

EFFECTIVE TESTING OF WEBSITE'S NAVIGATION

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Relevance and aim of the research: Navigation is an important part of the user experience (UX) while moving through a digital interface. Having a good navigation system on a website or mobile app allows users to find information quickly and easily. The aim of this research is to study the combination of usability and functional testing methods for effective evaluation of the web products' navigation in use.

Methodology: In order to identify the most critical navigation errors on websites or mobile applications, it is recommended to use a combined approach that includes usability testing and some functional testing methods. Initially, it is necessary to identify the most critical navigation functions of the website. It is recommended to conduct testing on different types of devices to identify responsiveness issues. Heuristic usability testing allows to perform a quick analysis of the issues in interface, by having 5–7 experts that develop a separate set of Nielsen's heuristics for the navigation function. Those questions are covered by a set of survey questions and then are added to a Google Form. Task based usability testing allows to get valuable insights from users and development team. A set of tasks and related questions are created to evaluate the convenience of navigation for users. To obtain accurate results, it is necessary to gather a sufficient number of participants to ensure a representative sample. Functional testing allows to identify issues with dynamic website content and not working paths during navigation. Test techniques such as state transition testing, positive and negative testing, and scenario testing should be used in order to find such issues. Then a test suit is created in table form. The results of the surveys and functional testing are analyzed and then priorities are assigned to the issues found.

Results: The developed testing methodology has been successfully applied for testing of education and e-commerce websites. For simple websites, where minor changes in design are expected it will be effective to apply heuristic testing and AI heatmap analysis, which identify critical defects in usability and website's design. Task-based usability testing should be conducted for websites of medium complexity, where significant changes in design are planned. Combination of heuristic testing and functional testing will allow to check quickly main usability scenarios and find critical integration defects between interface, API, and services. It is better to apply

for websites of medium and high complexity, when changes in design and server-side of the website are expected.

Conclusions & practical implications: The proposed testing approach allows to identify critical navigation issues on the website from both usability and functionality perspectives. Additionally, this approach ensures effective testing of the website in use, depending on its complexity and the availability of resources for testing. The test results provide valuable recommendations for improving the website's usability and quality.

Keywords: usability, UX, heuristics, functional testing, heatmaps, website