

## Internet

- Make researcher's dream come true.
- Browse internet == browse the shelves of the library.
- Limitless topics.
- web-based catalogs assist researchers in locating printed books, journals, government documents, and other materials (eg: [UTeM library website](#))

## Problem?

- How to effectively and efficiently access the vast amount of information available?
- Strategies for sorting through the abundance of information

## Common mistakes made by students:

- They rely on Internet searches for their research and **ignore other key sources**.
- They don't **critically evaluate** the quality of the information they find.
- They copy information from the Internet and don't **acknowledge their sources**.

## Internet research skills

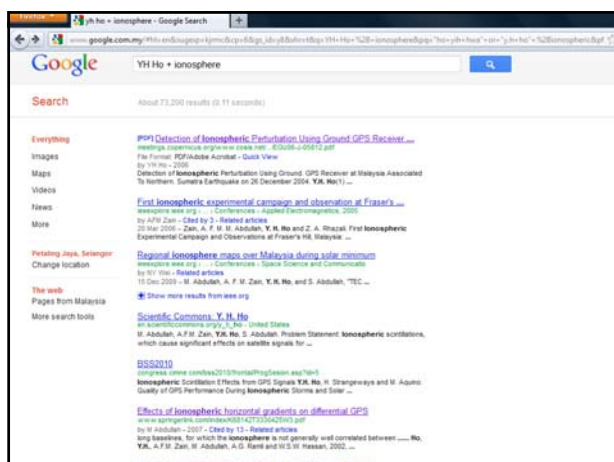
- Be able to do independent research.
- Locate and use a wide range of information sources.
- Critically evaluate the information found.
- Synthesize information to form your own original piece of work.
- Present a balanced and well-informed argument leading to your own conclusions.

## Information on the Internet

- **The good:**
  - academic publishing on the Internet
- **The bad:**
  - time wasting on Internet searches
- **The ugly:**
  - Internet hoaxes, scams and legends

## The Good

- Many sources of authoritative research information now publish on the Internet.
- The Academic publishing process:
  - **Peer review / refereeing**
  - **Scholarly journals**
  - **Electronic journals**
  - **Library eJournal services**
  - **eJournal publishers**



## The Bad - quality of information

- **Anyone can put something on the Internet** - an amateur or an expert.
- **From anywhere in the World** - be it the Malaysia, United State or Uruguay.
- **They can say anything they like** - be it true or false.
- **And leave it there as long as they like** - even if it goes out of date.
- **Or change it without warning** - perhaps even remove it completely.

## Dangers!!!

- The information you find on the Internet will:
  - Be from a source that is **unreliable, lacking in authority or credibility**
  - Have content that is **invalid, inaccurate, out-of-date**
  - **Not be what it seems!**

## The Bad - Weeding out poor quality information takes time

- simple search techniques
  - Thousands of web sites to explore: some information will be **useful**, some will be **useless** - it's up to you to discern which is which!
- time and skill to sift through search engine results and evaluate which are the best sources.

## The Bad - easy to miss key information

- As you go to a search engine, as they contain **everything** that is available online, right? **Wrong!**
- only cover a **proportion** of what is available online, a lot of information is **hidden or invisible** to them.
- **a huge body of research literature is still only available in print** form in books and journals.
- consider using other sources too, such as library catalogue, other databases and academic web search tools.

## The Ugly - Misinformation

- **Internet hoaxes**
  - Some web sites are fakes designed to be spoofs, parodies or jokes
  - **Official World Trade Organization site** [<http://www.wto.org/>]
  - **Spoof World Trade Organization site** [<http://www.gatt.org/>] - "WTO Announces Formalized Slavery Market For Africa"

## The Ugly - Misinformation

- **Urban legends**
  - **Urban legends can be harmless but only if you realise they are not actually true!**
  - stories or rumours that have been circulated from person to person.

## Search Engines

- What are search engines?
  - huge databases of web page files that have been assembled automatically by machine.
- Individual (Google, Yahoo etc.)
  - Individual search engines compile their own searchable databases on the web.
- Meta (Dogpile, Yippy etc.)
  - Meta-searchers do not compile databases. Instead, they search the databases of multiple sets of individual engines simultaneously.

## How Do Search Engines Work?

- do not really search the World Wide Web directly.
- searches a database of web pages that it has harvested and cached.
- databases are selected and built by computer robot programs called spiders.
- search engine spiders cannot find website never linked.
- "indexing" program identifies the text, links, and other content in the page and stores it in the search engine database.
- web pages excluded from search engines – invisible web.

## How Do Search Engines Work?

- It is important to remember that when you are using a search engine, you are **NOT** searching the entire web as it exists at this moment. You are actually searching a portion of the web, captured in a fixed index created at an earlier date.
- How much earlier?
  - depending upon how often the spiders make their rounds and then, how promptly the information they gather is added to the index.

## What Make a Search Engine Good?

- Search engines consist of three parts:
  1. a database of web documents
  2. search engine operating on that database
  3. a series of programs that determine how search results are displayed

## Database of Web Documents

- **Size of database:**
  - How many documents does the search engine claim it has?
  - How much of the total web are you able to search?
- **Freshness / up to date**
  - Search engine databases consist of copies of web pages and other documents that were made when their crawlers or spiders last visited each site. How often is the database refreshed to find new pages?
  - How often do their crawlers update the copies of the web pages you are searching?
- **Completeness of text:**
  - Is the database really "full" text, or only parts of the pages?
  - Is every word indexed?

## Database of Web Documents

- **Types of documents offered:**
  - All search engines offer web pages.
  - Do they also have extensive PDF, Word, Excel, PowerPoint, and other formats like WordPerfect?
  - Are they full-text searchable?
- **Speed and consistency:**
  - How fast is it?
  - How consistent is it? Do you get different results at different times?

## The Search Engine's Capabilities

- All search engines let you enter some keywords and search on them. **BUT**
  - What happens inside?
  - Can you limit in ways that will increase your chances of finding what you are looking for?

## The Search Engine's Capabilities

- **Basic Search options and limitations:**
  - Automatic default of AND assumed between words?
  - Accepts " " to create phrases?
  - Is there an easy way to allow for synonyms and equivalent terms (OR searching)? Can you OR phrases or just single words?
- **Advanced Search options and limitations:**
  - Can you require your search terms in specific fields, such as the document title? Can you require some words in certain fields and others anywhere?
  - Can you restrict to documents only from a certain domain (org, edu, gov, etc.)? Limit to more than one or only one?
  - Can you limit by type of document (pdf or excel, etc.)? More than one?
  - Can you limit by language?
  - How reliably and easily can you limit to date last updated?

## The Search Engine's Capabilities

- **General limitations and features:**
  - What do you have to do make it search on common or stop words?
  - Maximum limit on search terms or on search complexity?
  - Ability to search within previous results?
  - Can you count on consistent results from search to search and from day to day?
  - Can you customize the search or display?
  - Is there a "family" filter? Does it work well? Is it easy to turn on or off?

## Results Display

- All search engines return a list of results it "thinks" are what you are looking for.
- How well does it "think like you expect it think"?

## Results Display

- **Ranking:**
  - Are they ranked by popularity or relevancy or both?
  - Do you get pages with only some of your words, perhaps in addition to pages with them all?
- **Display:**
  - Are your keywords highlighted in context, showing segment of sentence from the web pages which caused the match?
  - Some other passage from the page?
- **Collapse pages from the same site:**
  - If it shows only one or a few pages from a site, does it show the one(s) with your terms?
  - How easy is it to see all from the site?
  - Can this be changed and saved as your preferred search method?

## Recommended Search Engines

- Google is currently the most used search engine.
  - It has one of the largest databases of Web pages, including many other types of web documents (blog posts, wiki pages, group discussion threads and document formats (e.g., PDFs, Word or Excel documents, PowerPoints).
  - Google's popularity ranking often places worthwhile pages near the top of search results.

## Recommended Search Engines

- Google alone is not always sufficient.
- Overlap studies show that more than 80% of the pages in a major search engine's database exist only in that database.
- For this reason, getting a "second opinion" can be worth your time.
- Why not trying Yahoo! Search or Exalead.

## Google (www.google.com)

- **Links to help**
  - Google help
- **Size, type**
  - IMMENSE. Size not disclosed in any way that allows comparison. Probably the biggest.
- **Noteworthy features**
  - PageRank™ system includes hundreds of factors, emphasizing pages most heavily linked from other pages.
  - Many additional databases including Book Search, Scholar (journal articles), Blog Search, Patents, Images, etc.
- **Phrase searching**
  - Enclose phrase in "double quotes".
- **Boolean logic**
  - Partial. AND assumed between words.
  - Capitalize OR.
  - ( ) accepted but not required.
  - In Advanced Search, partial Boolean available in boxes.

## Google (www.google.com)

- **+Requires/ -Excludes**
  - - excludes
  - "" requires an exact word or phrase
- **Sub-Searching**
  - The search box at the top of the results page shows your current search. Modify this (e.g., add more terms at the end.)
- **Results Ranking**
  - Based on page popularity measured in links to it from other pages: high rank if a lot of other pages link to it.
  - Fuzzy AND also invoked.
  - Matching and ranking based on "cached" version of pages that may not be the most recent version.
- **Field limiting**
  - Link:, site:, intitle:, inurl:
  - Offers U.S.Gov't Search and other special searches. Patent search.

## Google (www.google.com)

- **Truncation, Stemming**
  - No truncation within words. Automatically stems some words. Search variant endings and synonyms separately, separating with OR (capitalized):
    - *airline OR airlines*
  - Use \* or \_ as wildcards substituting for initials or words:
    - *Gps satelli\**
    - *george \_ bush*
- **Language**
  - Yes. Major Romanized and non-Romanized languages in Advanced Search.
- **Translation**
  - Yes, in "Translate this page" link following some pages. To and sometimes from English and major European languages and Chinese, Japanese, Korean. Use its own translation software with user feedback.

## Subject Directories

- created and maintained by human editors, not electronic spiders or robots.
- editors review and select sites for inclusion in their directories.
- smaller than search engine databases, typically indexing only the home page or top level pages of a site.
- may include a search engine for searching their own directory.

## How Do Subject Directories Works?

- the directory attempts to match keywords and phrases with those in its written descriptions.
- There are general directories, academic directories, commercial directories, portals and now, vortals.
- Today, the line between subject directories and search engines is blurring. Most subject directories have partnered with search engines to query their databases and search the web for additional sources, while search engines are acquiring subject directories or creating their own. (eg: MSN and Yahoo)

## Subject Directories - Pros & Cons

- **Pros:**
  - Organized hierarchically into browsable subject categories and sub-categories.
  - Because of the human oversight maintained in subject directories, they have the capability of delivering a higher quality of content.
  - They may also provide fewer results out of context than search engines.
- **Cons:**
  - Do not compile databases of their own and point to them.
  - This situation sometimes creates problems because, once accepted for inclusion in a directory, the Web page could change content and the editors might not realize it. The directory might continue to point to a page that has been moved or that no longer exists.
  - Dead links.

## When Do Use Subject Directories?

- Like the yellow pages of a telephone book
  - browsing and for searches of a more general nature.
- Good sources for information on popular topics, organizations, commercial sites and products.
- Looking for particular field or area of interest?  
Go for it! With subject directories.

## Recommended Subject Directories

- **ipl2 ([www.ipl.org](http://www.ipl.org)) or Infomine ([infomine.ucr.edu](http://infomine.ucr.edu))**
- look for your subject as you would for any other purpose, and keep your eyes open for sites that look like directories. Read through the descriptions. Sometimes these resources are identified as "Directories", "Virtual Libraries", or "Gateway Pages".
- **About.com ([www.about.com](http://www.about.com)) or Yahoo! Directory ([dir.yahoo.com](http://dir.yahoo.com))**
- try adding the terms *web directories* to your subject keyword term:
  - EXAMPLES:
    - civil war web directories
    - weddings web directories
- **In About.com**
  - search by topic and look for pages that are described as "101" or "guides" or a "directory." About.com is written by "Guides" who, themselves, often are experts in the sections they manage. Sometimes they write excellent overviews of a topic.

## ipl2 ([www.ipl.org](http://www.ipl.org))

- **Size, type**
  - Over 40,000. Highest quality sites only. Useful, reliable annotations. Formed by a merger of the Librarians' Internet Index and the Internet Public Library.
- **Phrase searching**
  - No.
- **Boolean logic**
  - OR implied between words. Also accepts AND and NOT. Nesting with ( ) does not work.
- **Truncation**
  - No.
- **Field searching**
  - No.

## infomine ([infomine.ucr.edu](http://infomine.ucr.edu))

- **Size, type**
  - Over 125,000 useful, reliable annotations.
  - Compiled by academic librarians from the University of California and elsewhere.
- **Phrase searching**
  - Yes. Use " "
  - [term term] requires exact match
- **Boolean logic**
  - AND implied between words. Also accepts OR, NOT, and ( ) .
- **Truncation**
  - Use \*. Also stems. Can turn stemming off. Use " " or | | to search exact terms.
- **Field searching**
  - Select advance options under search box to limit to Author, Title, Subject, Keyword, Description, various subject categories, and more.

## Meta-Search Engines

- **What Are "Meta-Search" Engines? How Do They Work?**
  - Search simultaneously to several individual search engines and their databases of web pages.
  - Do not own a database of Web pages.
  - Send your search terms to the databases maintained by search engine companies.

## Meta-Search Engines

- **Are "Smarter" Meta-Searchers Really Smart?**
  - clustering and linguistic analysis within results
  - fancy textual analysis and display
  - **Help** dig deeply into a set of results?
  - neither of these technologies is any better than the quality of the search engine databases they obtain results from.
- recommend directly searching individual search engines to get the most precise results, and using meta-searchers if you want to explore more broadly.

## Better Meta-Searchers

- **Yippy** ([yippy.com](http://yippy.com)) formerly Clusty
  - **What's Searched**
    - Searches Bing, Ask, Open Directory, and Yahoo.
  - **Complex Search Ability**
    - Accepts Boolean operators AND, OR, NOT, and limiting by "filetype:" and "site:".
  - **Results Display**
    - Results accompanied with subdivisions based on words in search results, intended to give the major themes. Click on these to search within results on each theme.

## Better Meta-Searchers

- **Dogpile** ([www.dogpile.com](http://www.dogpile.com))
  - **What's Searched**
    - Searches Google, Yahoo, and Bing.
    - Sites that have purchased ranking and inclusion are mixed into the results. Watch for "Sponsored:".

## Meta-Search Engines for SERIOUS Deep Digging

- **SurfWax** ([www.surfwax.com](http://www.surfwax.com))
  - **What's Searched**
    - A better than average set of search engines.
    - Can mix with educational, US Govt tools, and news sources, or many other categories.
  - **Complex Search Ability**
    - Accepts " ", +/-/. Default is AND between words.
    - recommend fairly simple searches, allowing SurfWax's SiteSnaps and other features to help you dig deeply into results.
  - **Results Display**
    - Click on source link to view complete search results there.
    - Click on  to view helpful "SiteSnap™" extracted from most sites in frame on right.
    - Many additional features for probing within a site.

## Meta-Search Engines for SERIOUS Deep Digging

- **Copernic Agent** ([www.copernic.com](http://www.copernic.com))
  - **What's Searched**
    - Select from list of search engines by clicking on Advanced, then "Modify search engine settings".
  - **Complex Search Ability**
    - ALL, ANY, Phrase, and more. Also Boolean searching within results under "Find in results" > "Advanced Find" (powerful!).
  - **Results Display**
    - Must be downloaded and installed, but Basic version is free of charge. [Table comparing versions.](#)

## Invisible or Deep Web

- **What is the "Invisible Web" or the "Deep Web"?**
- Cannot find using search engines and subject directories.
- These types of pages used to be invisible but can now be found in most search engine results:
  - Pages in non-HTML formats (pdf, Word, Excel, PowerPoint), now converted into HTML.
  - Script-based pages, whose URLs contain a ? or other script coding.
  - Pages generated dynamically by other types of database software (e.g., Active Server Pages, Cold Fusion). These can be indexed if there is a stable URL somewhere that search engine crawlers can find.

## Invisible or Deep Web

- **Why isn't everything visible?**
- **The Contents of Searchable Databases.**
  - crawler programs cannot type or think, they cannot enter passwords on a login screen or keywords in a search box.
  - Thus, these databases must be searched separately.
  - **A special case:** Google Scholar
    - part of the public or visible web.
    - contains citations to journal articles and other publications, with links to publishers or other sources where one can try to access the full text of the items.
    - Results are only a small fraction of all the scholarly publications that exist online.
    - Much more - including most of the full text - is available through article databases that are part of the invisible web.

## Invisible or Deep Web

- **Excluded Pages**
  - Search engine companies exclude some types of pages by policy, to avoid cluttering their databases with unwanted content.
- **Pages deliberately excluded by their owners.**
  - A web page creator who does not want his/her page showing up in search engines can insert special "meta tags" that will not display on the screen, but will cause most search engines' crawlers to avoid the page.

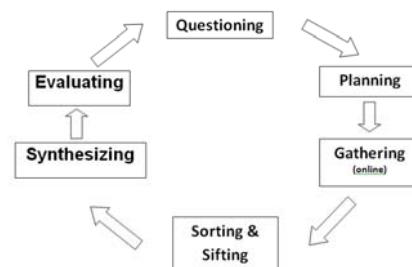
## How to Find the Invisible Web?

- Simply think "databases" and keep your eyes open.
  - You can find searchable databases containing invisible web pages in the course of routine searching in most general web directories. Of particular value in academic research are:
    - ipl2
    - infomine
- Use Google and other search engines to locate searchable databases
- Use the word "database"
  - **Examples:**
    - plane crash database
    - languages database
    - toxic chemicals database

## How to Find the Invisible Web?

- **Remember that the Invisible Web exists.**
- This includes all of the licensed article, magazine, reference, news archives, and other research resources that libraries and some industries buy for those authorized to use them.
- Spend a little time looking for databases in your field or topic of study or research.
- May not be free
- Libraries and corporations buy the rights for their authorized users to view the contents. If they appear free, it's because you are somehow authorized to search and read the contents (library card holder, company employee, etc.).

## Online Research Process





## Research Process

- Step 1: Questioning**
  - structure your questions before going on the Internet.
- Step 2: Planning**
  - develop a search strategy with a list of sites to investigate.
- Step 3: Gathering**
  - use the Web to collect and gather information.
- Step 4: Sorting & Sifting**
  - analyze and categorize the data gathered on the Web.
- Step 5: Synthesizing**
  - integrate the information into the lesson, and draw conclusions.
- Step 6: Evaluating**
  - assess the results, and if necessary, begin the process again.

## Search Strategy

- **Analyze your topic to decide where to begin**
  1. **What UNIQUE WORDS, DISTINCTIVE NAMES, ABBREVIATIONS, or ACRONYMS are associated with your topic?**
    - These may be the place to begin because their specificity will help zero in on relevant pages.

## Search Strategy

- **Analyze your topic to decide where to begin**
  2. **Can you think of societies, organizations, or groups that might have information on your subject via their pages?**
    - Search these as a “phrase in quotes”, looking for a home page that might contain links to other pages, journals, discussion groups, or
    - databases on your subject. You may require the “phrase in quotes” to be in the documents’ titles by preceding it by **title**

## Search Strategy

- **Analyze your topic to decide where to begin**
  3. **What other words are likely to be in ANY Web documents on your topic?**
    - You may want to require these by joining them with **AND** or preceding each by +

## Search Strategy

- **Analyze your topic to decide where to begin**
  4. **Do any of the words in 1, 2, or 3 belong in phrases or strings -- together in a certain order?**
    - Search these as a “phrase in quotes”.
    - E.g.: “GPS block Ila”

## Search Strategy

- **Analyze your topic to decide where to begin**
  5. **can you think of synonyms, variant spellings, or equivalent terms you would also accept in relevant documents?**
    - You may want to allow these terms by joining them by **OR** and including each set of equivalent terms in **()**.
    - E.g: global positioning satellite **OR** global positioning system

## Search Strategy

- **Analyze your topic to decide where to begin**
- 6. **Can you think of any extraneous or irrelevant documents these words might pick up?**
  - You may want to exclude terms or phrases with - **[no space] before each term, or AND NOT**

## Search Strategy

- **Analyze your topic to decide where to begin**
- 7. **What BROADER terms could your topic be covered by?**
  - When browsing subject categories or searching sites of webliographies or databases on your topic, try broader categories.
  - E.g: GPS in Surveying other than Engineering

## Search Strategy - Pick the right starting place

- **Search Engines**
  - Distinctive word or phrase?
    - Enclose phrases in " "
  - NO distinctive words or phrases?
    - Use more than one term or phrase in " " to get fewer results.
- **Seek an overview?**
  - NOT RECOMMENDED
- **Narrow aspect of broad or common topic?**
  - Boolean searching
- **Synonyms, equivalent terms, variants**
  - Choose search engines with Boolean OR, or Truncation, or Field limiting.
- **Confused? Need more information?**
  - NOT RECOMMENDED

## Search Strategy - Pick the right starting place

- **Subject Directories**
  - Distinctive word or phrase?
    - Search the broader concept, what your term is "about"
  - NO distinctive words or phrases?
    - Try to find distinctive terms in Subject Directories.
- **Seek an overview?**
  - Look for a specialized Subject Directory focused on your topic.
- **Narrow aspect of broad or common topic?**
  - Look for a Directory focused on the broad subject.
- **Synonyms, equivalent terms, variants**
  - NOT RECOMMENDED.
- **Confused? Need more information?**
  - Try an encyclopedia to learn basic concepts and keywords.

## Search Strategy - Pick the right starting place

- **Specialized Databases**
  - Want data? Facts? Statistics? All of something? One of many like things? Schedules? Maps? Look for a specialized database or webpage, or Custom Search Engine on your topic. (<http://www.cselinks.com/>)

## Evaluating Web Pages

- "Quality is in the eye of the beholder" - you need to take a case-by-case approach to evaluating information.
- **techniques** that help you quickly find what you need to know about web pages;
- think critically, even suspiciously, by **asking a series of questions** that will help you decide how much a web page is to be trusted.

## What can the URL tell you?

- Before you click and get interested in anything written on the page -- glean all you can from the URLs of each page.
- Choose pages most likely to be reliable and authentic.

## What can the URL tell you?

- **Is it somebody's personal page?**
- Read the URL carefully:
  - Look for a personal name (e.g., *thomas* or *alimohamed*) following a tilde (~), a percent sign (%), or the words "users," "members," or "people."
  - Is the server a commercial ISP or other provider of web page hosting (like aol.com or geocities.com)
- Personal pages are not necessarily "bad," but you need to investigate the author carefully.

## What can the URL tell you?

- **What type of domain does it come from ?** (educational, nonprofit, commercial, government, etc.)
- Is the domain extension appropriate for the content?
  - Government sites: look for .gov, .mil
  - Educational sites: look for .edu
  - Nonprofit organizations: look for .org  
(*Note that this is no longer restricted to nonprofits*)
- Many country codes, such as .us, .uk, and .my, are no longer tightly controlled and may be misused.
- Look for appropriateness. What kind of information source do you think is most reliable for your topic?

## What can the URL tell you?

- **Is it published by an entity that makes sense?**
- Who "published" the page? In general, the publisher is the agency or person operating the "server" computer from which the document is issued.
- The server is usually named in first portion of the URL (between *http://* and the first */*)
- Have you heard of this entity before?
- Does it correspond to the name of the site?

## Scan the perimeter of the page

- Look for links that say "**About us**," "**Philosophy**," "**Background**," "**Biography**," etc.
- Look for the date "last updated" - usually at the bottom of a web page.

## Scan the perimeter of the page

- **Who wrote the page?**
- name of the author, or the name of the organization, institution, agency, or whatever who is responsible for the page.
- Web pages are created with a purpose in mind by some person or agency or entity.
- someone who claims accountability and responsibility for the content.

## Scan the perimeter of the page

- **Is the page dated? Is it current enough?**
- time-sensitive or evolving topic?
- Undated factual or statistical information is no better than anonymous information. Don't use it without confirmation.
- The importance of the date is to tell you whether the page author is still maintaining an interest in the page, or has abandoned it.

## Scan the perimeter of the page

- **What are the author's credentials on this subject?**
- someone who is qualified to write on this topic?
- hobbyist, self-proclaimed expert, or enthusiast?
  - Is the page merely an opinion? Is there any reason you should believe its content more than any other page?
  - Is the page a rant, an extreme view, possibly distorted?
- author to the same degree of credentials, authority, and documentation that you would expect from something published in a reputable print resource (book, journal article, good newspaper).

## Look for indicators of quality information:

- Looks for "links," "additional sites," "related links," etc.
- What kinds of publications or sites are they? Reputable? Scholarly?
- Are they real? On the web (where no publisher is editing most pages), it is possible to create totally fake references.
- publisher of the page (first part of the URL).
- Expect a journal article, newspaper article, and some other publications that are recent to come from the original publisher IF the publication is available on the web. Look at the bottom of such articles for copyright information or permissions to reproduce.

## Look for indicators of quality information:

- **Are sources documented with footnotes or links?**
  - Where did the author get the information?
    - As in published scholarly/academic journals and books, you should expect documentation.
  - If there are links to other pages as sources, are they to reliable sources?
  - Do the links work?

## Look for indicators of quality information:

- **If reproduced information (from another source), is it complete, not altered, not fake or forged?**
  - Is it retyped? If so, it could easily be altered.
  - Is it reproduced from another publication?
    - Are permissions to reproduce and copyright information provided?
    - Is there a reason there are not links to the original source if it is online (instead of reproducing it)?

## Look for indicators of quality information:

- **Are there links to other resources on the topic?**
  - Are the links well chosen, well organized, and/or evaluated/annotated?
  - Do the links work?
  - Do the links represent other viewpoints?
  - Do the links (or absence of other viewpoints) indicate a bias?

## What do others say?

- What other web pages link to this page.
  - Use alexa.com: Type or paste the URL into alexa.com's search box. Click on the "Get details"
  - Traffic details.
  - Contact/ownership info for the domain name.
  - "Related links" to other sites visited by people who visited the page.
  - Sites linking in to the page.
- Look up the title or publisher of the page in a reputable directory that evaluates its contents (ipl2, Infomine, About.com, or a specialized directory you trust).
- Look up the author's name in Google or Yahoo!

## What do others say?

- **Who links to the page?**
  - Are there many links?
  - What kinds of sites link to it?
  - What do they say?
- Sometimes a page is linked to only by other parts of its own site (not much of a recommendation).
- Sometimes a page is linked to by both its fans and its detractors. Read both points of view

## What do others say?

- **Is the page listed in one or more reputable directories or pages?**
- Good directories include a tiny fraction of the web, and inclusion in a directory is therefore noteworthy.
- But read what the directory says! It may not be 100% positive.

## What do others say?

- **What do others say about the author or responsible authoring body?**
- "Googling" someone can be revealing. Be sure to consider the source.
- Also see which blogs refer to the site, and what they say about it. Google Blog Search is a good way to do this; search on the site's name, author, or URL.

## Does it all add up?

- think about all you have learned about the page. Listen to your gut reaction.
- Think about why the page was created, the intentions of its author(s).
- Be sensitive to the possibility that you are the victim of spoof, fraud, or other falsehood.
- Ask yourself if the web is truly the best place to find resources for the research you are doing.

[Web Page Evaluation Checklist](#)

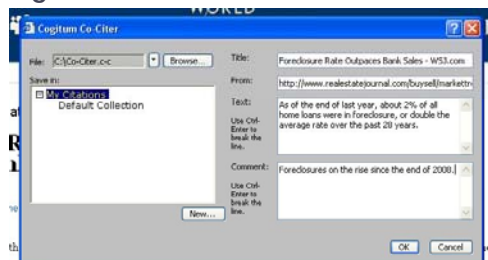
## Citing Your Sources

- **Why cite sources?**
- quote or base your ideas on another person's work, you must document the source you used.
- provide evidence for your arguments and add credibility to your work

## Internet Citation Tools

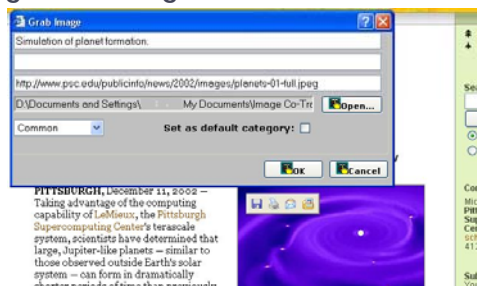
- Cogitum LC offers free tools that can help collect and organize information as you're scouring the Internet for data. These are:
  - Co-Citer – Records quoted text, its title and URL, and the date you collected it.
  - Co-Tracker 2.0 – Captures an image, its URL and the URL it links to, and the date you captured it.

## Cogitum Co-Citer



...omes rose just 4.4%, while the supply more than doubled, according to First American CoreLogic.  
 ...t 2% of all home loans were in foreclosure, or double the average rate over the past 20 years. It is th

## Cogitum Image Co-Tracker



## EndNote

- **EndNote is a bibliographic and file management tool for academics**
  - EndNote libraries are organized by author, date, title or any other tag you desire
  - Various work forms are provided for material types and are easily edited
  - Libraries are searchable by keyword
  - Libraries can hold links to your journal articles saved in PDF format.
  - Many databases have imbedded software so that search results can be downloaded in EndNote-compatible format.

## EndNote

