

The Research Process and Information Literacy

A significant amount of time at university involves learning the research process, the process by which students are indoctrinated into the ways of knowledge creation and the “cycle of information.”

The research process involves several steps that you will practice in different classes and contexts:

1. Selecting a topic and constructing a thesis statement;
2. Identifying, locating, evaluating background and in-depth information to prove your thesis statement, otherwise known as “research”;
3. Using that information ethically to write your research paper;
4. Citing your sources properly within that paper, creating a bibliography or Works Cited list, and avoiding plagiarism.

For your first year, much of the research process will be taught using a Web-based tool called Research Navigator: <http://www.researchnavigator.com> .

The research process is one aspect of a broader understanding and use of information called “information literacy.”

Because of the difficulty in organizing and classifying information, it is important to remain flexible when thinking about the materials your research requires. Good research is not as easy as pointing a browser at a search engine. It is therefore essential to know as much about information, its sources, and its uses as possible.

The following pages will put the research process into a broader context by introducing you to the skills involved in information literacy.

There is a lot of information here, but it is all important. Use this guide as a resource throughout your education.

By mastering the research process and the skills involved in information literacy you will be well prepared for the variety of information needs you will encounter both at Southern New Hampshire University and throughout your life!

Information Literacy -- Introduction

The Cycle of Information and the Academic Mission

We are constantly bombarded with information; it is everywhere, and consists of everything you take in by your senses.

But for the purposes of university study, and for these pages, information can be defined as *any documentation that can be used to create knowledge*. It can therefore consist of everything from spoken words, podcasts, written communications, videos, sheets of music, photographs and paintings, to computer codes, TV shows, and scientific formulae.

Research can be defined as *the process of collecting, organizing, and analyzing information to create knowledge*.

Research is, by its nature, a cyclical process that builds on what has come before. Scholars create information, such as a poem or laboratory data, and disseminate this information to other scholars through professional channels (e.g. books, journal articles, papers given at disciplinary conferences, etc.). Other scholars then use this information to create new knowledge (for example, in the form of new interpretations and new experiments), and the process repeats: what was once a secondary product of research in turn becomes the primary material for new research and new knowledge. This process is called the “cycle of information,” or “the scholarly dialog” or “discussion.”

Because knowledge is built on a foundation of prior knowledge, scholarly work contains bibliographies and “Works Cited” lists so everyone understands what the new knowledge was based upon. In so doing, the scholarly mission of knowledge creation is achieved with academic integrity.

Not citing sources and passing off someone else’s work as one’s own constitutes plagiarism, a serious example of academic fraud that goes against the scholarly mission.

Professors introduce university students to the cycle of information when they design their class assignments to include research and ask students to go through the same process that professional scholars go through to produce knowledge.

Understanding and participating in this academic process is an important part of university study, and because the cycle of knowledge creation is the same even outside of the university, understanding this process is also a key to opening the doors to professional work beyond the university.

The problem is that as more knowledge is created, it becomes harder to track where that knowledge and information is unless it is collected and organized effectively.

How Is Information Organized?

People can organize information in a variety of ways. Sometimes the organization is *systematic*, such as the alphabetical listing of a telephone directory; sometimes it is more *subjective*, such as organizing your books by binding color. Ideally, information should be organized according to who will use it and how. Ultimately, however, organizing a large amount of information can be very difficult, even for experts.

Regardless of how information is organized, people with different information needs might have different methods for searching for information. Consider, for example, the different ways libraries and academic disciplines organize information:

Organization of Information in Libraries

Libraries organize their holdings (usually books, but also perhaps videos, maps, and other objects) by adopting a classification scheme, a way to organize materials by subject. The two most common library classification schemes in the United States are the Dewey Decimal Classification system, used by school and public libraries, and the Library of Congress Classification system, used for university and large public libraries. Both systems contain combinations of letters and numbers to create call numbers by which items can be located on the library shelves.

Classification schemes that organize items by subject also keep similar items together on the shelves. This facilitates browsing. Locating a call number for one item can thereby lead to other discoveries that are shelved nearby.

Libraries also must organize other information, such as periodicals, namely newspapers and journals. Paper newspapers and journals often are housed temporarily in easy-to-access locations. Older newspapers are often retained only on microfilm for easier storage; older journals may be bound and their runs shelved either separately from or intermingled with the other holdings.

Journals and significant newspapers are often indexed either in paper or in electronic form. The articles therein can then be located by searching the indexes. Electronic databases may provide citations for the article, an abstract of the article, or in some cases, even the article in full text.

The library collection as a whole is collected in a searchable catalog. Previously, access to library catalogs was provided in the form of cabinets of paper library cards. Today, libraries typically provide access to their holdings via electronic online catalogs. Search the catalog for authors, book and journal titles, and for electronic items that may be linked to the catalog, such as electronic books (e-

books). You may be surprised to find out that titles of individual journal articles are not found by searching the online catalog.

How Academic Disciplines Value and Organize Information

Different academic disciplines also value and organize information differently. Fields in which research is often immediately applied to solve practical problems, such as medicine, computer science, and engineering, value and use information differently than disciplines for which research is not typically applied to solve problems, such as philosophy, English, or history. Many scientific fields, for example, value the newest information, while many fields in the humanities continue to value older material.

Regardless of the discipline, subject information can be found and retrieved via a number of paths. Information on psychology, for example, can be found via a prominent journal, an index of scholarly journal abstracts, or through a respected psychological society Web page; it could also be found in a database that includes both psychological information as well as information from other disciplines, or from a resource on drug interactions that may include a section on psychological side-effects.

The paths to find resources therefore make up a wide “web” of interconnections that are not always obvious to seasoned researchers, let alone beginning scholars. Today, many of these avenues may be linked to each other by means of the Internet, but much information is still not available online, and there are still many disciplines that continue to rely on traditional paper for publishing and sharing information, making the linking of such paths even more difficult to recognize and to follow.

Increasingly, cross-disciplinary and interdisciplinary fields, such as American Studies, Environmental Studies, and Women's Studies, are challenging the traditional ways knowledge has been valued and structured, and we recognize even more possible interconnections and paths to information. Therefore, in order to understand the research assignments you will be given, it is important to understand how the fields you study value information and the sources by which to find it.

Reminder: It is worth repeating that good, scholarly information can be difficult to find and tricky to use appropriately. It is important to remain flexible when thinking about the materials your research requires. Good research is not as easy as pointing a browser at a search engine. It is therefore essential to know as much about information, its sources, and its uses as possible.

Skill and patience is required when searching for information at any stage, but this is increasingly so throughout undergraduate university study as you begin to learn the research process.

What Is Information Literacy?

The “research process,” such as that outlined in ResearchNavigator.com, is one *application* of information literacy.

Information literacy is an intellectual process during which 4 activities occur:

- i. You determine your need for information;
- ii. You formulate a plan to locate that information in print and/or electronic resources using appropriate vocabulary and search strategies;
- iii. You evaluate the information found for gaps and quality; and
- iv. You use the information you found to draw conclusions and legally and ethically present results.

How Does Information Literacy Compare to the “Research Process”?

If we understand the research process to comprise the following steps:

- i. Selecting a topic and developing a tentative thesis statement;
- ii. Finding sources to support your argument;
- iii. Writing and revising your paper;
- iv. Citing sources appropriately; and
- v. Editing your work for presentation,

going through the research process to write a paper or create a presentation is one way that instructors ask that you practice information literacy.

Why Is Information Literacy Important?

Information literacy in its full sense encompasses more than writing research papers for university classes.

Other aspects of information literacy might include fluency in information technology (knowing how to use computers and their applications to search for information), visual literacy (understanding how knowledge is imparted through visual means, such as art and advertising), and other “literacies.”

Other applications of information literacy might include tracing your family history, preparing a financial report for work, investigating what laws apply to a local building project, planning a community recycling drive, or comparing reviews of a product you’re interested in buying.

In these and myriad other ways, information literacy is incredibly important in a world where we are bombarded with information everywhere we look: on TV, on the Web, in advertising, books, newspapers, and elsewhere. Much of this information is irrelevant, biased, wrong, and may even be designed to deliberately mislead you! Knowing how to find good, relevant, reliable information is a skill that requires mastering a combination of critical thinking and research skills that will continue to serve you long after you graduate from the university.

That's why practice in building these skills is important. And the more you practice information literacy at college, the more your skills will improve and you will be able to transfer those skills to other projects, whether they are for school, home, work, or the community at large!

How Is Information Literacy Taught at SNHU?

Teaching information literacy skills is a collaborative effort. There are many elements associated with Information Literacy, and the activities involved in teaching it will be spread throughout the curriculum. Some skills will be taught and modeled by your professors in and out of classes, others will be taught by librarians who are trained in information retrieval and use.

YOU will also be responsible for learning the skills necessary to become information literate and for developing papers, projects, and presentations that demonstrate your understanding of these skills.

The following pages provide more detail about the four “parts” of Information Literacy:

1. Determining What Information You Need
2. Acquiring the Information You Need Efficiently and Effectively
3. Evaluating Information Critically
4. Using Information Ethically and Legally