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Searching with Tags: Do Tags Help Users Find Things?

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- Grant Campbell, doctoral supervisor
- the students who volunteered a little time to participate in the project

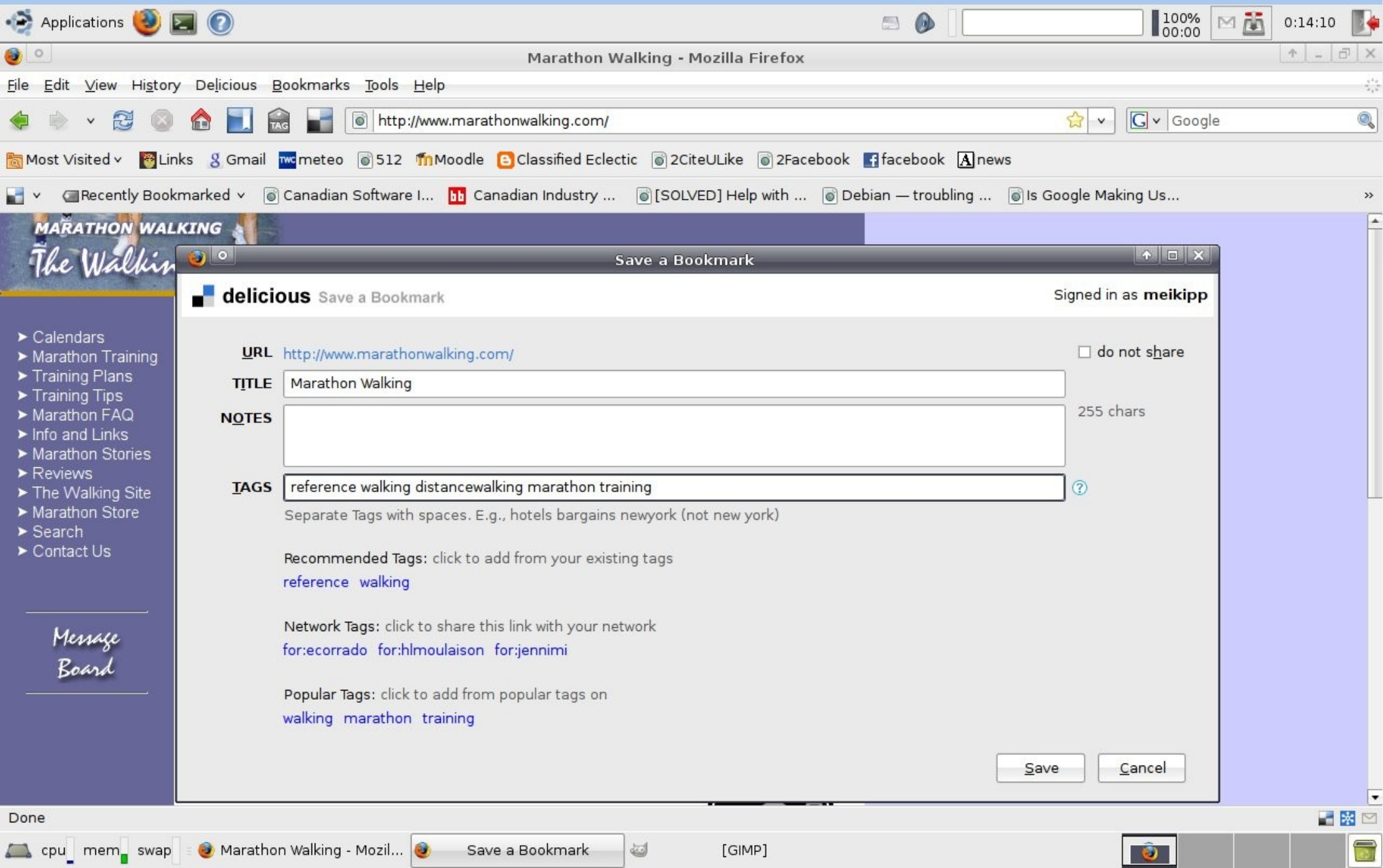
Finding with Tags

- "The Web is a big place, full of new and interesting things to discover. The problem is finding the good stuff and keeping track of it all. This is where Delicious can help." (del.icio.us)
- "In fact, if enough users register on the system, you'll probably find people reading the same articles as you. That provides a great way of keeping on top of the literature - you simply share it with people who have common interests." (citeulike)

Personal Information Management and Classification

- PIM studies suggest distinct difference between universal and user classifications
  - (Malone 1984; Kwasnik 1999, Jones et al 2005)
- universal/user classification distinction omnipresent in tagging
  - (Mathes 2004; Hammond et al 2005; Kipp CAIS2006; Kipp and Campbell ASIST2006)
- combined systems
  - PennTags project, Steve.museum, FaceTag, LibraryThing, Amazon.com etc.

Social Bookmarking



Social Bookmarking and Search

- social bookmarking allows users to publicly share interesting links, articles, videos, etc.
- premise: users are encouraged to provide useful labels that will help them refind an item
- assumptions:
  - users will use similar terminology next time
  - other users may benefit from convergent use of terminology
  - network effects will occur and increasing user base will increase usefulness

Study of Finding with Tags

- have users search traditional journal database (Pubmed) and a social bookmarking site (CiteULike) for academic articles
- 10 participants from LIS
  - all had prior search experience (online databases and the web)
  - very few had experience with social bookmarking
- participants were encouraged to discuss and compare their experiences searching each site

Research Questions

1. Do tags appear to enhance the process of resource discovery? Do users feel that they have found what they are looking for?
2. How do users find searching social bookmarking sites compared to searching more classically organised sites? Do users think that tags assigned by other users are more intuitive?
3. Do tagging structures facilitate information retrieval? How does this compare to traditional structures of supporting information retrieval?

Methodology

- participants were given a brief introduction to study (purpose, methodology) and tools
- search Pubmed and CiteULike for information on a specific assigned topic
- screen capture using CamStudio/Camtasia and Xvidcap
- semi-structured interview after search
  - discuss participant experiences with using keywords on each tool

Search Topic

- "You are a reference librarian in a science library. A patron approaches the reference desk and asks for information about the application of knowledge management or information organisation techniques in the realm of health information.
- The patron is looking for 5 articles discussing health information management and is especially interested in case studies, but will accept more theoretical articles as well."

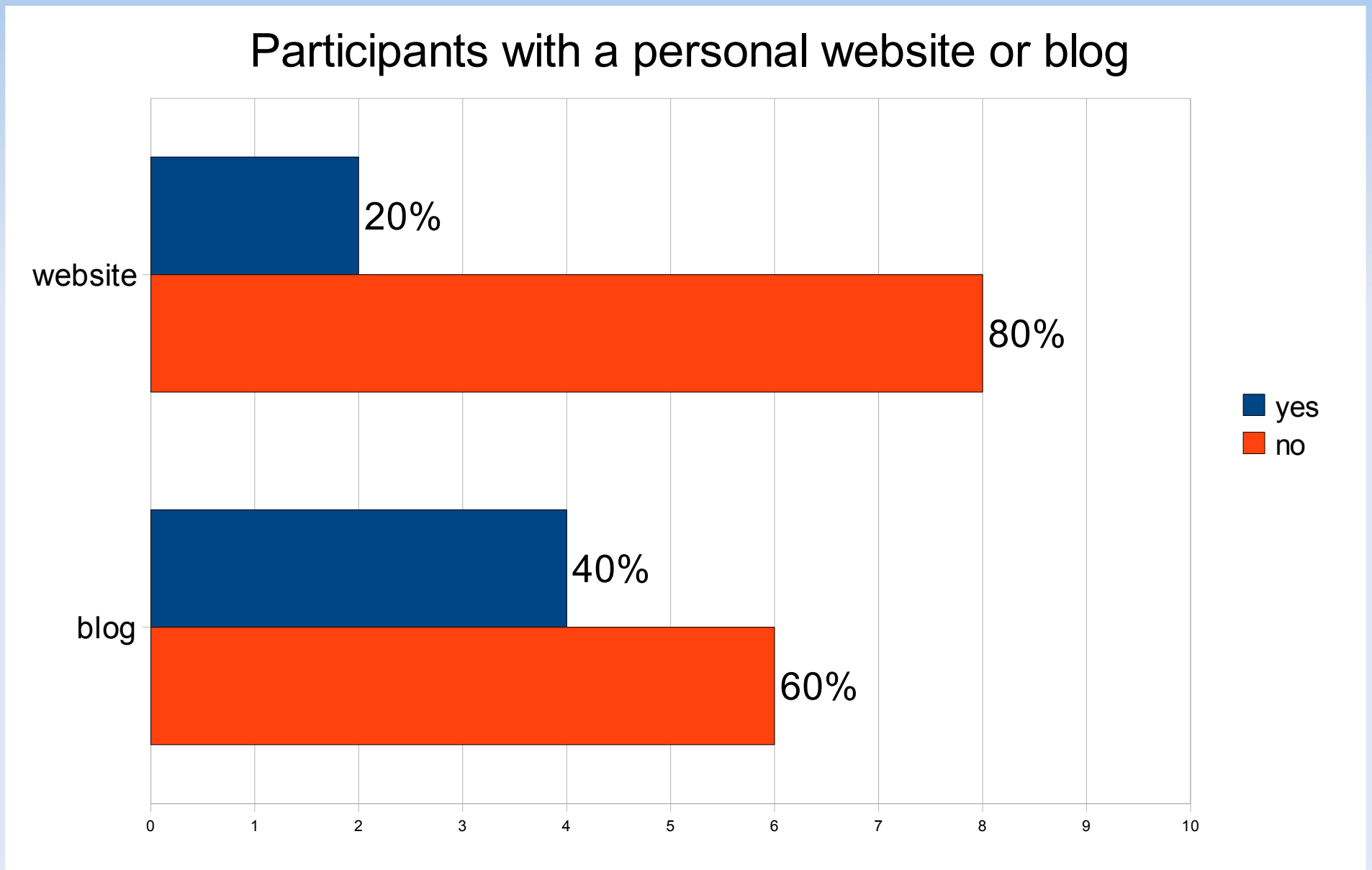
Study Timeline

- participants selected initial set of keywords
- searched for approx. 5 articles on each tool (order randomised)
- participants asked to make a second list of terms they would use if asked to search again
- semi structured interview covering:
  - usefulness of tags and subject headings
  - use of search terms
  - thoughts on the search process

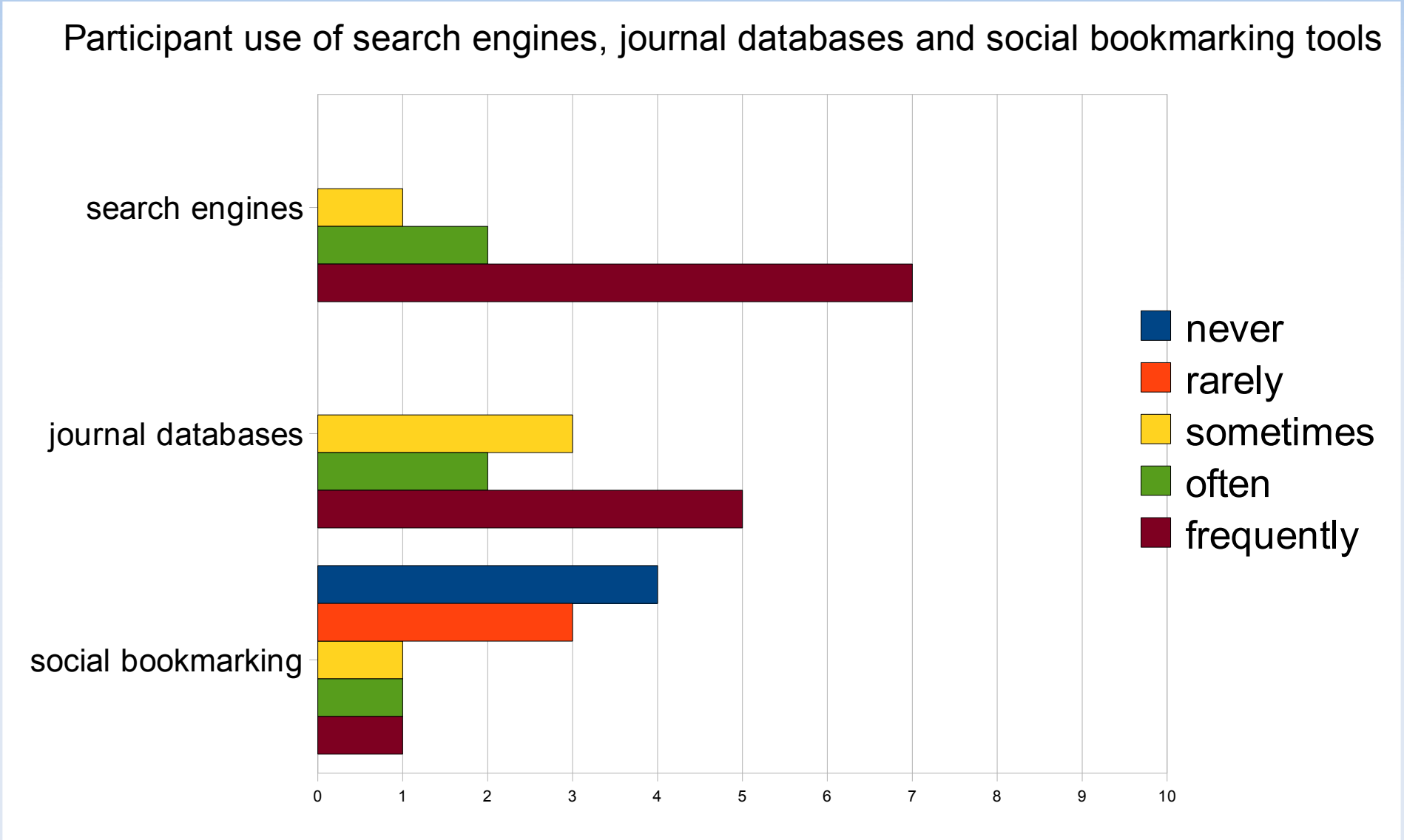
Demographics

- 6 female, 4 male
- between 23-40 years
- 80% self identified as intermediate computer users with 6-22 years of computer experience (mainly between 18-22 years experience)
- majority with humanities/social sciences background
- majority have some experience working in libraries/archives

Computer Usage



Use of Internet Tools



Keyword Usage

- All participants used multi word keywords
- majority of participants (50%) separated their list of final keywords by tool, despite the fact that they were asked for only one list
- most commonly used keyword was knowledge management
- information management also commonly used

Initial Keywords

Keywords	Frequency
knowledge management	7
information organisation/information organization	6
health information	6
case studies/case study/"case stud"	4
health information management	3

- 28 unique keywords or phrases
- 1-9 keywords initially (median 6)
- terms directly from information need

Final Keywords

Keywords	Frequency
knowledge management/km	9
case studies/case study	6
health information	5
information management	5
health care	3
health information management	2
informatics	2

- 46 unique keywords for final lists
- between 3 and 16 terms (median 6)
- terms similar to initial keyword lists

Results

- participants with separate final lists used between 3 and 8 terms for CiteULike (median 5) and between 1 and 8 for Pubmed (median 3)
- participant with only one final term chose "Information Management" a MeSH descriptor
- other popular terms tended to be entry vocabulary to MeSH desriptors (e.g. case studies)

Results 2

- Knowledge management (KM)
  - popular tag on CiteULike but not a MeSH descriptor or entry term
  - related to information management (a MeSH descriptor)
  - found in Pubmed abstracts on free text search
  - participants did not choose this as often for Pubmed because it did not allow entry to the powerful MeSH vocabulary
  - however, high incidence of term suggests that it should be included as entry vocabulary in MeSH

System Usage

- Participants often preferred search experience on system used first, regardless of previous experience
- most participants started with a single keyword or keyword phrase, but quickly added additional keywords from their initial lists to reduce the number of results returned
- abstract considered most useful piece of metadata
- related articles just as useful as subject headings or tags

Participant Responses

- participants did use the tags to aid in the search process, selecting tags to see what articles would be returned
- used tags as a guide to suggest further search terms
- some participants stated that they had not used the tags, only to realise on reflection that they had been using tags as links to related articles

Universality of Indexing and Classification

- not all classifications or indexing systems are universal (vertical files, local information, subject specific)
- user groups may find localised information more useful
- tagging may be useful to connect subjective user classification to universal classification
- important to achieve access and possible exchange of ideas between user groups

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Questions?

Thank you/Merci!

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