

CSCI3250 Computers and Society

Tutorial 2: Research Methods

Outline

- Source of Information
- Literature Review
- Statistical Survey

Flow of Information

- Information first appears on Media and Internet
- Information coverage gradually becomes more detailed and analytical



Sources to Use

Look for		Sources of Information	How to Find it
Content	Time Frame		
Anything, e.g. personal information, current events, government information, research, games, and more.	Immediate to Hours	Internet	<u>Internet Search Tools, e.g. subject directories and search engines.</u>
News, statistics, photographs, editorial and public opinions, etc.	Days	Newspapers	<u>Newspaper Indexes; Research Databases.</u>
Current events, statistics, photographs, editorial and public opinions, etc.	Weeks	Popular Magazines	<u>Indexes and Abstracts; Research Databases.</u>
Research results, analysis, statistics, etc.	Months	Conference Proceedings / Scholarly Journals	<u>Indexes and Abstracts; Research Databases.</u>
In-depth coverage of a topic, analysis, etc.	2+ Years	Scholarly Books	Library Catalogue; Research Databases.
Broad overviews of a topic and widely accepted information	5+ Years	Encyclopedias and Reference Works	Library Catalogue; Research Databases.

Accessing Library Databases via CUHK Campus Network/ VPN

- CUHK Library database:

<http://www.lib.cuhk.edu.hk/Common/Reader/Channel/ShowPage.jsp?Cid=617&Pid=2&Version=0&Charset=iso-8859-1&page=0>

- For off-campus computer, CUHK students have to use CUHK VPN or library proxy.

- Instruction for connecting to CUHK VPN:

<http://www.cuhk.edu.hk/itsc/network/vpn/vpn.html>

Newspaper Databases

(Accessible in CUHK Library/ Campus)

- Newspaper database subscribed by CUHK:
 - <http://www.lib.cuhk.edu.hk/Common/DataForm/DataForm.jsp?DFid=13&TypeId=14>
- ProQuest Newspapers:
 - Database on New York Times, The Washington Post and South China Morning Post.
 - <http://proquest.umi.com/pqdweb?TS=1296477424&clientId=24689&RQT=317>
- Wisenews
 - Database of mainly Chinese Language newspaper and magazine from Hong Kong, Macau, Taiwan and China.
 - <http://libwisenews.wisers.net/?gid=CULIB&user=ipaccess&pwd=ipaccess>
 - Accessible from computers in CUHK network or CUHKNet VPN
 - Copy and paste the above link (RATHER than click directly)
 - *** Click Wisers Information Portal on the top-right corner

International Newspaper Database

- Library PressDisplay:
 - Database of over 1700 newspapers published around the world.
 - Newspaper from the last 90 days only
 - <http://library.pressdisplay.com/pressdisplay/viewer.aspx>

Research Database

- Research Papers
 - Often technical and very specific.
 - In-depth analysis.
 - Fairly reliable source of data.
 - May be too technique for general use.
- E.g., Databases on ENGG/ IT/ CS related research papers:
 - IEEEXplore: <http://ieeexplore.ieee.org/Xplore/dynhome.jsp>
 - ACM portal: <http://portal.acm.org/>

Evaluate the Source of Information

- Authority
 - if the author/editor/publisher has the expertise on an issue
- Currency
 - if the information covers the time span you required
- Intended Audience
 - if the depth of the work is appropriate to your needs
- Coverage
 - if the work is comprehensive enough for your needs
- Objectivity
 - if the work is free of biased viewpoints and covers every aspects of the topic
- Accuracy
 - if the information presented is flawless
- Reviews
 - if other reputable scholars agree or argue with the viewpoints presented in the work

Information from the Internet

Domain Name	Types of Organizations	Remarks
.gov	Government	Usually reliable
.org	Organization	Good for information about the organization or a particular field if the organization is the professional body that defines standards for the field
.edu	Education/Academic	Usually reliable
.ac		
.net	Network services provider	May be biased to promote their products;
.com	Commercial site	usually provides update online manual and product information
~	Personal website	Quality varies greatly IMPORTANT: Not every personal website has a "~" in its URL, e.g. http://www.ccs.neu.edu/home/achan/

Literature Review

- Review critical ideas and finding on a topic from available sources.
- Can be a standalone article or integral part of a bigger article. Frequently find on the introduction of a paper.
- Tell your reader what knowledge and ideas have been established in the topic.
And show how your work fits in.

Stages of Literature Review

- Problem formulation
 - What topic is being examined?
- Literature search
 - Finding materials.
Read the materials, take notes, shape ideas.
- Data evaluation
 - Determine what is important or out of scope.
Analysis article strength and weakness.
- Analysis and interpretation
 - Describe and summarize the material.
Compare and contrast various sources.
Discuss the findings and conclusion.

Points to Note

- Finding a focus
 - Don't simply list your sources and report their finding.
Organize your review around ideas.
Consider what connect your sources together.
- Be selective
 - Highlight only important points from each source.
- Be careful when paraphrasing
 - Report the information from your sources in your own words, but REMEMBER to make it clear the information is not your own.

Statistical Survey

- Systematically collect information from a sample of individuals.
- Useful when information is not available in the literature.
- Advantages:
 - Efficient way of collecting information from a large population
 - Flexible in the range of information that can be collected
 - Easy to administer
- Disadvantages:
 - Depend on subject's motivation, honesty, memory and ability to respond.
 - Not appropriate for studying complex social phenomena.

Means of Doing Survey

- Self-completion survey
 - E.g. handing out questionnaires in canteens
 - Pros: low cost, no interview bias
- Email and internet survey
 - E.g. sending email questionnaires, using Internet voting
 - Pros: low cost, easy to administer, fast
- Face-to-face survey/ interview
 - E.g. intercept people in mall or street
 - Pros: can be used on issues that require clarification

Designing Survey Questions

- Write a short questionnaire.
- Use simple words.
- Avoid question that sounds very formal.
- Write questions that everybody understand the same way.
- Start with interesting questions.
- Don't use leading question.
- Don't make the list of choice too long.
- Ask close-end questions.
- Organize your questions in a logical order.
- Test your survey first.

Some Sources of Error

- Sampling error
 - Size of population surveyed
- Sample selection
 - Bias in sample selection
- Questionnaire
 - Bad questionnaire design
- Interviewer
 - Leading respondent, making assumption, misunderstanding question
- Respondents
 - Refusal, memory problem, protecting personal interests or integrity

Sources Consulted

- <http://infolit.lib.cuhk.edu.hk/Common/Reader/Version/Show.jsp?Pid=1&Version=0&Charset=iso-8859-1>
- <http://library.ucsc.edu/help/howto/write-a-literature-review>
- <http://www.canberra.edu.au/studyskills/writing/literature>
- <http://www.accesscable.net/~infopoll/tips.htm>
- http://www.ehow.com/how_16596_write-survey-questionnaire.html
- http://en.wikipedia.org/wiki/Statistical_survey
- <http://www.oesr.qld.gov.au/about-statistics/survey-methods/index.php>