

CASE STUDY: Usability Analysis of Prototype E-Commerce Website

Client's challenge

The client's aim was to streamline the user experience of online checkout by integrating state-of-the-art technology into an existing website that allows for richer and more dynamic interaction. The client desired a usability evaluation of both the current and prototype systems to evaluate user needs, expectations, and experiences in order to identify issues that (1) are critical enough to halt the launch and (2) have less impact, and could be addressed gradually after release.

Technical solution

Design Interactive, Inc. designed a two-tier approach to evaluate the websites:

1. **Expert reviews** included heuristic evaluations and cognitive walkthroughs. Current and revised designs of online checkout were evaluated against a set of usability heuristics to assess adherence to best practices for user centered design, and to uncover potential usability issues that may impact use and/or user satisfaction. Cognitive walkthroughs provided insight into operating procedures and identified ideal and alternative methods users may adopt to complete desired tasks.
2. **Usability testing** was completed with targeted users. Results from the expert review were used to guide the development of the test plan so that identified issues could be validated or dismissed and their relevance graded based on actual user interaction. In line with the client's request, 12 users from the general public were recruited to participate in the study which consisted of (1) a pre-test/screener questionnaire, (2) three task scenarios, and (3) post-task questionnaires to capture data about the subjective experience of the user.

A script was developed for the test moderator to ensure study quality and comparability of results. Observational techniques, video and screen recording as well as a think-aloud protocol were used to capture different aspects of the user interaction.

Results

The expert inspections revealed that the prototype design indeed addressed many shortcomings of the current site, and that integration of the new features happened intuitively so that current users are expected to experience no to minimal problems with switching to the new version. However, the prototype still contained critical usability concerns with respect to order handling. User testing confirmed that usability concerns did remain. Usability concerns were prioritized and associated with redesign recommendations to drive future development of the website. Expected benefits from implementation of redesign recommendations include improved user satisfaction, accelerated order processing and better handling of advanced features (e.g., multi-product orders).

Tools/Techniques Used

- Expert Evaluations / Heuristics
- Usability Testing

Deliverables

- Expert inspection results
- Experimental test plan
- Usability Metrics
- Usability Strengths and Weaknesses
- Redesign Recommendations