

Files Retrieval and Sharing: Is There a Contrast Between Attitudes and Behavior? / Esther Sher

Abstract

Managing information items such as files is a basic activity performed by billions of computer users, which includes storing, organizing, retrieving and sharing files. This study focuses on files retrieval and sharing. Files can be retrieved in two main ways: hierarchical folder navigation and query-based search using a search engine. Files can also be shared in two main ways: either by email or using cloud-based services. Previous studies have found that despite the arguments regarding search efficiency, there is a preference for navigation over search even with improved search engines. In addition, despite the arguments highlighting the advantages of cloud sharing, it has been found that cloud sharing may cause several practical problems.

The aim of this study was to find differences between the attitudes of computer users regarding the ways to retrieve and share files, and the actual behaviors found in previous studies. We examined subjects' attitudes toward the two main file retrieval options - navigation and search, as well as their attitudes toward the two file sharing options - e-mail and cloud. We compared the results of this study to the results of previous studies.

The research questions were examined using a questionnaire in which subjects were presented with a brief explanation of the two main ways of file retrieval, navigation and search, and an explanation of the two main ways of file sharing, e-mail and cloud sharing. The questionnaire consists of multiple-choice and open-ended questions, the answers to which are between one and one hundred, representing a percentage of searches. The questionnaire was answered by 110 respondents, of whom 38 were men, 71 women and one respondent who did not identify gender. The average age of the subjects is 28.39 years (standard deviation 12.90 years). Their average number of years of schooling was 14.19 (standard deviation 3.44). When subjects were asked to

rate their computer skills on a 1-5 Likert scale (1 very low, 5 very high), their mean response was 3.79 (standard deviation 0.95).

This study includes research questions related to the subjects' assessment regarding file retrieval: the effect of search engines on the search percentage, the effect of the quality of the search engine on folders organization, the effect of age on the search percentage, and retrieval speed; As well as research questions concerning the subjects' assessment regarding file sharing: preference, success, and speed of retrieval of email versus cloud, current and future cloud use, and vulnerability.

The first research question was what is the subjects' assessment of the percentage of file searches out of the total retrievals regarding: old search engines, improved search engines, and search engines in the future. On average, the participants estimated that old search engines are used in 30% of retrievals. However, the average estimation about the use percentage of improved search engines increased to 68% of retrievals. The estimation about the use percentage of search engines in the future was even higher, 82% on average. However, the search percentages found in previous studies are much smaller. Regardless of the search engine, users searched only in 4% -15% of the file retrieval events. However, they used navigation in 56% –68% of retrievals (Bergman et al., 2008). Another study (Bergman et al., 2019) found that participants used folder navigation in order to retrieve their files in 84% of cases, but used search engines only in 4% of cases.

The second research question was whether the subjects thought that the use of improved search engines leads to a decrease in the use of folders and whether they assess that in the future search engines would eliminate folders. Most respondents (73%) thought that the use of improved search engines leads to a decrease in the use of folders. In addition, most respondents (82%) believe that the improvement of search engines is eliminating the need to folders. However, previous studies have found no evidence that using improved desktop search engines leads users to change the way they organize their folders and rely less on the hierarchical organization of folders (Bergman et al., 2008).

The third research question was what is subjects' assessment about the effect of age on search. When respondents were asked to estimate the percentage of recent search engine searches among users in their twenties and among users over the age of 50, most respondents (70%) thought that younger people use search engines more than older people. The estimated percentage of searches for users in their twenties (75%) was significantly higher than the estimated percentage of searches for users aged 50 and over (49%). In other words, subjects estimated that the percentage of search decreases with age. These results contradict the findings of a previous study that found that young people do not search their files more than older people. Furthermore, a positive correlation was found between age and search percentage. That is, younger people tend to search less for their files (Bergman et al., 2019).

The fourth research question was what way do subjects think makes retrieval faster - search or navigation. In the current study, 60% of the respondents thought that search is the faster way, 13% of the respondents thought that there is no difference between the retrieval time of the two ways, while 27% of them thought that the navigation is faster. These findings suggest that most subjects think that search is faster than navigating. This is in contrast to the findings of a previous study that found that the retrieval time of search was significantly longer than the retrieval time of navigation.

The fifth research question was which sharing method (via email or cloud) do subjects assess is preferable to use, which leads to greater retrieval success, and which leads to faster retrievals. Most respondents (73%) thought that the preferred sharing method was cloud-sharing, and most (57%) thought that retrieving files shared by cloud was more successful, and about half (49%) thought that retrieving files from the cloud was faster. However, previous research found that email sharing is more effective. It has been found that the chances of failing to retrieve files shared in the cloud are significantly higher than the chances of failing to retrieve files shared by email (Bergman et al., 2014). These findings were validated in another study (Bergman et al., 2020a).

The sixth research question was what did the subjects consider the sharing method (email or cloud) that is used more today and which method they consider will be used more in the future. Although only 34% of respondents answered that today people most use the cloud to share files,

82% of them assessed that in the future people will most share files by cloud. Indeed, according to the findings of computer users tend to share their files via email more than in the cloud. Here no contradiction was found between the attitudes of the participants in the present study and the actual behavior found in previous studies. However, the evaluation given by the participants for cloud sharing in the future shows positive attitudes towards cloud sharing.

The seventh research question was what did the subjects consider the sharing method in which retrieval is more vulnerable to the increase in the number of files, the number of partners, the number of versions and the time elapsed since the last retrieval. Only 35% of respondents thought that cloud sharing was more vulnerable than email sharing to these issues. However, a previous study found that factors related to collection size, file versions, and user workload adversely affect cloud-shared files retrieval more than email-shared files retrieval.

In conclusion, comparing the findings of the present study with the findings of previous studies indicates a contradiction between users' attitudes regarding file retrieval and sharing, and actual users' behavior. Participants in the present study reported positive attitudes toward search versus navigation as well as cloud-sharing versus e-mail sharing, in contrast to previous research findings that found that the most effective method of file retrieval is navigation and that the most effective method of file sharing is email. The present study indicates that the findings of previous studies regarding file retrieval and sharing are counterintuitive.

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