The Effect of Computer Literacy on the Percentage of Personal File Search (Poster)

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Abstract

Personal Information Management (PIM) is an activity in which an individual stores his/her personal information items (such as files, emails, Web favorites) in order to retrieve and use them later. The two main ways by which items can be retrieved are through hierarchical navigation and search. Research has consistently found strong preference for navigation over search (Barreau & Nardi, 1995; Boardman & Sasse 2004; Capra & Pérez- Quiñones, 2005; Kirk et al., 2006; Teevan et al., 2004). Moreover, this preference was not affected by the use of advanced search engines (Bergman, Beyth-Marom, Nachmias, Gradovitch & Whittaker, 2008). However, these publications did not differentiate between users.

Our research questions were:
(1) Does computer literacy affect the percentage of search of all retrievals? Positive results could mean that as computer literacy increases so will the percentage of search retrievals.
(2) Does the amount of PIM order affect the percentage of search of all retrievals? Here we assumed that the messier the participants would be, the more they will be inclined to use search.

Participants were 73 computer users aged 20-53. Thirty seven of them were males. 42 of them used Windows 7 OS, 23 used XP, 6 used Vista and 2 used a Mac. Participants answered an online questionnaire. *Search* percentage was measured with a self-estimation question in which was found to be highly reliable in (Bergman et al., 2008). *Computer literacy* was measured as the sum of correct answers for 18 "know how" questions. *Order* was measured using a 4 options Likert scale.

Results show no significant correlation between *computer literacy* and *search percentage* $r(72)=0.09$, $p=0.47$ or between *order* and *percentage of searches* $r(72)=0.025$, $p=0.84$. Unexpectedly we found positive correlation between order and computer literacy $r(72)=0.24$, $p<0.05$. Mean *search percentage* was 16 (SD=16%), compared to 62% for navigation. Although the Windows 7 search engine is much more advanced than that of XP, we found no significant difference between the Windows 7 and XP users, conforming with (Bergman et al., 2008).

The results that *search percentage* is unaffected by *computer literacy*, the quality of search engine used and even *order*, may indicate that navigation preference is rather a stable attribute and not merely habits result. Our current research is attempting to find cognitive and neurological reasons for that. The unexpected correlation between *computer literacy* and *order* can be explained in several alternative ways, and should be a further studied.

Keywords: Personal information management, search, navigation, computer literacy.

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