User Evaluation Plan

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Assumptions

- I will use a figma front-end interactive prototype to evaluate the user experience.
- My front end prototype will cover the applicant's perspective of using the system.

Scope and why

I will seek to primarily gain an insight into my system and how users perceive it using the following two parts of the system:

- Obtain advice on suggested visa
- Applying for a visa

I have chosen these two aspects because it represents the main flow of the system and what users will want to primarily use the system for. This also provides a long enough time using the system for participants to form an opinion on the system and provide their critical feedback.

What I will measure

Quantitative

- Time taken to complete the full task from start to finish
- Amount of clicks taken

These more quantitative measures of the system allow us to obtain objective data that can be used to provide useful statistics in the analysis stage.

Qualitative

- User feedback (in the format of out loud thoughts)
- Observations (where the user naturally gravitates towards, etc)

The qualitative measures that I gather are more subjective and differ on a user basis however this will give a general idea of how the end users will navigate the system and thus give a better idea of how to tweak and tailor the system to make the user experience even better.

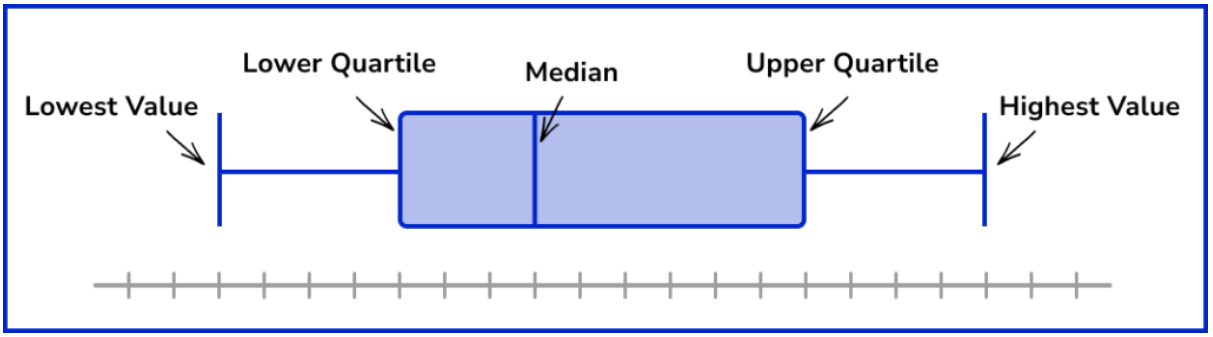
I can validate this by returning later for another guerilla usability test to confirm the changes made a difference or not.

Result analysis

Once this data has been collected I will collate it and produce the following

- Mean time taken from task start to completion across all participants.
- Minimum and maximum time taken to complete the task.
- Mean amount of clicks taken for a task to be completed across all participants.
- Minimum and maximum amount of clicks required to complete a task.

I will display the data on a box plot in order to easily see the tasks which take the longest amount of time and where the system can be improved as a result.



Approaches chosen + justification

Guerilla usability testing

Following the style of guerilla usability testing, an approach to evaluation in the wild for qualitative and subjective user data, I will find users in an environment where I can find target users such as an airport and offer them incentive for their insight on the current state and usability. I believe this style of on the spot user evaluation will provide a much more real sample size of potential users.

Lab testing

I also will employ lab testing in order to gather more quantitative and objective data as this can be done much easier in a controlled environment. Furthermore when recruiting people I can seek to find specific individuals that meet a certain criterion such as age group as opposed to an in the wild approach where I cannot control the type of person I encounter.

In conclusion a mix of both of these approaches should strike the correct balance between qualitative and quantitative measurable data in order to evaluate my system with.

Techniques used

Guerilla Usability testing

Think aloud method

The user will be informed that they should give their honest unfiltered thoughts aloud as they are using the system. Through this technique for the guerilla usability testing I can gain an

insight into the user's thought process as they are using the application and during this time I as the interviewer can record observations based on their interaction with the system and what they are saying/thinking.

Observational study

This leads on to the other part of this approach which will include the observational study of the users behaviour and tendencies when using the system. Things such as where the user naturally navigates to when using the system and how implicit it is to use the main workflow of the system should be critical to assessing the overall user experience.

Questionnaire using SUS questions

After the usability testing has concluded then the post study review will commence in which I will then carry out a small initial interview with the user debriefing them and then they will be asked to fill in a questionnaire with SUS questions where they will detail their opinions on the system using statements and marking their answers on a strongly disagree to strongly disagree rating scale. (See equipment SUS Questionnaire)

Lab testing

Observational study

The lab testing will also act as an observational study of the user however in the case of the lab study it is within a controlled environment with no external interference or worry of schedules leading participants to rushing through the system. We will seek to measure objective data using key tracking to obtain the amount of clicks needed to achieve the end goal of completing the task.

Questionnaire using SUS questions

In the conclusion of the lab test the participants will also be asked to fill in the SUS questionnaire for more overall data and because it is quick, easy and relatively effective for our purpose. (See equipment SUS Questionnaire)

Schedule and location

Guerilla usability testing schedule and location

Location: Manchester Airport immigration terminal

I have chosen this location because I will have the best opportunity to find people representative of my target audience, I should also be able to find people who have some level of experience in applying for visas and therefore I can ask for their opinion on how easy the system is to use in comparison to other systems on the market.

Date & Time: 16th/17th December

6 20 minute sessions

This sums up to 2 hours total.
6 users total should be a good sample size for what I am trying to measure and is in a safety net of the minimum needed users recommended for usability testing. (Nielsen, 2012)

Lab testing schedule and location

Location: Converted office

I have chosen this location because I can create a controlled and quiet environment In which to carry out the lab test. I should then be able to carry out my more quantitative data measure such as the amount of clicks taken.

Date & Time: 14th/15th December

In order to gather a big enough data set to analyse it is necessary to have a larger number of participants for the lab testing stage.

A minimum of 20 participants should provide a big enough range of data to identify any common trends and make adjustments to the system accordingly.

20 20 minute sessions is 6.6 hours so can be split in half over the duration of the two days.

Participants, recruitment and ethics

Guerilla usability testing participants

For recruitment of this in the wild approach to user evaluation it will be necessary to provide an incentive to entice people to try the software system. The main disadvantage with this approach is the ability to gather a range of different participants which is simply not possible to do as it is completely random. On top of this even if the desired target audience is present they may not be included to participate in the testing. I will seek to make up for this with lab testing recruitment.

Lab testing participants

In order to get a representative sample size of every possible user of the system or the most likely I will need to be careful in the selection of participants.

If all participants are similar in their knowledge of technology or the domain of visa processing then this will skew the data and the overall user experience measure will be impacted greatly. I must choose both participants with very little knowledge and those with more to strike a balance between meeting both user types needs.

Following on from the guerilla usability testing I can seek out and recruit the missing age groups and user types that I did not manage to acquire data from during that stage and make up for it during the lab testing, by explicitly seeking out those types of users.

Ethics

This project and testing will adhere to the BSC code of conduct made up of four key principles. (BCS - The chartered institute for IT, n.d.)

Public interest - The project and tests that go ahead will have regard and consideration for the parties involved, the participants gathered will represent the general public regardless of race, sex, age, disabilities, etc.

Professional competence and integrity - The project is within the competency of an achievable goal and does not claim to be of anything it is not. The system is developed with the awareness that not everything is known and testing being carried out supports this with a willingness to view alternative viewpoints and accept the criticism.

Duty to relevant authority - The processes and procedures taken within this project are compliant and participants are not deceived in any way by being disclosed any information that would have an impact on ethics.

Duty to the profession - The project and results of which seek to further the interests of the profession, making good quality software that does not do harm. The user evaluation tests that commence seek to improve the professional quality of the end product and thus maintain the integrity of the profession producing high quality software under the BCS standards.

In order to make sure I am disclosing all information and acting according to the ethics principles I will also require participants to fill in consent forms prior to the test. (See equipment, consent form)

Equipment needed

- Laptop
- Time taking device
- Recording device

SUS Questionnaire

**Example of SUS Questionnaire* (Brooke, n.d.)

ID	Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I think that I would like to use this system again.	☐	☐	☐	☐	☐
2	I found the system unnecessarily complex.	☐	☐	☐	☐	☐
3	I thought the system was easy to apply for a visa with.	☐	☐	☐	☐	☐

4	I think that I would need the support of a technical person to be able to use this system.	☐	☐	☐	☐	☐
5	I found the various functions in this system were well integrated.	☐	☐	☐	☐	☐
6	I thought there was too much inconsistency in this system.	☐	☐	☐	☐	☐
7	I would imagine that most people would learn to use this system very quickly.	☐	☐	☐	☐	☐
8	I found the system very cumbersome to use.	☐	☐	☐	☐	☐
9	I felt very confident using the system.	☐	☐	☐	☐	☐
10	I needed to learn a lot of things before I could get going with this system.	☐	☐	☐	☐	☐

Consent form

SAMPLE PARTICIPANT CONSENT FORM

TITLE OF RESEARCH STUDY:

Please answer the following questions by ticking the response that applies

	YES	NO
• I have read the Information Sheet for this study and have had details of the study explained to me.		
• My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point.		
• I understand that I am free to withdraw from the study within the time limits outlined in the Information Sheet, without giving a reason for my withdrawal or to decline to answer any particular questions in the study without any consequences to my future treatment by the researcher.		
• I agree to provide information to the researchers under the conditions of confidentiality set out in the Information Sheet.		
• I wish to participate in the study under the conditions set out in the Information Sheet.		
• I consent to the information collected for the purposes of this research study, once anonymised (so that I cannot be identified), to be used for any other research purposes.		

Participant's Signature: _____ **Date:** _____

Participant's Name (Printed): _____

Contact details: _____

_____

Researcher's Name (Printed): _____

Researcher's Signature: _____

Researcher's contact details:
(Name, address, contact number of investigator)

Please keep your copy of the consent form and the information sheet together.

Scenarios and roles

The users I find will take on the role of an applicant,
The scenario is the user instructions.

User Instructions

- Try and use the application to obtain advice on what visa to apply for.
- Try and use the application in order to apply for a visa.

I am opting to use very vague user instructions to test the simplicity of my system and how implicit it is to know where to navigate to in the system without having to be trained or go through a tutorial on how to use the website. If the system can achieve this I believe I can consider it to be a user friendly experience.

The simulated system and how to use it to conduct the evaluation

I will do this by using a high fidelity prototype with interactivity but it is strictly front end with no logic going on in the background. This gives the illusion of a complete and functioning software in order to gain key insight into user experience without the effort required of actually developing the whole system at this stage.

The figma simulated system can simply be used by the users by going through the flow from frame to frame, this will give the illusion of navigating through the system

Front end wireframes

Figma wireframes/prototype
Please see “**AFS Wireframes.pdf**” for full wireframes in image format.