**Sources of Information**

Information can come from virtually anywhere — media, blogs, personal experiences, books, journal and magazine articles, expert opinions, encyclopedias, and web pages — and the type of information you need will change depending on the question you are trying to answer. Look at the following sources of information.

**Magazine**

A magazine is a collection of articles and images about diverse topics of popular interest and current events. Usually these articles are written by journalists or scholars and are geared toward the average adult. Magazines may cover very "serious" material, but to find consistent scholarly information, you should use journals.

-To find updated information about current events

-To find information or opinions about popular culture and practices

-To find general articles for people who are not necessarily specialists about the topic

E.g. India Today, Frontline, Outlook, The Week, Yojana, Sports Star, Femina etc.

**Journal**

A journal is a collection of articles usually written by scholars in an academic or professional field. An editorial board reviews articles to decide whether they should be accepted. Articles in journals can cover very specific topics or narrow fields of research.

-When doing research

-To find out what has been studied on your topic

-To find bibliographies that poit to other relevant research

**Database**

A database contains citations of articles in magazines, journals, and newspapers. They may also contain citations to podcasts, blogs, videos, and other media types. Some databases contain abstracts or brief summaries of the articles, while other databases contain complete, full-text articles.

**Newspaper**

A newspaper is a collection of articles about current events usually published daily. Since there is at least one in every city, it is a great source for local information.

**Library catalog**

A library catalog is an organized and searchable collection of records of every item in a library and can be found on the library home page. The catalog will point you to the location of a particular source, or group of sources, that the library owns on your topic.

**Books**

Books cover virtually any topic, fact or fiction. For research purposes, you will probably be looking for books that synthesize all the information on one topic to support a particular argument or thesis.

**Encyclopedias**

Encyclopedias are collections of short, factual entries often written by different contributors who are knowledgeable about the topic.

There are two types of encyclopedias: general and subject. General encyclopedias provide concise overviews on a wide variety of topics. Subject encyclopedias contain in-depth entries focusing on one field of study.

- when looking for background information on a topic

-when trying to find key ideas important  dates or concepts

**The Web**

The Web allows you to access most types of information on the Internet through a browser. One of the main features of the Web is the ability to quickly link to other related information. The Web contains information beyond plain text, including sounds, images, and video

**Background information resources**

Background information resources give general information about a variety of topics. These are often considered to be general reference sources, meaning that they provide basic facts and knowledge that can be used as a foundation for one's research. A little time spent in background information resources can save a tremendous amount of time when searching in databases and more subject-specific resources.

**Almanacs**

Almanacs are publications containing useful facts and statistical information; usually published annually. Some almanacs are general, like the Book of Facts in [MasterFILE Premier from EBSCOhost](http://search.ebscohost.com/login.aspx?authtype=ip,uid&profile=ehost&defaultdb=f5h) while others are subject-specific, such as [Astronomical Almanac Online](http://asa.usno.navy.mil/index.html) . Search Addison for [Almanacs](http://addison.vt.edu/search/a?searchtype=d&searcharg=almanacs&searchscope=1) to see a listing.

**Bibliographies**

Bibliographies are lists of books, articles, and other materials about a particular subject or by a particular author. Entries in this list usually follow a specified format such as the APA or CBE style guides and are sometimes accompanied by an annotation. A bibliography is generally found at the end of a book or article, but may comprise the entire article or book in and of itself. Search Addison by subject for your topic and include the term *bibliography* to find examples. You can search entries from bibliographies in Summon to see if we have access to the source.

**Biographical resources**

[Biographical resources](http://www.lib.vt.edu/topics/biography/index.html) include encyclopedic entries, articles, books, and videos about a person, group, or organization. They provide historical information about a person, lists of authored works, relationships to other people and groups. and analysis of impact on a field. Search Addison by subject for your topic and include the term*biography* to find sources. Many subject-specific databases provide biographies; check their advanced search screen for limiting options.

**Dictionaries**

Dictionaries can be both lists of words and definition and also alphabetical lists of entries on a topic. Similar to encyclopedias, these subject-specific dictionaries provide overview articles in a field, though not necessarily in as much depth, or with a bibliographic list of references. Search Addison by subject for your topic with the term*dictionaries* for sources.

**Directories**

Directories are lists of persons or organizations that are systematically arranged. They typically provide addresses and  affiliations for individuals and addresses, officers, functions, and similar data for organizations. Use these to compare organizations or to locate contact information to ask for information directly from the source.

**Encyclopedias**

Encyclopedias provide short entries or essays on topics and typically include a short bibliography of references for further research. Most are subject-specific ones like or .

**Handbooks**

Handbooks provide short entries or chapters on a topic, offering practical guidance or "how-to" instructions. Examples include the [CRC Handbook of Chemistry and Physics](http://www.hbcpnetbase.com/), [ADA Nutrition Care Manual](http://www.nutritioncaremanual.org/virginia) , and [Elsevier Handbooks in Economics](http://www.lib.vt.edu/find/databases/E/elsevier-handbooks-economics.html) .

**Statistical sources**

Statistics can be used to verify your position or support an assertion in your research. Almanacs may offer some statistical information, but statistical sources will provide more in-depth coverage. Examples include the [*Statistical abstract of the United States*](http://addison.vt.edu/record=b1775166~S1)and [International Monetary Fund eLibrary](http://elibrary-data.imf.org/) .

**Thesauruses**

Thesauruses provide lists of terms and synonyms. Examples can be both basic English language thesauruses, like Roget's Thesaurus, that provide synonyms for common English words, and subject-specific thesauruses, that provide *official* lists of terms (or *controlled vocabulary*) used in a field, such as the [*Thesaurus of psychological index terms*](http://addison.vt.edu/record=b1654093~S1). Many databases provide thesaurus lookup capabilities for searching their subject or descriptor index-searches. Use these to determine the correct/official term used to describe a topic in that database or field

**Web and the library,**

Although we've been making some distinctions between the Web and the library, the two aren't distinctly different things. It's important to understand that there is a middle-ground—the idea of the *library on the Web*. That is to say, many libraries have Web sites which organize information and provide access to collections of quality resources.

One great thing about using the library on the Web is that the information has been*evaluated* and *organized*. Sometimes the library has digitized part of their own collections for people around the world to use. Keep in mind that although there is an increasing amount of information in this *digital library*, some information can only be found in print resources

### *Libraries vs the Web*

#### Library resources go through a review process

Librarians select books, magazines, journals, databases, and other media sources. This selection process allows the library to collect sources considered reliable, historically relevant, and valuable.

#### Library resources are free for your use

Libraries purchase subscriptions to journals, databases, and other resources so they are available for your research. These subscriptions are not cheap but the information is valuable, relevant, and reliable.

#### Library resources are organized

Items in libraries are organized so you can easily find all the sources on a topic. For example, when you search for a book in the library catalog you will get a call number. The call number will direct you to a specific shelf in the library. The other books and bound journals near the same call number should cover a similar topic.

#### Library resources are meant to be kept permanently

One of the primary functions of a library is to be an organized storehouse of in-depth information published throughout time. Current and historical information can be found in the library giving the student an picture of how information on a topic developed.

#### Library resources come with personal assistance

Unlike the Internet which is primarily do-it-yourself, libraries have staff who are trained to assist you in sorting through all these information sources. They can help you learn to use new tools and can answer any questions you have. Some libraries even provide help through their websites. The Virginia Tech Libraries have a reference desk located on the second floor and in each of our branch libraries. We also have an [IM chat service and a texting service](http://www.lib.vt.edu/help/ask.html)for help. When all else fails, you can pick up a phone and call us or knock on a librarian's door for help.

#### Quality over quantity

Libraries have large collections of information on a variety of topics which have been carefully selected and organized. The key idea when using the library is that you are getting QUALITY over QUANTITY. Print or electronic library resources are the best sources to use when starting your research. You can efficiently find quality information from a variety of credible resources in the library

Although many people first go to the web for information, it is not always the best place for what you need. It's pretty darn difficult to make definitive statements about something as diverse as the web. But here we go.

**Most information on the web does not go through a review process**

Anyone can publish on the web without passing the content through an editor. Pages might be written by an expert on the topic, a journalist, a disgruntled consumer or a sixth grader.

**Some information on the web is not free**

Many web pages are free to view (and actually many of the best ones are), but some commercial sites will charge a fee to access all or part of their information.

**Information on the web is searchable but not organized**

There are too many web pages for any single directory service or search engine to organize and index. Information can be found by using a search engines such as Google or Bing.

**Most information on the web is not comprehensive**

The millions of web pages out there make up an eclectic hodgepodge of information and opinion. Rarely will you be able to use a search engine on the web to collect information about your topic from different decades, different viewpoints, and different types of sources.

**Most information on the web is not permanent**

Some well-maintained sites are updated with very current information, but other sites may become quickly dated or disappear altogether without much notice.

**The information you find on the web is as varied as the people who put it there**

Groups that publish information on the web include:

* **Libraries** - That's right, libraries are major producers and purchasers of quality information on the web. The Library of Congress puts copies of important historical photographs and documents on their site called "The American Memory Project."
* **Universities** - Universities put entire classes online as well as provide space for their faculty and students to produce web pages. Much of the information you need to enroll and register for classes can be found on the web.
* **Government agencies** - In order to make information available to more people, federal, state and local governments are publishing many documents on the web. The Internal Revenue Service (IRS) puts copies of tax forms on the web.
* **Companies** - Many companies publish financial documents and press releases on their sites. The web is also a major marketing tool for many companies to provide information about their products. Nike produces a popular site full of sports information.
* **Organizations** - Organizations have agendas and opinions that they want you to know about. The American Lung Association educates about the dangers of smoking on its web page.
* **People in foreign countries** - The web has global representation. With a computer and a phone connection, anyone can publish on the web

## *Primary, secondary, and tertiary sources*

When searching for information on a topic, it is important to understand the value of primary, secondary, and tertiary sources.

**Primary sources** allow researchers to get as close as possible to original ideas, events, and empirical research as possible. Such sources may include creative works, first hand or contemporary accounts of events, and the publication of the results of empirical observations or research. We list [sources for historical primary documents](http://www.lib.vt.edu/find/primary-sources/index.html).

**Secondary sources** analyze, review, or summarize information in primary resources or other secondary resources. Even sources presenting facts or descriptions about events are secondary unless they are based on direct participation or observation. Moreover, secondary sources often rely on other secondary sources and standard disciplinary methods to reach results, and they provide the principle sources of analysis about primary sources.

**Tertiary sources** provide overviews of topics by synthesizing information gathered from other resources. Tertiary resources often provide data in a convenient form or provide information with context by which to interpret it.

The distinctions between primary, secondary, and tertiary sources can be ambiguous. An individual document may be a primary source in one context and a secondary source in another. Encyclopedias are typically considered tertiary sources, but a study of how encyclopedias have changed on the Internet would use them as primary sources. Time is a defining element.  
While these definitions are clear, the lines begin to blur in the different discipline areas

In the sciences, primary sources are documents that provide full description of the original research. For example, a primary source would be a journal article where scientists describe their research on the genetics of tobacco plants. A secondary source would be an article commenting or analyzing the scientists' research on tobacco.

**Primary sources**

* Conference proceedings
* Interviews
* Journals
* Lab notebooks
* Patents
* Preprints
* Technical reports
* Theses and dissertations

These are where the results of original research are usually first published in the sciences. This makes them the best source of information on cutting edge topics. However the new ideas presented may not be fully refined or validated yet.

**Secondary sources**

* Monographs
* Reviews
* Textbooks
* Treatises

These tend to summarize the existing state of knowledge in a field at the time of publication. Secondary sources are good to find comparisons of different ideas and theories and to see how they may have changed over time.

**Tertiary sources**

* Compilations
* Dictionaries
* Encyclopedias
* Handbooks
* Tables
* Periodicals are usually separated into several major groups: popular, trade, and scholarly. If you are able to recognize the differences between these sources, you can focus your research to retrieve only the type of information you need.
* **Popular magazines** like *People*, *Sports Illustrated*, and *Rolling Stone* can be good sources for articles on recent events or pop-culture topics, while *Harpers*, *Scientific American*, and *The New Republic* will offer more in-depth articles on a wider range of subjects. These articles are geared towards readers who, although not experts, are knowledgeable about the issues presented.
* **Trade journals** are geared towards professionals in a discipline. They report news and trends in a field, but not original research. They may provide product or service reviews, job listings, and advertisements.
* **Scholarly journals** provider articles of interest to experts or researchers in a discipline. An editorial board of respected scholars (peers) reviews all articles submitted to a journal. They decide if the article provides a noteworthy contribution to the field and should be published. There are typically little or no advertisements. Articles published in scholarly will include a list of references.
* **Peer review** is a widely accepted indicator of quality scholarship in a discipline or field. Peer-reviewed (or refereed) journals are scholarly journals that only publish articles that have passed through this review process. See also our [FAQ on how to find peer-reviewed articles](http://vt.libanswers.com/a.php?qid=305460)

A publication is considered to be **scholarly** if it is authored by academics for a target audience that is mainly academic, the printed format isn't usually a glossy magazine, and it is published by a recognized society with academic goals and missions. A publication is considered to be **peer-reviewed** or **refereed** if its articles go through an official editorial process that involves review and approval by the author's peers (experts in the same subject area.) Most (but not all) scholarly publications are peer-reviewed.

# A journal is a periodical, which generally contains material relating to research • Appears at regular intervals – weekly, monthly, quarterly • Content varies and can include editorials, articles, book reviews, etc • They do not necessarily have the word “journal” in the title, e.g. New scientist.

A journal is a publication that is published in a particular format and is issued at fixed intervals (e.g. weekly, monthly, and yearly). Academics, scholars, researchers and other experts in the field often publish in **academic** (otherwise known as **scholarly**) **journals**. Academic journals tend to focus on a specific area or discipline (e.g. [Nature](http://library.uq.edu.au/record=b1014349) and the [New England Journal of Medicine](http://library.uq.edu.au/record=b1127607)) and are published more frequently than books. Articles published in these journals are supported by references to other scholarly material.

The [Explaining journal articles](http://www.library.uq.edu.au/how-to-guides/explaining-journal-articles) How-to guide provides an explanation of different types of journals including peer reviewed journals

**Popular magazines**

Popular magazines (such as [Australian Geographic](http://library.uq.edu.au/record=b1231072~S7) and [New Scientist](http://library.uq.edu.au/record=b1014335)) contain articles written by journalists and are geared towards a general audience. Unlike academic journals they do not go through a peer review process and rarely contain bibliographic citations. (such as [Australian Geographic](http://library.uq.edu.au/record=b1231072~S7) and [New Scientist](http://library.uq.edu.au/record=b1014335)) contain articles written by journalists and are geared towards a general audience. Unlike academic journals they do not go through a peer review process and rarely contain bibliographic citations.

**Reference Books**

You can use reference material (such as dictionaries, encyclopaedias, yearbooks, biographies, directories and atlases) to find facts, figures, addresses, statistics, definitions and dates. They're good sources of factual and statistical information, and sources like encyclopaedias can give an overview of a topic.

Provide short, to-the-point factual information • Good starting point – provide definitions & general information • Examples: Encyclopaedias Dictionaries Directories Atlases and maps.

Bibliographic databases

Do not contain full text documents – representations of documents • Usually author, title, source, abstract, keywords • Sometimes a hyperlink to full text version • Important databases for health: Medline, African Healthline, MDConsult, Health & Wellness Resource Center.

**Theses & Dissertations**

A research report as presented as part of an academic course for a higher degree • UP = UPeTD: Theses & dissertations available in electronic format • Part of a worldwide network • TD’s available on the internet – research more accessible.

# The type of information source you use will differ based on the questions you are trying to answer and the assignment requirements set out by your Course Co-ordinators.

# REFERENCE PRACTICES

The accuracy and validity of references are a part of a meticulous publication; they give reliability and credibility to it. An accurate bibliographic reference enables anyone to find the particular piece of information easily. Bibliographic references also convey the copyright relations. Accuracy in bibliographic references is as crucial in electronic as in printed information sources.

Several disciplines have their own reference practices. Furthermore, several university departments have compiled their own guidelines on bibliographic references that are to be followed in the publications and theses that the departments in question issue. For the sake of consistency, it is advisable to follow the same practices on all the references made in a particular publication.

There are several guidelines on how to produce bibliographic references; for example, research guides and study books often have examples on referencing and citing. Such guides can be found from Tampere University Library. In addition, there are a great number of reference guides and examples on the web: for instance, it is advisable to take a look at the [guidelines](http://library.duke.edu/research/citing/) compiled by the Duke University.

### Managing References (RefWorks)

There are computer-based programmes to manage bibliography and references. Tampere University Library offers[RefWorks](http://www.refworks.com/Refworks/help/Refworks.htm) to its patrons, which enables creating your own database where it is possible automatically import and store references from different databases, and which automatically formats the bibliography.

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There are many different types of information sources that may be useful when you are researching essays and assignments. It is important to understand the difference between these and how they can best be used and accessed.