Processing and Elaboration of Web Based Information: The Influence of Information Scent, Task, and Content Relevance

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by

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Abstract

This research investigates how visitors of Web sites cognitively process and elaborate on the information that they encounter. Influences of the amount of information cue embedded in a Web site’s interface, visitors’ goals of using a Web site, and the degree to which a Web site’s content is relevant to visitors are examined. This study draws from and integrates research from communication studies, cognitive sciences, and human-computer interaction to form its theoretical foundation. I argue in this study that the user-interface of a Web site presents options and content to visitors. It plays a critically important role in facilitating the interactions between the visitors and the Web site. The more information about options (information cue) that a user-interface provides for visitors, the easier it is for them to navigate. Visitors with different goals for visiting the site (e.g., seeking specific information or aimless browsing) would navigate process the site and cognitively process its content differently. Information seekers would focus on search efficiency, and the relevance and quality of information found in relation to their task; on the other hand, browsers without specific goals would focus on the relevance of information in relation to themselves. Finally, visitors with different goals might not only evaluate the information that they find differently, but they are also likely to navigate the Web site and process the information differently. Eye-gaze tracking and Web log data are used in combination with self-reported questionnaires to examine processes in the present study. The results show that task scenario, information cue, and content relevance contribute to the process of Web site visits. Having search tasks was shown to expand visitors’ time spent on a Web site. The findings also show that making options on user-interface more informative has an indirect influence on cognitive processing of site content via its effect on navigation behavior. The strengths of some effects of making user-interface more informative varied when content relevance was altered.