

The Impact of UI and UX Design on Web Application Quality: A Mixed Methods Study

Information sheet

The purpose of the study is to examine the relation between user interface (UI) and user experience (UX) design on web applications, with a focus on identifying which design features impact UX the most and how they can be applied to web applications. The study will be conducted by Josh Haywood (JH248828).

The study consists of two parts an A/B test between two similar artefacts and a thematic analysis of results from a questionnaire given too two study groups. The first study group will test artefact A, an ecommerce website with specific alterations to its design informed by the literature review. The second group will test artefact B a website of the same genre made with a website builder. Each group will be tasked with selecting several products from different categories and adding them to the site's basket or cart. Participants complete this task by reaching the final stage of the application's life cycle, either a checkout page or confirmation page. Collecting several products gives users the opportunity to use all the site's core functionality, such as search and filtering. After completing the task, participants will fill out a qualitative questionnaire with the questions present in the figure provided in this slide. Artefact A will also use a click heat map via Microsoft Clarity to determine which elements were clicked the most. In total the task and questionnaire will take approximately 20 minutes to complete.

Potential risk of this study include:

- Privacy concerns regarding personal information and data security.
- Strain on eyes and neck due to prolonged screen use.
- Repetitive stress injuries due to prolonged mouse and keyboard use.

Participants may withdraw their consent after completing the task but before providing questionnaire data by contacting the study conductor or supervisor via email. Once participants have given questionnaire data they are obligated to remain in the study after a 3-week period. During this time, they may request to have their data removed. Participants must complete all required fields in the questionnaire, including providing a name for referencing purposes. This does not have to be their real name and won't be used as part of the study results; this name is used to identify participants during the 3 weeks after their submission should they make a deletion request. Participants may contact the study conducted at any point during the study with questions via email.