

THE RESEARCH PROCESS: DEFINITION

There are a variety of approaches to research in any field of investigation, irrespective of whether it is applied research or basic research. Each particular research study will be unique in some ways because of the particular time, setting, environment, and place in which it is being undertaken.

An understanding of the research process is necessary to effectively carry out research and sequencing of the stages inherent in the process.

Step 1: Identify and develop your topic

Selecting a topic can be the most challenging part of a research assignment. Since this is the very first step in writing a paper, it is vital that it be done correctly. Here are some tips for selecting a topic:

1. Select a topic within the parameters set by the assignment. Many times your instructor will give you clear guidelines as to what you can and cannot write about. Failure to work within these guidelines may result in your proposed paper being deemed unacceptable by your instructor.
2. Select a topic of personal interest to you and learn more about it. The research for and writing of a paper will be more enjoyable if you are writing about something that you find interesting.
3. Select a topic for which you can find a manageable amount of information. Do a preliminary search of information sources to determine whether existing sources will meet your needs. If you find too much information, you may need to narrow your topic; if you find too little, you may need to broaden your topic.
4. Be original. Your instructor reads hundreds of research papers every year, and many of them are on the same topics (topics in the news at the time, controversial issues, subjects for which there is ample and easily accessed information). Stand out from your classmates by selecting an interesting and off-the-beaten-path topic.
5. Still can't come up with a topic to write about? See your instructor for advice.

Once you have identified your topic, it may help to state it as a question. For example, if you are interested in finding out about the epidemic of obesity in the American population, you might pose the question "What are the causes of obesity in America?" By posing your subject as a question you can more easily identify the main concepts or keywords to be used in your research.

Step 2 : Do a preliminary search for information

Before beginning your research in earnest, do a preliminary search to determine whether there is enough information out there for your needs and to set the context of your research. Look up your keywords in the appropriate titles in the library's Reference collection (such as encyclopedias and dictionaries) and in other sources such as our catalog of books, periodical databases, and Internet search engines. Additional background information may be found in your lecture notes, textbooks, and reserve readings. You may find it necessary to adjust the focus of your topic in light of the resources available to you.

Step 3: Locate materials

With the direction of your research now clear to you, you can begin locating material on your topic. There are a number of places you can look for information:

If you are looking for books, do a subject search in the Alephcatalog. A Keyword search can be performed if the subject search doesn't yield enough information. Print or write down the citation information

on (author, title, etc.) and the location (call number and collection) of the item(s). Note the circulation status. When you locate the book on the shelf, look at the books located nearby; similar items are always shelved in the same area. The Aleph catalog also indexes the library's audio-visual holdings.

Use the library's [electronic periodical databases](#) to find magazine and newspaper articles. Choose the databases and formats best suited to your particular topic; ask at the librarian at the Reference Desk if you need help figuring out which database best meets your needs. Many of the articles in the databases are available in full-text format.

Use search engines ([Google](#), [Yahoo](#), etc.) and subject directories to locate materials on the Internet. Check the [Internet Resources](#) section of the NHCC Library web site for helpful subject links.

Step 4: Evaluate your sources

See the [CARS Checklist for Information Quality](#) for tips on evaluating the authority and quality of the information you have located. Your instructor expects that you will provide credible, truthful, and reliable information and you have every right to expect that the sources you use are providing the same. This step is especially important when using Internet resources, many of which are regarded as less than reliable.

Step 5: Make notes

Consult the resources you have chosen and note the information that will be useful in your paper. Be sure to document all the sources you consult, even if you think there is a chance you may not use that particular source. The author, title, publisher, URL, and other information will be needed later when creating a bibliography.

Step 6: Write your paper

Begin by organizing the information you have collected. The next step is the rough draft, wherein you get your ideas on paper in an unfinished fashion. This step will help you organize your ideas and determine the form your final paper will take. After this, you will revise the draft as many times as you think necessary to create a final product to turn in to your instructor.

Step 7: Cite your sources properly

Give credit where credit is due; cite your sources.

Citing or documenting the sources used in your research serves two purposes: it gives proper credit to the authors of the materials used, and it allows those who are reading your work to duplicate your research and locate the sources that you have listed as references. The [MLA](#) and the [APA](#) Styles are two popular citation formats.

Failure to cite your sources properly is plagiarism. Plagiarism is avoidable!

Step 8: Proofread

The final step in the process is to proofread the paper you have created. Read through the text and check for any errors in spelling, grammar, and punctuation. Make sure the sources you used are cited properly. Make sure the message that you want to get across to the reader has been thoroughly stated.

Additional research tips:

- Work from the general to the specific -- find background information first, then use more specific sources.

- Don't forget print sources - many times print materials are more easily accessed and every bit as helpful as online resources.
- The library has books on the topic of writing research papers at call number area LB 2369.
- If you have questions about the assignment, ask your instructor.
- If you have any questions about finding information in the library, ask the librarian.

THE RESEARCH PROCESS: CHARACTERISTICS AND REQUIREMENTS

From these definitions it is clear that research is a process for collecting, analysing and interpreting information to answer questions. But to qualify as research, the process must have certain characteristics: it must, as far as possible, be **controlled, rigorous, systematic, valid and verifiable, empirical and critical**. Let us briefly examine these characteristics to understand what they mean:

Controlled – In real life there are many factors that affect an outcome. A particular event is seldom the result of a one-to-one relationship. Some relationships are more complex than others. Most outcomes are a sequel to the interplay of a multiplicity of relationships and interacting factors. In a study of cause-and-effect relationships it is important to be able to link the effect(s) with the cause(s) and vice versa. In the study of causation, the establishment of this linkage is essential; however, in practice, particularly in the social sciences, it is extremely difficult – and often impossible – to make the link. The concept of control implies that, in exploring causality in relation to two variables, you set up your study in a way that minimizes the effects of other factors affecting the relationship.

Rigorous – You must be scrupulous in ensuring that the procedures followed to find answers to questions are relevant, appropriate and justified. Again, the degree of rigour varies markedly between the physical and the social sciences and within the social sciences.

Systematic – This implies that the procedures adopted to undertake an investigation follow a certain logical sequence. The different steps cannot be taken in a haphazard way. Some procedures must follow others.

Valid and verifiable – This concept implies that whatever you conclude on the basis of your findings is correct and can be verified by you and others.

Empirical – This means that any conclusions drawn are based upon hard evidence gathered from information collected from real-life experiences or observations.

Critical – Critical scrutiny of the procedures used, and the methods employed is crucial to a research enquiry. The process of investigation must be foolproof and free from any drawbacks. The process adopted and the procedures used must be able to withstand critical scrutiny. For a process to be called research, it is imperative that it has the above characteristics.