraries, which is useful for maintaining a consistent design language.
- **Plugins:** It has a rich ecosystem of plugins that extend its functionality, including plugins for prototyping, version control, and more.
- **Vector Editing:** Sketch is known for its powerful vector editing tools, which are essential for creating detailed and scalable designs.
- **Artboards and Pages:** It organises designs into artboards and pages, making it easy to manage complex projects.

Each of these tools has its own learning curve and set of features, and the choice of which to use often depends on the specific needs of the project, the team's workflow, and personal preference. Many designers use a combination of these tools to leverage the strengths of each at different stages of the design process.

Best practices for creating detailed wireframes and user flows



Wireframes ([Image source ↗\(https://www.pixelfridge.digital/how-detailed-should-wireframes-be-a-guide-to-wireframe-fidelity/\)](https://www.pixelfridge.digital/how-detailed-should-wireframes-be-a-guide-to-wireframe-fidelity/))

Creating detailed wireframes and user flows is a fundamental aspect of UX design that helps in visualising the structure and functionality of an application or website before diving into high-fidelity designs. Here are some best practices to consider:

- 1. Understand the User and Their Goals:** Before you start sketching wireframes, it's crucial to have a deep understanding of the users and their goals. Conduct user research, create personas, and define user journeys. This knowledge will guide you in creating wireframes that address the needs and pain points of your users, ensuring that the user flow is intuitive and efficient.
- 2. Start with Low-Fidelity Sketches:** Begin with low-fidelity sketches to quickly iterate and explore different ideas without getting bogged down in details. This allows you to focus on the layout and functionality rather than aesthetics. Once the basic structure and flow are established, you can move on to more detailed wireframes.
- 3. Keep Wireframes Detailed Yet Flexible:** While wireframes should be detailed enough to communicate the design's functionality, they should also remain flexible to allow for changes based on feedback and further iterations. Avoid adding too much design detail that might restrict the exploration of alternative solutions. Use placeholders for images and text, and focus on the placement and interaction of elements.
- 4. Document User Flows Clearly:** User flows should clearly map out the path a user takes to complete a task within the application. This includes all the screens, interactions, and decision points. Use diagrams to visualise the flow, and annotate them with explanations of what happens at each step. This documentation will not only help in creating a coherent wireframe but also serve as a reference for developers and stakeholders to understand the intended user experience.

By following these best practices, you can create detailed wireframes and user flows that effectively communicate your design intentions, guide development, and ultimately lead to a better user experience.

Applying visual design principles to create engaging and intuitive user interfaces

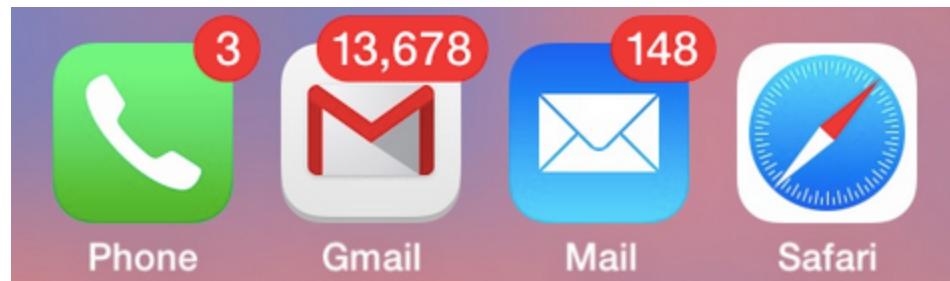


Applying visual design principles is essential for creating user interfaces that are not only aesthetically pleasing but also engaging and intuitive. One of the key principles is **consistency**, which involves using a unified color scheme, typography, and style throughout the interface. This consistency helps users recognise patterns and navigate the interface more easily, as they can anticipate how elements will look and behave based on previous interactions.

Another important principle is **hierarchy**, which involves organising content in a way that guides the user's attention and helps them understand the relative importance of different elements. This can be achieved through varying sizes, colors, and placement of elements on the screen. By establishing a clear visual hierarchy, designers can lead users through the interface in a logical flow, ensuring that the most important actions or information stand out.

Lastly, the use of **white space** (or negative space) is a powerful design principle that can greatly enhance the user experience. By providing breathing room around design elements, white space can reduce clutter and prevent the interface from feeling overwhelming. It also helps to group related items together, improving the overall legibility and scannability of the content. When combined with other visual design principles, white space contributes to an interface that is both visually appealing and functionally intuitive.

Incorporating interactive elements to simulate user interactions and navigation



UI elements ([Image source ↗ \(https://www.uxpin.com/studio/blog/user-interface-elements-every-designer-should-know/\)](https://www.uxpin.com/studio/blog/user-interface-elements-every-designer-should-know/))

Incorporating interactive elements into a user interface design is crucial for simulating user interactions and navigation, as it allows designers to create a more realistic representation of the final

product and gather feedback on the user experience before development begins. Here are some key aspects to consider when adding interactive elements:

- 1. Buttons and Clickable Items:** Ensure that buttons and other clickable items are clearly identifiable and behave as expected. This includes using appropriate hover states, active states, and click animations to provide feedback to the user. These interactions should be consistent across the interface to reinforce the application's behaviour.
- 2. Forms and Input Fields:** For forms and input fields, it's important to simulate the typing experience, validation, and error messaging. This helps in understanding the flow of data entry and ensures that the form is user-friendly. Placeholders, input masks, and auto-complete functions can also be simulated to enhance the user experience.
- 3. Navigation Menus and Tabs:** Interactive prototypes should include the ability to navigate through different pages or sections of an application. This can be achieved by creating clickable navigation menus, tabs, or breadcrumbs that demonstrate how users will move between different parts of the content.
- 4. Gestures and Touch Interactions:** For mobile and touch-enabled devices, it's essential to simulate gestures such as swiping, pinching, and tapping. This helps in designing interfaces that are responsive to touch interactions and ensures that the user can perform actions in a natural and intuitive way.
- 5. Microinteractions:** Small animations and feedback for user actions, known as microinteractions, can greatly enhance the perceived quality of the interface. For example, showing a checkmark when an item is selected or a subtle animation when a task is completed provides a satisfying user experience and confirms that the action has been successful.
- 6. State Changes:** Simulate how the interface changes in response to user actions or system events. This includes showing loading states, disabled states, and how content updates in real-time. By visualising these state changes, designers can anticipate and solve potential usability issues.
- 7. Accessibility:** When incorporating interactive elements, it's important to consider accessibility. This means ensuring that all interactive elements are keyboard accessible, provide appropriate focus states, and are compatible with screen readers. Accessible interactions benefit all users, especially those with disabilities.

By thoughtfully incorporating these interactive elements into the design process, UX designers can create prototypes that more accurately reflect the functionality of the final product. This not only helps in identifying usability issues early on but also aids in communicating the design vision to stakeholders and developers.

▼ Supporting content C - Developing comprehensive usability testing plans

Setting clear goals and research questions for usability testing

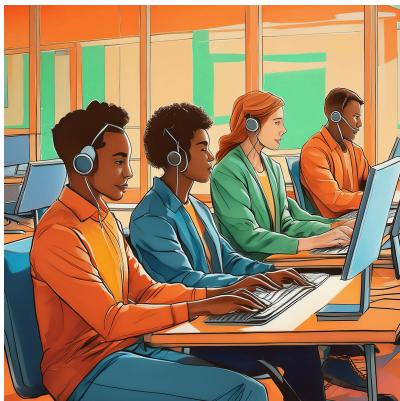


Setting clear goals and research questions for usability testing is a critical foundational step in the UX design process. These goals and questions guide the entire testing phase, ensuring that the efforts are focused and that the outcomes are actionable. Clear goals define what the team hopes to achieve with the usability testing, such as identifying pain points in the user flow, assessing the effectiveness of a new feature, or validating the overall user experience. These **goals** should be specific, measurable, achievable, relevant, and time-bound (SMART), providing a clear target for the testing process.

Research questions, on the other hand, are the specific inquiries that the usability testing aims to answer. They should be derived from the goals and be crafted in a way that allows for objective observation and measurement. For example, if the goal is to improve the efficiency of a task within the application, a corresponding research question might be, "How long does it take for users to complete Task X using the current design?" or "What are the common errors users encounter when attempting to complete Task X?" Well-defined research questions enable the testing team to collect relevant data and make informed decisions based on user behaviour and feedback.

Moreover, setting clear goals and research questions helps in designing the testing methodology. It influences the choice of participants, the tasks they will perform, the data collection methods, and the metrics for success. By having a clear understanding of what to test and what data to collect, the team can create a **structured test plan** that maximises the chances of obtaining valuable insights. This preparation also ensures that the usability testing remains efficient and cost-effective, as it prevents unnecessary testing and allows for the prioritisation of efforts on the areas that are most likely to impact the user experience.

Identifying target participants and recruitment criteria



Identifying target participants and establishing recruitment criteria are essential steps in developing a comprehensive usability testing plan for UX design. The selection of participants should be informed by the goals and research questions of the usability testing, ensuring that the individuals chosen are representative of the actual user base of the product or service being tested. This means considering **demographic factors** such as age, gender, cultural background, and education level, as well as **psychographic factors** like user behaviour, experience, skills, and attitudes towards the product or service. By carefully defining the target participant profile, the testing can yield more accurate and relevant results.

Recruitment criteria serve as the guidelines for identifying and selecting participants who meet the desired characteristics. These criteria should be specific and inclusive, outlining both the must-have qualifications and any exclusion criteria. For example, if the product is a mobile banking app, the criteria might include users who are already familiar with online banking services, thereby excluding those who have never used such services. The criteria should also consider the users' technical proficiency, frequency of product use, and any other factors that could influence their interaction with the product. This ensures that the feedback collected is from users who can provide insights into the typical user experience.

Effective recruitment is key to obtaining a **diverse** and **representative** sample of participants. This can be achieved through various methods, such as using existing customer databases, social media outreach, or partnering with recruitment agencies specialising in user research. It's important to craft a clear and compelling call for participants that explains the purpose of the testing, what is expected from the participants, and any incentives for their involvement. Transparency and ease of participation can encourage a wider range of potential users to engage with the testing process, ultimately leading to more robust and valuable user data.

Designing effective tasks and scenarios for usability testing sessions



Usability testing ([Image source ↗ \(https://uxdesign.cc/usability-testing-what-is-it-how-to-do-it-51356e5de5d\)](https://uxdesign.cc/usability-testing-what-is-it-how-to-do-it-51356e5de5d))

Designing effective tasks and scenarios for usability testing sessions is crucial for gathering accurate and insightful data on user interactions with a product or service. The tasks and scenarios should be crafted to closely mimic **real-world situations** that users are likely to encounter, ensuring that the testing environment is as **authentic** as possible. This involves creating a series of activities that guide participants through common user journeys, from simple navigation and feature usage to more complex problem-solving scenarios.

When designing tasks, it is important to consider the **user's goals** and the steps they would naturally take to achieve them. Each task should have a clear objective and be presented in a neutral manner, without leading the user towards a particular solution or biasing their actions. For example, instead of

instructing a user to "click the blue button," the task might be phrased as "make a payment for your order." This allows the user to interpret the interface in their own way, providing valuable insights into the clarity and intuitiveness of the design.

Scenarios, on the other hand, provide the context for the tasks and help set the stage for the user's experience. They should be crafted to reflect a variety of user motivations, needs, and potential obstacles. By embedding tasks within scenarios, testers can observe how users approach problems and make decisions in a simulated environment that closely resembles their actual experience. This holistic approach not only tests the usability of individual features but also evaluates the overall user journey and the effectiveness of the design in supporting user goals and expectations.

In summary, designing effective tasks and scenarios requires a deep understanding of the target users and their interactions with the product. By creating realistic and engaging activities, testers can gather actionable data that informs design improvements and enhances the overall user experience.

Determining appropriate metrics and data collection methods



Determining appropriate metrics and data collection methods is a critical aspect of usability testing, as it ensures that the data gathered will effectively measure the usability of a product and inform design improvements. Metrics should be selected based on the specific goals and research questions of the testing, providing quantifiable measures of user performance and satisfaction. Common usability metrics include task completion rates, error rates, time on task, click-through rates, and subjective satisfaction scores. These metrics help in objectively assessing the ease of use, efficiency, and user acceptance of the product.

In addition to selecting the right metrics, it is important to choose appropriate data collection methods that will accurately capture the necessary information. **Observation** is a primary method, where test facilitators watch participants perform tasks and take notes on their behaviour, struggles, and successes. This can be complemented by screen recording and eye-tracking technology to gain a deeper understanding of user interactions.

Questionnaires and **interviews** are also valuable for collecting qualitative data, such as user feedback, preferences, and suggestions. These methods can provide insights into the user's emotional response to the product and their perception of its usability. For quantitative data, tools like surveys with Likert scales or standardised usability questionnaires (e.g., System Usability Scale - SUS) can be employed to measure satisfaction and usability in a more structured way.

It is essential to balance the need for detailed data with the practicality of data collection. Overwhelming participants with too many questions or tasks can lead to fatigue and skewed results. Therefore, the chosen metrics and data collection methods should be tailored to provide the most

valuable information with the least burden on the participants. Ultimately, the goal is to gather a comprehensive dataset that will enable the UX team to make informed decisions and enhance the user experience.

▼ Supporting content D - Conducting effective usability testing sessions

Best practices for moderating usability testing sessions



Moderating usability testing sessions is a critical skill in UX design, as it directly impacts the quality of data collected and the participant's experience. Here are some best practices for moderating these sessions effectively:

Firstly, it's essential to establish a **comfortable and non-threatening environment** for participants. Begin with a warm welcome and clearly explain the purpose of the session, the process, and what is expected of them. Ensure that participants understand that the test is on the product, not on them, to alleviate any potential stress or performance anxiety.

Throughout the session, maintain a friendly and supportive demeanor, using neutral language and avoiding leading questions that could bias the participant's responses. Encourage open and honest feedback by reassuring participants that there are no right or wrong answers.

Secondly, effective moderation involves **active listening** and **observation**. Pay close attention to what participants say and do, not just to their successes or failures with the product, but also to their emotions and frustrations. Take detailed notes or, better yet, record the session (with the participant's consent) to capture all the nuances of their experience. Avoid the temptation to jump in and help or correct the participant; instead, use probing questions to encourage them to think aloud and articulate their thought process. This not only provides valuable insights into usability issues but also helps in understanding the participant's mental model.

Lastly, be **adaptable** and ready to adjust the session as needed. If a participant is struggling significantly with a task, it may be necessary to move on to prevent frustration. Similarly, if a participant is eager to share additional insights or experiences, allow the conversation to flow naturally within reason. At the end of the session, thank the participant for their time and effort, and consider offering a debrief where you can share some initial observations and gather any final thoughts. Remember, the goal of moderating usability testing sessions is to create a space where participants feel comfortable enough to reveal genuine experiences, which in turn leads to actionable insights for improving the user experience.

Techniques for observing and documenting user behaviour and feedback

- **Think Aloud Protocol:** Encourage participants to verbalise their thoughts, feelings, and intentions as they interact with the product, providing insight into their cognitive processes.
- **Note-taking:** Jot down key observations, quotes, and reactions during the session to capture specific moments and behaviours for later analysis.
- **Screen Recording:** Use software to record the participant's interactions with the product, capturing errors, navigation paths, and task completion for detailed review.
- **Video Recording:** Record the session, including the participant's facial expressions and body language, to gain a holistic understanding of their emotional responses.
- **Audio Recording:** Capture the conversation and the participant's verbal feedback, ensuring accurate quotes and allowing for detailed analysis of the discussion.
- **Task Analysis:** Observe and document the steps participants take to complete specific tasks, noting any difficulties or deviations from the expected workflow.
- **Usability Metrics:** Track quantitative data such as task completion rates, error rates, and time on task to measure the efficiency of user interactions.
- **Post-Task Questionnaires:** Administer short questionnaires after each task to gather immediate feedback on the participant's experience and perceived difficulty.
- **Interview Techniques:** Use open-ended questions and follow-up probes to explore the participant's experience in depth, uncovering underlying motivations and attitudes.
- **Behavioural Mapping:** Create a visual map of the participant's journey, noting where they click, what they view, and how they navigate through the product.
- **Eye Tracking:** Employ eye-tracking technology to understand what participants focus on and how their attention shifts during the session.
- **Heat Maps:** Generate heat maps from click data to visualise which areas of the product receive the most attention.
- **Session Replay Analysis:** Review recorded sessions to identify patterns in user behaviour and pinpoint areas for usability improvement.
- **Affinity Diagramming:** After the session, organise observations and feedback into categories or themes to identify common issues and insights.
- **Retroactive Think Aloud:** After completing a task, ask participants to explain their actions and reasoning, providing retrospective insights into their behaviour.
- **Storyboarding:** Create visual narratives based on the participant's journey, combining screenshots, notes, and quotes to tell the story of their experience.

Analysing usability testing data to identify insights and areas for improvement



Analysing usability testing data is a critical phase in the UX design process, as it allows teams to uncover insights and identify specific areas where a product can be improved. The first step in this analysis is to **review all collected data**, including session recordings, notes, and quantitative metrics. This involves watching video recordings, listening to audio, and reviewing any written feedback provided by participants. The goal is to immerse oneself in the data to understand the user's experience holistically. During this review, it's important to look for patterns and common themes in user behaviour, such as

where users encounter difficulties, where they succeed, and any points of confusion or frustration.

Once the data has been thoroughly reviewed, the next step is to **categorise and code the information**. This involves identifying key themes and grouping similar observations together. For example, all instances of users struggling with a particular feature can be categorised under "Navigation Issues" or "Error Handling." Coding helps in quantifying qualitative data, making it easier to prioritise findings based on frequency and severity. It's also useful to link these findings back to the usability goals and key performance indicators (KPIs) established before the testing to evaluate how well the product is meeting its objectives.

Finally, the analysed data should be synthesised into a **clear and actionable report**. This report should highlight the most significant insights and provide recommendations for improvement. It's important to present the findings in a way that is accessible to stakeholders, including visual aids like heat maps, charts, and storyboards. The recommendations should be specific, suggesting design changes or further investigations that could enhance the user experience. It's also beneficial to prioritise these recommendations, often based on the impact on user satisfaction and the feasibility of implementation. By presenting a well-structured analysis, UX designers can effectively communicate the value of usability testing and advocate for user-centered design decisions that lead to a more intuitive and enjoyable product.

Communicating usability testing findings to stakeholders and development teams



Communicating usability testing findings to stakeholders and development teams is a vital step in the UX design process, as it ensures that insights gained from testing are understood and acted upon. The first key aspect of effective communication is to **present the findings** in a clear, concise, and compelling manner. This often involves creating a comprehensive report or presentation that summarises the testing process, highlights key findings, and provides specific recommendations for improvement. Visual aids such as charts,

heat maps, and video clips of user interactions can be particularly persuasive in demonstrating the impact of usability issues.

Tailoring the communication to the audience is also crucial. Stakeholders may be more interested in the business implications of the findings, such as potential increases in user satisfaction, conversion rates, or retention. On the other hand, development teams need detailed information about the specific issues encountered and practical suggestions for how to address them. It's important to speak the language of each audience, using terms and examples that resonate with their priorities and concerns. For stakeholders, this might mean framing findings in terms of ROI or competitive advantage, while for developers, it could involve providing wireframes or code-level suggestions.

Finally, facilitating a **collaborative discussion** around the findings can lead to better outcomes. This might involve organising a workshop or meeting where stakeholders and development teams can review the findings together, ask questions, and brainstorm solutions. Encouraging open dialogue can help build consensus on the most critical issues to tackle and the best approaches for doing so. It's also an opportunity to educate stakeholders and developers about the value of usability testing and user-centered design, potentially leading to greater investment in UX activities in the future. By fostering a culture of collaboration and shared understanding, communication of usability testing findings can drive meaningful change and improve the overall quality of the product.

▼ Supporting content E - Iterating on UX designs based on user feedback

The importance of incorporating user feedback into the UX design process



Incorporating user feedback into the UX design process is crucial for creating products that meet the needs and expectations of the end-users. User feedback provides a direct line of communication from the people who will be using the product, offering invaluable insights into what works, what doesn't, and what could be improved. This **feedback loop** ensures that the design is user-centered, addressing real problems and enhancing the overall user experience. By listening to users, designers can make informed decisions that lead to more intuitive, accessible, and enjoyable products, which in turn can lead to higher user satisfaction and loyalty.

Moreover, user feedback helps in identifying **pain points** and areas of confusion that may not have been apparent during the initial design phases. It allows designers to **prioritise features** and functionalities based on actual user needs rather than assumptions or guesses. This can result in more efficient use of resources, as development efforts can be focused on the aspects of the product that will have the greatest impact on user experience. Additionally, incorporating **feedback** early in the design process can prevent costly redesigns later on, as issues are caught and addressed before they become deeply embedded in the product's architecture.

Finally, regularly seeking and integrating user feedback fosters a **culture of continuous improvement**. It encourages a mindset where the design is never truly finished but is always evolving to better serve the user. This iterative approach not only benefits the current product but also lays the groundwork for future innovations. Users who see their feedback being acted upon are more likely to engage with the product and provide further feedback, creating a virtuous cycle of improvement that can give a company a competitive edge in the market.

Prioritising and addressing usability issues identified through testing



Prioritising and addressing usability issues identified through testing is a critical step in the UX design process. Usability testing provides direct evidence of how users interact with a product, highlighting areas where users struggle, experience confusion, or encounter errors. By **analysing this data**, designers can create a **prioritised list** of issues based on their impact on the user experience. Issues that prevent users from completing tasks or that cause significant frustration are typically addressed first, as they can have the most profound effect on user satisfaction and product success. This prioritisation ensures that the most critical problems are tackled with the limited time and resources available, maximising the positive impact of any design changes.

Once the usability issues have been prioritised, it's essential to **address them systematically**. This involves revisiting the design with a critical eye, considering how changes can be made to alleviate the identified pain points. Solutions may range from minor tweaks, such as rewording labels or rearranging elements for better visibility, to more significant overhauls, like redesigning a workflow or adding new features to support user goals. Throughout this process, it's important to maintain a user-centric perspective, ensuring that any changes made are in service of improving the user experience rather than just fixing the issue at hand. This may involve further testing of proposed solutions with users to validate their effectiveness before implementing them.

Addressing usability issues is not a one-time task but an **ongoing process**. After implementing changes, it's crucial to continue testing with users to ensure that the fixes have had the desired effect and to identify any new issues that may have arisen. This iterative approach to design allows for continuous refinement of the product, ensuring that it remains aligned with user needs and expectations over time. Additionally, by demonstrating a commitment to improving the user experience based on feedback, companies can build trust and loyalty with their users, fostering a community of advocates who are more likely to provide valuable feedback in the future.

Making data-driven design decisions based on usability testing insights



Making data-driven design decisions based on usability testing insights is a cornerstone of effective UX design. Usability testing provides a wealth of quantitative and qualitative data about how users interact with a product, including their success rates, the time taken to complete tasks, and their subjective feedback. By analysing this data, designers can **uncover patterns and trends** that inform design decisions. For example, if a significant number of users struggle with a particular feature, the data suggests that the feature may need to be simplified or better explained. Similarly, if users consistently take a longer time to complete a task than expected, it may indicate that the workflow is inefficient and requires streamlining. By grounding decisions in data, designers can ensure that changes to the design are not based on assumptions or personal biases but are instead backed by evidence of what users actually need and how they behave.

Data-driven design also helps in **prioritising** which design changes will have the most impact. Not all usability issues are created equal, and resources are often limited. By analysing the data from usability testing, designers can identify which issues are most critical and address them first. This could involve looking at the **frequency** of an issue, the **severity** of the impact on the user experience, or the **number of users** affected. For instance, a problem that prevents a large number of users from completing a key task is likely to be more urgent than a cosmetic issue that only slightly annoys a few users. By focusing on high-impact changes, designers can make the most efficient use of their time and resources, leading to more significant improvements in the user experience.

Furthermore, data-driven design fosters a **culture of accountability and continuous improvement**. When design decisions are backed by data, they are easier to justify to stakeholders, and their success can be measured objectively. This transparency helps in building trust within the team and with stakeholders, as everyone can see the rationale behind design choices and their outcomes. Additionally, by regularly collecting and analysing data from usability testing, designers can monitor the impact of their changes and make further adjustments as needed. This iterative process ensures that the product evolves in response to user needs and behaviours, leading to a more refined and user-friendly experience over time.

Documenting and communicating design iterations to stakeholders and development teams

Documenting and communicating design iterations to stakeholders and development teams is a vital practice in the UX design process. It ensures that all parties involved have a clear understanding of the changes being made, the reasons behind them, and the expected outcomes. This **transparency** is crucial for maintaining alignment and fostering collaboration between designers, stakeholders, and developers. **Design documentation** should be comprehensive yet accessible, detailing the iterative changes with visual aids such as wireframes, prototypes, and annotated screenshots. It should also



include the **rationale** behind each iteration, linking back to user feedback, usability testing insights, and data-driven decisions. This context is essential for stakeholders to understand the value of the design changes and for developers to implement them effectively, ensuring that the user experience goals are met in the final product.

Effective communication of design iterations involves more than just documentation; it also requires **presenting the information** in a way that is engaging and understandable to both technical and non-technical audiences. Designers should facilitate meetings or workshops

where they can walk through the iterations, highlighting the key points and answering questions. Visual tools such as slideshows, videos, or interactive demos can be particularly effective in illustrating the design changes and their impact. Additionally, involving stakeholders and developers in the design process early on can help in building a shared understanding and gaining buy-in for the proposed changes. This collaborative approach can also lead to valuable feedback and insights that might not have been considered otherwise.

Moreover, clear communication of design iterations helps in **managing expectations** and facilitating smoother development processes. By understanding the design changes and their justifications, stakeholders can better anticipate the resources and time required for implementation. Developers, in turn, can plan their work more effectively, knowing the scope and priority of the design iterations. This proactive communication can prevent misunderstandings and conflicts that might arise from unclear or incomplete information. Ultimately, documenting and communicating design iterations is an investment in the success of the project, ensuring that everyone is working towards the common goal of creating a user-centered product that meets the needs and expectations of its users.



This activity is complete when you have

- Engaged with the AI tutor in the MyHealthMate case study and participated in class discussion to share your experiences and learn from others.
- Documented your analysis and recommendations for the MyHealthMate case study in a short report (1-2 pages, or a copy of the chat transcript), which will form part of your **portfolio** (<https://lms.griffith.edu.au/courses/24045/pages/building-a-portfolio-for-assignment-2>)..
- Applied the concepts of Activities 2.1 and 2.2 to your **application system design report** (<https://lms.griffith.edu.au/courses/24045/assignments/93487>)..