Google Suggest, Cognitive Load Theory, and Query Expansion: How Web Searchers Perceive Keyword Suggests in Google

Abstract
Web Search engines provide users with different facilities to improve retrieval. Keyword suggest for query expansion in Google is a new facility. However, users may find it difficult to use. The aim of this research is to investigate the extent and the types of cognitive load (Extraneous, Intrinsic, and/or Germane) that the searchers encounter in using Google suggested keywords. Little research has been reported in the area of using suggested keywords in the process of query expansion. The methodology of this research helps access to valuable results in this regard.

Design/Methodology/Approach: Through a mixed approach (using a questionnaire as well as “think aloud” technique) quantitative and qualitative data were collected from 60 post-graduate students from two broad fields of Humanities and Basic Sciences at Ferdowsi University of Mashhad, Iran.

Findings- Findings show that suggested keywords and retrieved pages did not make any significant problem (or negative cognitive load) for users. Also, there was no significant difference between Humanities students and Basic Science students regarding cognitive load when they were browsing the suggested keywords. Most of the suggested keywords and retrieved pages could fulfill users’ needs and had direct relationship with their primary keywords.

Conclusions- Suggested keywords/queries can help Web searchers learn better and expand their queries faster. On the other hand, based on users' reactions in this research towards the list of suggested keywords, designers could improve the search interface and provide a more relevant structure for optimizing queries.