Conducting a Literature Review

Information Overload versus Information Literacy
Information overload occurs when one is overwhelmed by the volume of information being presented to him/her and is, therefore, unable to effectively extract relevant information. To succeed in the Information Age you must become Information Literate. An information literate person is able to recognise when information is needed and has the skills to locate, evaluate and use information effectively.


Starting your literature review

A literature review is an account of what has been published on a topic by accredited scholars and researchers. There are some excellent websites that explain the process of conducting a literature review.
A good place to start is Mike Hart's site, which will help you with practical sources of advice to successfully write your projects, dissertation or thesis.
http://final-year-projects.com/index.htm and http://uw-tutor.co.uk/ess_help/

Excellent Online tutorial: http://www.engageinresearch.ac.uk/index.html

Starting your research.
Define what your topic and focus will be. Compile a list of keywords and synonyms. Use dictionaries, thesauri, and encyclopaedias to aid you. Check www.wikipedia.org and Oxford Reference (from our database pages)

• List the resources you will use for your review – Internet, books, journals etc
• Evaluate results -are they reliable, accurate
• Structure and write review

Types of Information Sources
Libraries, including UCC Library, are repositories of information sources. Information sources are generally defined as either print or electronic.

Print: Reference material, general textbooks, academic journals, popular journals, newspapers, annual reports, theses and inter-library loans.

Electronic: Databases, electronic journals and books, and the Internet.

Each information source serves a specific need, so that while you may find you need to use print resources, such as core textbooks, for one assignment, you may also find that you need to access electronic resources, for example, databases for another. Most assignments and any literature review will, in fact, require you to use both print and electronic resources.
Books
There can be a wealth of useful information for your research contained in books. To locate books on your topic you could use the Library Catalogue, look at online vendors such as Amazon, or search Google Print

The Library Catalogue [http://library.ucc.ie/screens/opacmenu.html](http://library.ucc.ie/screens/opacmenu.html)

Libraries use catalogues to record their contents. In the past, card catalogues were used. Details of library books were written on cards, which were then, arranged in alphabetical order by author/subject etc.

Today, details of library books are entered into computer databases, or electronic catalogues, known as OPACs (Online Public Access Catalogues).

Searching our catalogue will let you know if we stock the particular book you are looking for. It will also tell you how many copies we have, where they are located, and if they are out to anyone. If the library does not stock a book you are looking for you may wish to buy it or get it through Inter Library Loans. [www.amazon.co.uk](http://www.amazon.co.uk) will give you the bibliographic details you need.


A very useful resource for finding out what is inside a book. Often when you look for a book on Amazon or on our library catalogue you are searching by the title of the book. Your research may be Ring Tailed Lemurs but there may be few books called this. Google Books allows you to search within the book so you may find books with good chapters on your topic.

Next, searching the Internet, which is usually the first port of call for many students.

The Internet

Google [www.google.ie](http://www.google.ie)

Google is a very versatile search engine. It covers a variety of topics, and includes options for basic and advanced searches. It is a good starting point for anyone undertaking research. Its content is not, however, definitive. Therefore you must learn to evaluate the results. There is an excellent tutorial, Internet Detective at [http://www.vts.intute.ac.uk/detective/index.html](http://www.vts.intute.ac.uk/detective/index.html)

In order to zone in more accurately on your required results always use the “Advanced Search” option in Google. This will allow you to broaden or narrow your search with ease. Also take a look at the “Advanced Search Tips”
More importantly for **quality information** you should use the following peer reviewed (work/site is reviewed by experts in the field) search engines

**Google Scholar**  [http://scholar.google.com/](http://scholar.google.com/)

Google Scholar enables you to search specifically for scholarly literature, including peer-reviewed papers, theses, books, preprints, abstracts and technical reports from all broad areas of research. Use Google Scholar to find articles from a wide variety of academic publishers, professional societies, preprint repositories and universities, as well as scholarly articles available across the web.

**Scirus**  [http://www.scirus.com/](http://www.scirus.com/)

Search engines are all different in the Web sites they cover, and the way they classify these Web sites. Scirus, the search engine for science, focuses only on Web pages containing scientific content. Searching more than 200 million science-related pages, Scirus helps you quickly locate scientific information on the Web:

- Filters out non-scientific sites. For example, if you search on REM, Google finds the rock group - Scirus finds information on sleep, among other things

The following **gateway** is also useful  [http://www.intute.ac.uk/](http://www.intute.ac.uk/)

Subject specialists select and evaluate the websites and write high quality descriptions of the resources. Lists **evaluated** Internet resources for students, lecturers, researchers and practitioners in Science and Technology, Arts and Humanities and the Health and Life Sciences.

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**Databases**

*When conducting a literature review perhaps the most important source is to use the many databases that the library subscribes to.*

You use databases all the time - the address book feature on your mobile phone is an example of one. The basis of a database is that someone has brought together a collection of information resources, identified and described them, and then, systematically organised them so that someone else, for example, you, can find them.

The research databases you will be using to source information for your assignments are electronically organised collections of periodicals, including newspaper and journal articles. These databases are an extremely efficient means of accessing references to up to date, academically sound material.

UCC Library subscribes to 180 approx. specialised and general databases.

**Searching the Library Databases**

Library website, Booleweb,  [http://booleweb.ucc.ie/](http://booleweb.ucc.ie/)

The important reason as to why you should use one of the Library's databases rather than concentrating on Yahoo and Google is that you are searching through **peer**
reviewed academic journals so quality and accuracy is guaranteed. They also offer speed, allowing you to zone in on the exact information you want. Thousands of different academic journal titles are published each year, some appearing weekly and each containing numerous articles. A database sorts through millions of these articles in seconds, retrieving articles matching the search term(s) you entered. Databases are expensive commercial products, each indexing a set of journal titles, and these titles can differ from database to database. Therefore, to do a comprehensive search you should search more than one database as they may bring up titles not indexed in the other.

The Library subscribes to many databases, which you can find listed on our website at http://library.ucc.ie/screens/pininfo.html

Databases normally give you brief details about an article - journal title, article title, page numbers, year, etc and an abstract or a synopsis of what the article includes. This information allows you to get the article easily, either by clicking the Article Linker button or checking our catalogue under Journals to see if we stock it, or, if not, through Inter Library Loans. Thankfully we are subscribing to more and more full text electronic versions of journals and currently we have access to around 55,000 titles.

We also subscribe to full text databases such as Science Direct and JSTOR. These will find articles for you as well as allowing you to read them on screen.

**Some examples of Databases**

To see databases for your subject click to the Subject Portals link on the top of the library homepage and select your relevant subject.

To start, try out your search on the following full text databases

- Academic Search Premier – multiple journal titles
- JSTOR – Older archival multiple journal titles
- Science Direct - multiple journal titles
- Wiley Interscience - multiple journal titles
- Web of Knowledge – access to BIOSIS Previews and Web of Science (Note: despite Science in name it is a multidisciplinary database)
  This important database is a bibliographic database, ie; you will only get the details of an article. You can, where available, click on the “Article Linker” button which will take you to the full text if we subscribe to it. Alternatively you can check our catalogue to see if we stock journal, and if we do, retrieve it from shelves to read.

Searching the above Internet sites along with some of our databases should give you more than enough information on your topic to get started. You can of course continue your research by searching through the other databases listed in Booleweb and following the bibliographies listed at the end of each article.

To use our databases from home (Remote Access) you will be asked to enter your name, library/ID card number and your PIN number (a 6+ digit alpha/numeric password which you decide)

Details at http://library.ucc.ie/screens/pininfo.html
How to cite references
Please remember that if you use articles in your work, and obviously for a literature review, you must cite them in a bibliography or “List of References” at the end. See the following tutorial You Quote It, You Note It! http://library.acadiau.ca/tutorials/plagiarism/

The following link is also excellent for Harvard Style (used in Science) referencing information http://asp.wlv.ac.uk/Level5.asp?UserType=11&Level5=500

The Library also offers classes in using the bibliographic management software EndNote. Email r.bradfield@ucc.ie for details

Books about writing research papers, scientific papers and articles for journals can be found in the Boole Library at the classification number 808 (located on Q+3).

And remember - never use someone else’s words or ideas as if they were your own (plagiarism). Always cite them.

Coming Soon -Online Information Literacy Module www.informationliteracy.ie

An online PDF version of this handout is available at http://0-boolweb.ucc.ie.library.ucc.ie/documents/LitReview_Handout09.pdf
This will save you having to type in any of the links above.

For any further help or to arrange further classes please contact Richard Bradfield, Science Librarian. Email r.bradfield@ucc.ie Tel: 490 3971 or the Science Information Desk on Q+1 librarysciencefloor@ucc.ie, Tel: 490 2284

or your relevant Subject Librarian.
TIP: To improve your searching efficiency, you should use **Boolean Logic**. Using the words **AND**, **OR**, and **NOT** will help refine your search.

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>AND</strong></td>
<td>Connecting your keywords with <strong>AND</strong> tells the search tool that <strong>all</strong> the words must be present. <strong>Will reduce your search results</strong> i.e. if you keeping adding words you will find less articles mentioning all of them.</td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td>Connecting your keywords with <strong>OR</strong> tells the search tool that <strong>any</strong> of the words can be present. <strong>Will Increase your search results</strong> as articles can mention either word or all of them.</td>
</tr>
<tr>
<td><strong>NOT</strong></td>
<td>Using <strong>NOT</strong> in front of a key word tells the search tool to <strong>exclude</strong> any page containing that word. <strong>Use cautiously</strong> as you may exclude some good results.</td>
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**Examples**

- **Poverty AND Crime** requires that any hit returned would include **BOTH** words.
- **College OR University** will return pages which have **EITHER** of the words.
- **Cats NOT Dogs** will return any pages that have cats in the text, but will **exclude** any mention of both “cats and dogs” and dogs.

The shaded area in these Venn diagram’s represents the results you will get.

*Our Boole Library takes its name from George Boole, the first professor of Mathematics at UCC in 1849. He developed Boolean Logic and laid the foundations in the latter half of the nineteenth century of a system of mathematical expression that formed the basis for all modern computer languages.*