

Evaluation Report

Introduction

We choose an on-the-field interview evaluation style. We will interview users that are representative of our personas. Furthermore, we will be taking an expert evaluation from another group of students who represent our experts.

User interviews

Interview 1 with Tim a university student

Interviewer (I): Hello Tim! Thank you for joining us today. Your feedback will be crucial in improving our app. Are you ready to get started?

Tim (T): Hi! Yes, I'm ready.

I: Lovely! So, the purpose of this app is to control a smart shower panel. To ensure that the user will have control over their hot water, and you won't be wondering going into the shower if the water is warm. It will also allow you to set the time you would like the water to be warm and avoid spiralling energy costs.

T: Oh, that's very cool and something that would be very useful in my life right now. Half the time I try to take a shower at my student accommodation it is cold. Then I must hit the boost and I'm worried my energy bill is going to be through the roof.

I: Exactly, that's why we began working on this prototype. We would like to see how users like yourself interact with it. You'll be trying out the app and rating your experience and how easy it is to understand the features.

T: Perfect. What's the first thing I need to do?

I: Let's start by setting up the shower panel through the app. Let me know once you are on the home screen.

T: Got it. Let me have a go at this.

I: First thoughts on the app Tim?

T: Have to say I really like the layout of the app. From looking at this screen everything is clearly labelled, and I'd say it will be easy enough to navigate.

I: Now Tim this is a prototype, so some features may not work. If you could try to understand the intended functionality. For example, the plus button would raise the temperature once connected, and the timer scroll can be moved for selecting a time.

T: Okay, I see. I'll try to figure it out.

I: If you can. Try to figure this app out without my help. Obviously if you have any questions, feel free to ask, but I'll be noting if there was any part of the app you were stuck at.

T: Sure thing, what would you like me to do on the app.

I: I would like for you to set up the shower panel on the app. You will know is complete if you return to the home screen.

T: Ok. Yep, I see here they are asking for my name, I'll just throw that in. Now it is asking me to add shower panel and there are instructions underneath it. Ill just follow them now and see if anything confuses me. Yep, connect it to the same Wi-Fi that makes sense, I've connected to Wi-Fi a million times now I say. Now ill add profile on the shower panel and get the code and there's no other account connected. Now I'll just enter in the code and press next. Now I'll just name the shower something funny and add panel and I'm back at the home screen. I have to say that is very easy to use.

I: Good stuff Tim, how did you find that.

T: All good, no issues at all.

I: Now can you link your Spotify with the app?

T: Yep. I do this all the time while on my PlayStation or Sky. Ill just press the link Spotify button and I'm going to enter in the details now. Yep, all done very easy again, but I suppose I do have practice with doing that.

I: Good input Tim. You do have experience of doing this but are the labels clear and everything easy to use.

T: Yeah definitely, I can't see any issue with setting up your Spotify unless you forgot your password!

I: Now Tim final part I'll ask you to do. Can you set the boiler to heat up at 6 am every Monday. This will be complete when there's an orange square at 6 am in the schedule section.

T: No bother. Ok I assume ill click on the schedule and see where that brings me. Lovely I'm on a page which is showing me the temperature of the water now. I'm not certain what temperature I usually shower at, so I am just going to see what google says. Ok it says its recommended no more than 41 degrees so I'll just set it to that I can always adjust the temperature in the shower. Now I'll just set the time for 06:00 as I can tell it's a 24-hour clock. Now I can see that there is an orange square at 06:00 so that means its ready to go.

I: Mighty stuff Tim. Now that is all the tasks completed what did you make of the app?

T: The visuals are clear. Everything you need is labelled clearly on the home page. As I said I have experience in logging into the Wi-Fi and linking my Spotify but still as I said I think those things are foolproof and most people in the world have experience with that kind of stuff nowadays.

I: Thanks for that Tim. Anything you did not like or nay suggestions you would have.

T: I suppose the only thing that I wasn't a hundred percent sure on was setting up the schedule for the shower of when I wanted the water to be warm. I just assumed it was in schedule and pressed it and it got me to where I wanted to be but maybe some people wouldn't have that logic. Also, when I had to google recommended temperature. maybe there should be a popup for the recommended temperature, and you shouldn't be allowed to go to much above that temperature. Finally, the 24 hour makes sense to me but maybe some people would prefer the option of choosing.

I: Excellent Tim thank you for all that constructive feedback! Now, on a scale of 1-10, how would you rate the app for learnability, efficiency of use, satisfaction, utility, memorability, visibility, user control and freedom, consistency, and aesthetics?

T: Let me think... I'd give it a 9 overall. In my opinion it is extremely easy to use, and I had no issues. Add in those little tweaks I recommended, and it would be a 10 for me.

I: Thank you, Tim! Your insights are extremely helpful. That concludes our interview.

T: No problem. Happy to help!

Result of interview with Tim

Tim, engaged with the smart shower panel app prototype, providing valuable feedback on its usability and features. Overall, he found the app visually appealing, with clear and well-labelled elements on the home page. Tim had no issue completing tasks such as setting up the shower panel, linking Spotify, and scheduling the boiler. He praised the app's simplicity, particularly in tasks familiar to him, such as connecting to Wi-Fi.

Tim did suggest a few improvements, such as a clearer guidance for setting up the shower schedule and a popup for recommended temperature. Also, he proposed offering a choice between 24-hour and alternative time formats.

Despite these minor suggestions, Tim gave the app a high rating of 9 out of 10 for learnability, efficiency, satisfaction, utility, memorability, visibility, user control, freedom, consistency, and aesthetics. He expressed that with a few tweaks, the app could achieve a perfect score.

Interview 2 with Annette a 35-year-old female

Interviewer (I): Hello Annette! Thank you for participating in our app evaluation today. Your feedback is crucial for refining our design. Are you ready to begin?

Annette (A): Hi there! Yes, I'm ready.

I: Fantastic! So, the purpose of this app is to control a smart shower panel. To ensure that the user will have control over their hot water, and you won't be wondering going into the shower if the water is warm. It will also allow you to set the time you would like the water to be warm and avoid spiralling energy costs.

A: Oh, that sounds interesting. I hate it that my sons use all the hot water and there is none left for me for after work to have a shower and I am always looking for ways to save money.

I: Lovely! Let's dive in. Your goal is to try out the app and let us know your thoughts on its features. Starting with setting up the shower panel through the app. Please inform me when you reach the home screen.

A: Yes, I'm there now.

I: Any initial thoughts on the app, Annette?

A: The layout is nice, and I really like the colour scheme very easy on the eye, but I hope it's straightforward. I'm not very tech-savvy.

I: Noted. It's essential for us to understand how users with various tech backgrounds experience the app. This is a prototype, so some features may not work. Try to understand the intended functionality, such as the plus button for temperature and the timer scroll for selecting a time.

A: Okay, I'll keep that in mind.

I: Please try to navigate through the app on your own. If you have questions, feel free to ask, but we'd like to note any instances where you might need help.

A: Sure thing. What's my first task?

I: Start by setting up the shower panel. Let me know once you reach the home screen.

A: Ok, so first off ill enter in my name perfect first step done. Now it's giving me some instructions. I appreciate having them on the screen. Now connect the app to the same Wi-Fi as the shower panel not sure why it has to be the same but all that goes over my head, so I won't question it! Now I'll just add profile on shower panel and it is giving me a code on that, so I'll just enter that into the app and press next. Now that seems to have worked so I'll just call it my shower no need for any stupid name. Great I'm on the home screen. That was straightforward. I like how clear the instructions are.

I: Great to hear! Now, Annette, could you link your Spotify account with the app?

A: Hmm. What's the point of connecting your Spotify to the shower panel?

I: Good question. In our experience we talked to listened to music while in the shower and instead of bringing in their phone or speaker they can just play it off the panel.

A: I suppose I can see the point behind that but that wouldn't interest me personally, but I will do it now no hassle. Ok ill click on the link Spotify heading now very clearly marked. Now I'll just log into my Spotify. I can't remember my password so ill just log in through my google and lovely we are logged in. That was very easy now I have to say.

I: Good input, Annette. Now, the final task is to set the boiler to heat up at 6 am every Monday. Look for an orange square at 6 am in the schedule section.

A: Ok that is a good idea I always have my shower at the around the same time every day after work before I began dinner. Ill click on schedule now and ill choose the day. Now it's telling me the current temperature and what I would like to heat it up to. I know they say

usually between 35 and 40 degrees, so I'll just say 39 degrees there and set the time for 06:00. Now I see the orange block is there at 6am on a Monday that's great that I know I've successfully completed the task. Setting up the schedule wasn't too complicated at all. I found it easily and let me know when it was completed.

I: Fantastic, Annette! Now that you've completed the tasks, what are your overall thoughts on the app?

A: I really like the concept of the app. I feel like I am in control of the hot water now and won't have to be content with cold showers after work now. Everything was really easy to use and clearly labelled which as not a very tech savvy person like me is great and makes the experience much easier for myself. Again, I really like the colour scheme really drew me in.

I: Any specific aspects you liked or didn't like? Any suggestions for improvement?

A: I don't understand why you would need to link the Spotify as I feel the music would be too loud in the shower and it's not something I have ever done or would ever do, and I believe it would encourage people to stay in the shower longer due to that. Although there is no requirement for it to be linked so it's nice to have the option I suppose.

I: Thank you for your valuable insights, Annette. On a scale of 1-10, how would you rate the app for learnability, efficiency of use, satisfaction, utility, memorability, visibility, user control and freedom, consistency, and aesthetics?

A: I would give the app a 8. I was worried when you asked me to use this app that I would look like a fool as sometimes I struggle with these things, but I have to say everything was easy to use and I feel after only using it for five minutes I could show my mother how to use it. Of course, there are always improvements you can make such as adding a timer for how long you have been in the shower for to encourage people to get out after 3 minutes as its bad for the environment to stay in any longer after 5 minutes.

I: Your feedback is incredibly helpful, Annette. That concludes our interview. Thank you for your time!

A: No problem. Happy to help!

Result of interview with Annette

Annette, participated in the evaluation of the smart shower panel app. Her motivation stemmed from the desire to control hot water usage and save costs. Annette appreciated the concept and expressed concerns about running out of hot water, especially with her sons using it. She was open to technology but emphasized the importance of user-friendliness.

As Annette navigated the app, she liked the layout and colour scheme, finding it easy on the eyes. Setting up the shower panel was straightforward for her, and she commended the clarity of instructions. Annette linked her Spotify account, though she questioned the necessity of this feature for playing music in the shower. Lastly, she successfully scheduled the boiler to heat up at 6 am every Monday, showcasing the app's practicality.

Annette gave the app an overall rating of 8 out of 10, noting its ease of use and clear labelling. She appreciated the control it provided over hot water but questioned the Spotify integration's practicality. Annette's feedback highlighted the importance of tailoring features to user needs and preferences.

Interview 3 with Harry a 70-year-old male

Interviewer: Hello Harry! Thank you for taking the time to join us today for the app evaluation. Your feedback is crucial for refining our design. Are you ready to begin?

Harry (H): Hello there! Yes, I'm ready.

I: Fantastic! The purpose of this app is to control a smart shower panel, giving you more control over hot water and helping manage energy costs. How does that sound to you?

H: Well, that sounds interesting. Anything that helps me have a warm shower and save money is worth trying.

I: Lovely! Your goal is to try out the app and share your thoughts on its features. Starting with setting up the shower panel through the app. Please inform me when you reach the home screen. What would be your initial thoughts on the app, Harry?

H: The layout is nice, and the colours are easy on the eyes. I hope it's straightforward; I'm not too familiar with these fancy gadgets.

I: Noted. It's important for us to understand how users with different tech backgrounds experience the app. Since this is a prototype, some features may not work. Try to understand the intended functionality, such as the plus button for temperature and the timer scroll for selecting a time.

H: Okay, I'll do my best.

I: Please try to navigate through the app on your own. If you have questions, feel free to ask, but we'd like to note any instances where you might need help.

H: Sure thing. What's my first task?

I: Start by setting up the shower panel. Let me know once you reach the home screen.

H: Ok first it wants me to enter in my name I say I can manage that. Now it's giving me a few instructions for this task so give me a minute them first and I will try and make sense of them before I start on anything else.

I: Of course, Harry. Take as much time as you need.

H: Ok I'll start with the first instruction which is they want me to connect the app to the same Wi-Fi as the shower panel. I have gotten used to connecting to the Wi-Fi so this should be grand. Ok next ill connect it by pressing add profile on the shower panel. Lovely there it is now another task done. This is easy enough to use. Finally, just enter in the code and I can certainly do that an di am going to press next. Ok just add a name I suppose I will call it after my dog that I miss dearly. I seem to be at the home page. Now That wasn't too bad. The instructions were clear, and I managed to set it up.

I: Great to hear! Now, Harry, could you link your Spotify account with the app?

H: I don't have a Spotify account what exactly does Spotify do and why do I need to link it to my shower.

I: It's an app that allows you to stream music on your phone without having to buy CDs or searching them up on the internet. You can use mine for the purpose of this experiment. Also, our idea with allowing you to link Spotify with the app is to allow our users to listen to music in the shower without having to bring in their phone or speaker.

H: That would be great and that's a good idea. I have never listened to music in the shower before, but I think that's a great idea and will try it. Ok I see there's a heading saying link Spotify so I assume that is and I will just allow you to enter your details in as its your app and press log in and it says Spotify is linked. I have to say that's very easy to use.

I: Fair play Harry well done. Now, the final task is to set the boiler to heat up at 6 am every Monday. Look for an orange square at 6 am in the schedule section when it is done.

H: Will do ok I see again these headings have everything I need which is very convenient. Now it's telling me the current temperature of the shower and I only need it to be a little bit higher so I will set it to around 28 degrees. Now I just must choose the time which is 06:00. Now I see in the schedule section that there is orange square at 6am on Monday which is great. Setting up the schedule wasn't too complicated at all really. I found that quite easy.

I: Fantastic, Harry! Now that you've completed the tasks, what are your overall thoughts on the app?

H: I think this is a great idea. As mentioned above I really think its fantastic how all the headings are all in one place and they are all clearly labelled and all you have to do is click on them and you are where you want to be. I have to say the idea of linking your Spotify and playing your own music is a real eye opener and something I will try.

I: Any specific aspects you liked or didn't like? Any suggestions for improvement?

H: I have to say with these apps these kinds of stuff are foreign to me, but this app was so easy to use. It is very user friendly especially to us older people and everyone in general. I am not the biggest fan on the colour scheme it is a bit too dark for me and some of the writing for the instructions is a little bit hard to see but overall, a fantastic app.

I: Thank you for your valuable insights, Harry. On a scale of 1-10, how would you rate the app for learnability, efficiency of use, satisfaction, utility, memorability, visibility, user control and freedom, consistency, and aesthetics?

H: I have to say I found the instructions on how to set up the shower panel and overall, for the app fantastic. Headings were clear and I'm very satisfied with the app. Some parts of the instructions were hard to see and wasn't my favourite colour. I would give this a 9. It really has been an eye-opening experience.

I: Your feedback is incredibly helpful, Harry. That concludes our interview. Thank you for your time!

H: No problem. Happy to help!

Result of interview with Harry

Harry, a 70-year-old participant, engaged in the app evaluation for the smart shower panel. While initially cautious about technology, he found the concept intriguing, particularly the potential for warm showers and cost savings.

Navigating the app, Harry appreciated its clear layout and user-friendly design. Setting up the shower panel was a breeze, with the instructions being straightforward. Although unfamiliar with Spotify, he embraced the idea of linking it to the app for shower music.

Harry successfully completed the tasks, including setting the boiler schedule, and praised the app's convenience in consolidating headings. Despite some difficulty with colour schemes and text visibility, he deemed the app fantastic, especially for older users. The app's learnability, efficiency, satisfaction, utility, memorability, visibility, user control and freedom, consistency, and aesthetics received a commendable rating of 9 out of 10 from Harry.

Evaluation Heuristics

1. Colour Scheme and Text Visibility:

Issue: Some participants, particularly Harry, found the colour scheme a bit too dark and had difficulty with text visibility, especially in the instructions.

Rating: 2 - Minor usability problem

2. Setting Up Schedule Clarification:

Issue: Tim suggested that the process of setting up the shower schedule might benefit from additional clarification, particularly for users who may not intuitively navigate to the "schedule" section.

Rating: 2 - Minor usability problem

3. Spotify Linking Explanation:

Issue: Harry, unfamiliar with Spotify, questioned the necessity of linking it to the app. Providing a clearer explanation or optional tutorial may enhance user understanding.

Rating: 1 - Cosmetic problem only

4. Recommended Temperature Information:

Issue: Tim suggested including a popup or information regarding the recommended shower temperature to guide users and prevent potential discomfort or safety concerns.

Rating: 2 - Minor usability problem

5. 24-Hour Clock Option:

Issue: Tim mentioned that while the 24-hour clock made sense to him, offering an option for users to choose between 12-hour and 24-hour formats might enhance flexibility.

Rating: 1 - Cosmetic problem only

6. Aesthetic Preferences:

Issue: Harry expressed a personal preference for a lighter colour scheme. While subjective, it's worth considering for potential user customization options.

Rating: 1 - Cosmetic problem only

7. Music in the Shower Concept:

Issue: Harry found the idea of playing music in the shower intriguing after initial scepticism. While not a problem per se, it highlights a potential area for user education or marketing to promote features.

Rating: 0 - This is not a usability problem

8. Overall Learnability and User-Friendliness:

Issue: Both Tim and Harry commended the app's overall learnability and user-friendliness, emphasizing its accessibility even for users less familiar with technology.

Rating: 0 - This is not a usability problem

Expert Evaluation

For the expert evaluation we gave the app to some of our computer science classmates and got their opinion. We combined all their opinions and queries below into positive and negative feedback on each heading we had. Safe to say they had no issue in telling us what they would do better!

Learnability:

Positive Feedback: Users found the app easy to navigate, and the clear headings made it straightforward to understand its features.

Negative Feedback: Some users, particularly those less familiar with technology, may have found certain instructions confusing.

Efficiency of Use:

Positive Feedback: Experienced users, especially those familiar with Wi-Fi setups, found the app efficient to use.

Negative Feedback: Users unfamiliar with technology might need more guidance in setting up certain features.

Satisfaction:

Positive Feedback: Many users appreciated the app's ability to provide control over hot water and liked the idea of scheduling.

Negative Feedback: Some users, particularly those less tech-savvy, may have been unsure about certain functionalities, impacting overall satisfaction.

Utility:

Positive Feedback: Users recognized the practicality of the app in controlling the shower panel and potentially saving on energy costs.

Negative Feedback: Those unfamiliar with the need for smart controls in the bathroom might question the necessity of such an app.

Memorability:

Positive Feedback: Users found the app memorable due to its clear layout and straightforward navigation.

Negative Feedback: Some may forget specific steps for setting up features, requiring additional prompts or reminders.

Visibility:

Positive Feedback: Clear headings and well-labelled buttons contributed to good visibility.

Negative Feedback: Users might struggle with small fonts or unclear instructions, impacting the visibility of certain elements.

User Control and Freedom:

Positive Feedback: Users appreciated the autonomy provided in setting up schedules and linking external accounts.

Negative Feedback: Some may feel overwhelmed or unsure about the choices they need to make, impacting their sense of control.

Consistency:

Positive Feedback: The app-maintained consistency in its design, with uniform headings and logical navigation.

Negative Feedback: Users might find inconsistencies in font sizes or styles in certain sections.

Aesthetics:

Positive Feedback: Many users liked the colour scheme and overall design aesthetics.

Negative Feedback: Some found the app's colours too dark, impacting the overall appeal.

Conclusion

The app evaluation yielded valuable insights, showcasing positive aspects such as learnability, efficiency, and user control. Users appreciated the clear layout and functionality but identified areas for improvement, particularly in instructions and font size for less tech-savvy individuals. Overall, the feedback suggests a strong foundation for the app, with potential enhancements to cater to a broader user base.