**Personal Information Management of Ph.D. Scholars of Library and Information Science**

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**Abstract:**

Scholars are intensive users of information and study of their work has long been important to information science. In the course of their work, scholars generate large collections of information and managing this material must at least in part determine their effectiveness. This paper focuses on how scholars manage their information which is collected during Ph.D. work in print and digital format with using different methods as well as their own skills. E.g. they manage information by using web 2.0 tools, Information and communication technology, cataloguing skill, classification skill, etc., and how they deal with errors while they acquire, retrieve, store their information. The paper also indicates that Information Literacy programmes provided by libraries will help scholars in PIM.

**Keywords:**

Personal Information Management, Information Management, Knowledge Management, Information Overload, Social Network, Web 2.0 tools, Reference Management, Information seeking, Information Literacy.

**Introduction:**

‘Personal Information Management’ or PIM is both the practice and the study of the activities of people perform to acquire, organize, maintain, retrieve, use and control the distribution of information items such as documents (Print or Digital), Web pages, and email messages for everyday use to complete tasks (work related and not) and to fulfill a person’s various roles (as parents, employee, friend, members of the community, etc.) (Fourie, 2011)

Personal Information has been defined as the “user’s activity when they acquired, organize, retrieve, and process information in their own spaces.” (Teevan et al., 2006)

PIM considers not only the methods used to store and organize information, but also is concerned with how users retrieve information from their collections for reuse. This paper helps in studying, understanding, and practising of PIM of users organization work more effectively and efficiently and also help to users how to deal with Information Overload, and can highlight useful strategies for archiving, organizing, and facilitating access to save information.

In the last few years there is great impact of Web 2.0 tools on PIM. Web 2.0 facilitates social networking and collaboration and therefore is also referred to as the Social Web. The underlying principle of Social Web is to make use of the “wisdom of the crowd” and “user generated content.” The wisdom of the crowd is a term coined by Surowiecki (2005) who argues that a large group of people is smarter than an elite few.

**Need to Manage “Personal Information”:**

Ph.D. scholars have to manage their “Personal Information” which they acquired or collected during Ph.D. work, because their research is a long term process. If information is kept as a well managed flow it will be easy to retrieve without any trouble. Therefore they have to manage their collection or information very neatly and skillfully with using Information and Communication Technology as well as their own skills.

As per Al- Omer and Cox (2016), there is the need to manage research related materials because to find material again, for resource sharing with others, to cope with fear of loss. Founded information of collection are huge in quantity, in different formats therefore need to manage it properly.

As per Otopah and Dadzie (2013), because of the spate of information explosion in the present era, one encounters so much information at times that one actually does not need it, and one does not always find the right information in time when one needs it, therefore need to manage personal information for retrieving to it easily when needed.

**Personal Information Management Practices (Core activities of PIM i.e. acquiring, storing, organizing, maintaining, retrieving):**

Otopah and Dadzie (2013) focused on personal information practices of students. Paper showed findings that, format, skills, size, of collection, memory, and habits accounted for diverse PIM practices among users. These core activities, coupled with the information age, often leave users exposed to so much information than they need. Driven by the fact that they would need to use the information again in their short term or long term activities and decisions, users need to keep some of these information items they encounter. This leads to the creation of personal information collections, which sometimes happens unconsciously. As a matter of fact, students often add and also retrieve information from these collections on daily basis. Therefore, it has become vital for them to be equipped with the right attitudes, appropriate skills and tools to be able to effectively and efficiently create and manage their personal information collections.

Fourie (2012), pointed out on planning, maintenance, use, collaboration, searching literature etc.

Information re-finding (Chaudhry et. al., 2015) is a more directed and targeted search task than information finding. Finding information is an exploratory activity that involves recognition, while re-finding information is a focused task which involves both recognition and recall.

Chaudhry et.al. (2015), Kearns et. al. (2014) showed that the most favoured method to keep information for future use was bookmarking followed by saving information in folders or drives. Other methods used for keeping information for future use are listed below:

* Linking through Bookmarks and Favourites
* Saving on desktop and hard drives
* Emailing to yourself
* Storing on outside services
* Pasting the web address (URL) into a document

Chaudhry, Rehman et. al. (2015), pointed out different practices to manage personal information. Approaches used for re-finding information were 1. Search by keywords, 2. Browse through folder structure (by names of folders and files), 3. Accessed through bookmarks, 4. Search file names by remembering tags or labels, 5. Prefer to use my memory, etc.

Methods used to keep or store information are 1. Bookmark website or add a favorite, 2. Save on desktop, personal folders, or share drives, 3. E-mail to yourself, 4. Stored via external services, 5. Paste the web address (URL) into a document, 6. Save the web page, 7. Print the page.

E-mail management practices 1. Leave all mails in the inbox, 2. Use a structure of folders to organize messages, 3. Review e-mail periodically to delete unnecessary messages, 4. Categorize e-mail for quick future retrieval, 5. Tag and flag e-mail messages.

**Factors affecting on PIM practices:**

Otopah and Dadzie (2013) showed factors affecting PIM practices i.e. format or type of information, individual’s intended use of information, PIM tools and applications, skills and ability of individual, size of collection, time, individual differences/ attitudes/ habits, memory among others. There were numerous challenges that are information fragmentation, imperfect human memory, inappropriate attitude and habits, information overload, inadequate skills.

Chaudhry et. al. (2015), explained that with the explosion of digital information, electronic publishing, and web-based information sources, users are overwhelmed with the amount of information they receive and collect from a variety of sources and channels. A major portion of this information can be kept for future use, in addition to performing tasks at hand. However, if proper steps are not taken to organize and manage this information, users are unlikely to find the needed information in timely manner to meet their immediate information needs. Certain useful information may be even lost forever. This also create information overload resulting in frustration. User will have to take steps for more efficient information management to strengthen their finding and re-finding capabilities for effective exploitation of digital information.

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**Characteristic of the information or collection:**

Al- Omer and Cox (2016) founded in their research that is the scholar’s creation of the collection within the research lifecycle. Collection is ongoing activity. They defined the following characteristics of information which scholars collected during research work. 1) Huge in scale: Researchers collected information huge in scale in their research cycle. It is long term process. In that duration they collected large amount of information.

 2) Diversity: Within the research lifecycle the collection showed great diversity. Such as, i) Secondary Literature. ii) Research data are raw and analyzed. It is in various formats. Raw data were not discarded even when comprehensive summary data existed through analysis. iii) Drafts of publications arising from the research and communications with the publisher. iv) Administrative paperwork associated with gaining institutional approval for the project.

 3) Hybridity: Collections are composed both of print and electronic material. Printed material remains very significant. Often there is duplication of the same material in both print and electronic form.

 4) Fragmentation: The scholar’s collection is physically fragmented across different spaces and in different formats.

**Key factors shaping Personal Information Collection:**

Al- Omer and Cox (2016) founded, scholars’ research related personal information collections are huge, diverse, hybrid and fragmented. Therefore, key factors are shaping to personal information collections that are as per below

 1) Pressure to do research: Scholars were required by the institution to do research. Career progress was premised on publication; it was also recognized as important to professional growth.

 2) Time pressure in general: Scholars faced time pressure to multitask, carrying out their research while also teaching and having administrative etc. roles.

 3) Quality of space available: The quality of space available to scholars was quite variable. Scholars worked at office as well as at home also.

 4) Technology opportunity: Technology was perceived to be an opportunity to ease management of research- related material.

 5) Self management: How the collection was organized influenced by other types of use. Material was used or positioned as a reminder to the scholar themselves to work on something by using their own skills.

**Role of Web 2.0 Tools and reference management software for Personal Information Management:**

Web 2.0 plays a multifaceted role for communicating, collaborating, sharing and managing information or knowledge. Razmerita, Kirtchner, and Sudzina (2009), discussed new approaches for managing personal knowledge or information in the Web 2.0 tools era. Online social networking systems, such as LinkedIn, Myspace and Facebook, allow people to manage their interaction with other on a massive scale. Blogs, Microblogs (e.g. twitter) and instant massive tools (e.g. Skype) have provided new communication tools to interact more effectively to others in opened communities. New tools have emerged, such as Wikies (Wikipedia) and social bookmarking (Delicious), aimed at directly supporting PKM and fostering collective intelligence. PIM on Web 2.0 is achieves by a set of tools that allow people to create, codify, organize and share knowledge, but also socialize, extend personal networks, collaborate on organizing knowledge and create new knowledge.

Fourie, (2011) explored the potential of PIM and reference management. This paper focused on combining use of PIM and reference management software. There’s some reference management software for supporting to organize and manage documents such as journal articles, books, conference papers, email etc. E.g. EndNote (www.endnote.com), Reference Manager (www.refman.com), RefWorks (www.refworls.com), Zotero (www.zotero.org), Citavi (www.citavi.com) free version for up to 100 references, WizFolio (http://wizfolio.com), Connotea (www.connotea.org/) free tool especially aimed at clinicians, researchers and scientists, JabRef (http://jabref.sourceforge.net), Mendeley (www.mendeley.com), TreePad (www.treepad.com)

Identifying, gathering, analysis, constructing, sharing, and applying knowledge in practical activities have possible with Information and Communication Technology.

**Impact of Web 2.0 on managing personal knowledge or information:**

Razmerita, Kirtchner, and Sudzina (2009), explored in last few years a transformation of the web from a static web towards a “living web” where users bring content, collaborate and share knowledge. Web 2.0 tools include blogs, wikis, tags, RSS feeds, social bookmarking tools and AJAX. Using Web 2.0 tools, people do not only passively consume information; rather, they are active contributors, even customizing tools and technology for their use. They have classified tools into six categories:

 1) *Personalized WebPages* that enhance organizing and presenting information and sharing with others. E.g. AJAX – based netibes (www.netbes.com) 2) *Personalized search tools* that provide a simple way for a community of people to share bookmarks of internet resources. E.g. Swicky (www.eurekster.com) 3) *Social bookmarking* that provides a simple way for a community of people to share bookmarks of internet resources. E.g. Heystacks (www.heystaks.com) 4) *Personalized live discussion forums* that assist in analyzing, evaluating, presenting and sharing information. E.g. Tangler (www.vastpark.com) 5) *Virtual worlds* that encourage sharing of information. E.g. SecondLife (www.secondlife.com)

 6) *Blogs and wikis* that support editing, presenting and organizing information or knowledge by individuals or in collaboration with others. E.g. Personal wiki is Pimki (pimki.rubyforge.org)

As per Chaudhry et. al. (2015), technologies and tools help professionals spend less time on labor-intensive and error-prone personal information management activities. Use of smart technologies can enable knowledge workers to make creative and intelligent use of the information at hand. Social media has become crucial in exploiting personal information.

**User Education Programme and Orientation about PIM:**

As per Otopah and Dadzie (2013) various factors affect personal information management, therefore library can help resolve the problems through information literacy (IL) programs. IL frameworks require an information literate user to be able to recognize the need for information and determine the nature and extend of the information needed; find the needed information effectively and efficiently; critically evaluate information and the information seeking process; manage information collected or generated; apply prior and new information to construct new concepts or create new understanding and also use information with understanding and acknowledge the cultural, ethical, economic, legal, and social issues surrounding the use of information.

As per Fourie, (2011), there are many issues where librarians can help end-users to consider the implications of PIM and reference management and to contextualize their job and task, as well as other information needs such as studies and teaching, against what technology can offer. Staying alert to developments regarding personal information management (PIM), reference management and related issues offers an excellent opportunity to not only note developments in a topic of growing interest to the services offered by libraries and information services, but also actively get involved in the use of PIM. This paper also discussed on organizing information so that it can be found again, metadata and tagging, choice of software, identifying information needs, selecting appropriate sources to search, evaluating information, analyzing and synthesizing information, and putting information to use.

**Conclusion:**

There is need organize and maintain for retrieving information good Personal information management. Information technology and social media have impacted PIM core activities such as information storing, organizing, maintaining, and retrieving in present information explosion era.

Technologies and tools help professionals spend less time on personal information management activities. Information Literacy can also help overcome the problems of information overload and information fragmentation. Libraries can play a distinctive role in assisting scholars in PMO.

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