What Happens Once You Categorize Files Into Folders?

Kyong Eun Oh
Rutgers University
4 Huntington Street New Brunswick, NJ 08901, USA
keoh@eden.rutgers.edu

ABSTRACT

This study examined a post phase of personal information organization in an attempt to investigate the dynamics of personal information organization. To collect data, eleven participants were asked to record diary entries for a week whenever they saved or organized their information in digital forms. Then, a first interview was conducted to ask how they organized the information files. About 2-4 weeks after the first interview, a second interview was conducted to examine what happened after files were categorized into folders. Interviews were recorded, transcribed and analyzed by using a grounded theory approach to find out what decisions were made after files were categorized into folders, and why participants made such decisions. The initial analysis of the results showed that once information files are organized into folders, people keep them in the folder, move them to other personal devices, re-categorize them either by organizing them into different folders or splitting the existing category, or delete them. By focusing on the post phase of personal information organization which has been rarely investigated, this study deepens our understanding about personal information organization. In addition, the results of this study have practical implication for human computer interaction (HCI) studies in designing tools, devices and interfaces that are more effective in supporting individuals' personal information management (PIM).

Keywords

Personal information management, personal information organization, information organizing behavior, categorization.

INTRODUCTION

Personal information is the information a person keeps for personal use either directly or indirectly. In our daily lives, people keep and organize a large number of personal information items in digital forms (Boardman, Spence, & Sasse, 2003). As time goes by, not only new information files are created or received, but also various changes are made into the already organized information files. However, while personal information organization has been investigated in various ways, little is known about what happens once people categorize files into folders. Personal information is directly related to people's daily life in pursuing various goals, performing diverse roles and responsibilities, and therefore, it is important to have an accurate understanding about how people organize their personal information to develop strategies and tools that effectively support personal information organization. Thus, this study aimed to examine personal information organization with a special focus on its post phase of categorization in an effort to provide a more holistic view of personal information organization.

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RELATED WORKS

In PIM literature, organizing has been understood as one of the primary activities, so that there are a number of interesting studies which investigated how people organize personal information. To be more specific, there are studies which examined organizational structures of personal information by investigating number of files and folders, size of each category, and the depth of the organizational structures (Boardman & Sasse, 2004; Henderson & Srinivasan, 2009; Whittaker, Bergman, & Clough, 2010). Many researchers also explored different types of personal information organizing strategies primarily based on the amount of organized information and frequency of organization (Abrams, Baecker, & Chignell, 1998; Boardman & Sasse, 2004; Malone, 1983; Whittaker & Sidner, 1996). In addition, various factors that influence personal information organization (Barreau, 1995; Kwasnik, 1989), and different types of personal information objects (Barreau & Nardi, 1995; Cole, 1982) have been investigated.

However, previous studies rarely focused on what happens after files are organized into categories. There are a few studies which mention changes that are made in file organization; however, this was not a primary focus of their studies so that the fact of changes were either stated without examining empirical data (Whittaker, 2011), or briefly investigated by reporting the changes in number of files and folders (Gon□alves & Jorge, 2003; Ravasio, Schär, &

Krueger, 2004). Thus, while it is important to understand the post phase of categorization to have a holistic understanding about personal information organization, little is known about what decisions are made once people organize files into folders, and why such decisions are made. This was the motivation for the study reported here.

METHODOLOGY

Participants

Eleven participants at Rutgers University were recruited via recruitment in classes and using a personal network. Participants were mostly undergraduate students in Communication Studies. Demographic information of participants is presented in Table 1.

Procedures

This study was composed of three stages. In the first stage, participants were asked to record diary entries over a week on a given template whenever they saved or organized information in digital forms. In the second stage, a post-diary semi structured interview which asks questions about how and why participants saved and organized information files was conducted based on the diary which participants kept over a week. In the third stage, another semi-structured interview was conducted to examine whether there had been any changes made to files (or their folders) that were discussed in the first interview. To examine the changes, this interview was conducted about a month after the first interview.

Demographic Information		#of Participants
Age	20s	8
	30s	2
	60+	1
Gender	Male	1
	Female	10
Ethnicity	Caucasian	9
	Asian	2
Level of Study	Undergraduate	8
	Graduate	2
	Professor	1
Field of Study	Communication Studies	6
	Human Resource Management	3
	Human Computer Interaction	1
	Information Technology & Informatics	1

Table 1. Demographic information of participants.

A month seemed enough time for some changes to occur yet not so long that participants would not remember their organizing activities. Interviews were recorded and transcribed for further analysis. Then, the diary and the interviews were analyzed by using a grounded theory (Strauss & Corbin, 1990).

RESULTS AND DISCUSSION

Once participants organized files into folders, they made various decisions: Keeping; moving; re-categorizing; and deleting. Detailed explanation about each decision is provided as follows.

Keep

Participants kept some files in the same folder without making any changes. Reasons why participants kept the same organization included perceived appropriateness, ongoing use, and unnoticed.

Appropriateness

Participants kept the organization when it was regarded as most appropriate folder for the organized files. For instance, when asked why he/she kept certain file in the folder without making any changes, participant 3 (P3) answered that "It's really related to exactly that. It's really specific to that reviewing assignment, so that's the only place I will store it". In a similar vein, P3 mentioned that if he/she needs to access that specific file, he/she is not going to look for it elsewhere but the folder where he/she categorized it. Thus, participants kept the organization when they think it is the best location to place the files.

Ongoing Use

Participants also did not make any changes to the files and folders when they were currently in use. For example, P2 said, "I left that folder because I use those files to develop my paper". Similarly, both P6 and P10 kept the folder which contains the files that are related to a class exam before they take the exam; however, once they are done with that exam, both participants made changes to the organization. This will be further discussed in the 'Re-Categorize' section.

Unnoticed

Regardless of its appropriateness, sometimes organization was kept simply because participants forgot about it. For example, when P2 found certain file which is categorized into a folder, he/she said, "I didn't recognize that they were in 'Downloads'", indicating that he/she kept the organization because he/she did not notice about it. While explaining why she kept certain files that he/she usually deletes after he/she is using them, P3 also said "The only reason for not deleting is I forgot about it". Thus, some files were kept in the same folder even when they were inappropriate or no more in use, because they were unnoticed by participants.

Move

Sometimes a folder itself was moved to another location. Reasons for moving folders included back up and sharing.

Back Up

Participants often moved the folder itself to other personal devices when they wanted to back up the files. For instance, P1 and P11 regularly moved folders into their external hard drives to back up files, P2 moved folders to his/her personal website, and P3 moved them to his/her computer at home. Thus, although types of devices vary, participants moved the folders into certain places to back them up.

Sharing

Folders were also moved to the other locations when they need to be shared with other people. The most common cases were sending them via email attachments.

Re-Categorize

Sometimes organized files or folders were re-categorized. Participants re-categorized files or folders by placing organized files or folders into a different folder, or by splitting the existing folder. In the case of re-categorization made by placing them into different folders, the primary reason was inappropriateness. In the case of re-categorization that is made by splitting a folder, the main reason was differentiating files that are organized in that folder.

Inappropriateness

Participants re-categorized organized files when they thought the current folder is inappropriate because a more appropriate category exists. This inappropriateness was sometimes caused by participants' mistakes. For instance, when P5 saw certain files that were organized into a folder, he/she said, "They shouldn't be here, they should be in my school folders", indicating that he/she mis-categorized the files initially. Participants also categorized files into an inappropriate category when they did not have enough time to categorize files into a more appropriate category. For example, when the researcher asked why he/she organized certain information file in an inappropriate category, P3 said "Because I was in a hurry". Sometimes categorization which was appropriate became inappropriate because the value of the information changed. For instance, P3 mentioned that one of the information files which was written by one of his/her co-authors was initially categorized into 'Jessica's Paper' folder, however, it will be re-categorized under 'Papers accepted' folder, once it gets accepted.

Differentiation

Participants also re-categorized files by splitting a folder. This re-categorization occurred when participants want to differentiate files from other files in the same folder. Often, files that belong to the category but are not going to be needed were categorized into a sub-folder in the category to be differentiated from other files in the folder which are currently used by participants. In this study, P4, P6 and P10 all re-categorized files by creating a sub-folder in a category to differentiate files that are not in use from the files that are currently used by them. For instance, P6 said "I put it in the 'exam 2' folder, because that was what I needed to know for exam 2, and I don't want to have it mixed up with the exam 3 notes that I need to study". Thus, participants sometimes re-categorized files by splitting the folder by creating a sub-category in an attempt to differentiate them from other files in the category.

Delete

Sometimes participants deleted organized files or folders. Reasons for deleting organized files included no future use and alternative access.

No Future Use

Participants often deleted files or folders when they are not needed anymore. For example, when the researcher asked why he/she deleted a folder, P9 said, "I erased that folder, actually the whole folder. Because I just felt like, I wasn't ever really like going back and looking at them".

Alternative Access

Although participants may need them in the future, participants deleted organized files when those files can be easily accessed by other ways when needed. For instance, when the researcher asked why he/she deleted the file, P8 said, "Because it's saved on my Facebook page already. So I didn't really need another copy on my computer". Thus, sometimes participants deleted information files when they can be acquired without saving them.

CONCLUSION

This study investigated what happens after files are categorized into folders, which is a post phase of personal information organization. The results showed that several decisions are made once files are categorized into the folders including keeping, moving, re-categorizing, and deleting. The analysis of the results showed that such post organization decisions were made primarily based on *use* condition of the files (e.g., on-going use, future use, no future use) and temporal condition, which influenced both the use of files as well as perceived value of the files. The findings from this study revealed that personal information organizing process is a dynamic ongoing process that cannot be done at once, and often involves a post phase. This study presented some initial analysis of the results that was conducted with a limited number of participants. In the future, the researcher plan to extend this study with more participants. In addition, this study will be further investigated by examining the relationships between post organizing decisions and types of information objects. Another fruitful avenue for extending this study would be examining the influence of technology and diverse personal devices in making post organization decisions. Knowing post phase of personal information organization widens our understanding of PIM. In addition, the findings from this

study can be contributed to the development and design of PIM devices and applications that support an individual's organizing information.

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