

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

Information sheet

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Brief

Introduction

The purpose of the study is to examine the relationship between user interface (UI) and user experience (UX) design on web applications. The study aims to identify which design features have the most impact on UX and how they can be applied to web applications.

Background

The rapid expansion of the internet with the launch of Web 3.0 has led to a significant increase in the number of websites. To make it easier for users to manage and customize their website designs, website builders have been developed. These builders allow users to simply drag and drop pre-made components into place, without the need for coding knowledge in HTML or CSS. In 2020, 43% of websites used the website builder WordPress, up from 13% in 2011. This rise in popularity is likely due to the convenience and accessibility of these builders for non-developers creating their first website as these users may not have the same level of knowledge and expertise as experienced web developers.

For these non-developers, user experience (UX) is crucial in maximizing the potential of web applications. UX involves using user-based metrics to evaluate whether a user interface (UI) design enables effective interaction and meets user requirements. Website builders may limit the effectiveness and uniqueness of design by only offering a set of predetermined tools. Negative UX can impact brand perception and decrease product value, while positive UX can help a website stand out through increased traffic or search engine optimization.

Objectives

1. To determine which design features, have the most impact on UX in web applications
2. To examine how these features can be applied to web applications
3. To identify best practices for designing web applications that enhance UX

Methodology

The study consists of two parts an A/B test between two similar artefacts and qualitative results from a questionnaire given to two study groups. Depending on your study group you will either test artefact A, an ecommerce website with specific alterations to its design or 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. In total the task and questionnaire will take approximately 20 minutes to complete.