Writing a Research Paper

Learning to research information is an invaluable skill. It is important to learn how to do quality research regardless of whether you are on the job and need to research something for your boss, whether you are working on a personal project that could benefit from the added value of research, or whether you are a student doing research for a class. Learning this skill is worth the effort and will benefit you for years.

How to begin writing a research paper

First steps

The very first step in writing a research paper is to make certain you understand the assignment. Read through the assignment carefully making sure you understand it well enough to restate it in your own words. Pay close attention to any instructions regarding the subject of the paper, the suggested length and any requirements regarding the sources you may use.

[Click on the link below and go through the three steps to understanding your assignment.]

Understand your assignment

Choosing a topic

Choosing a topic is a critical step in writing a research paper! What makes this so important is that you want to carefully decide on a topic that interests you. If you take this advice to heart, then the work of research does not seem like work. It is fun.

Consider this a good time to think about the subjects you are already interested in or the subjects about which you would like to learn more. Brainstorm a list of possible topics you might like to write about. The earlier you begin this process, the better.

To add to your list of topics, begin searching the web looking at online news sources, encyclopedias and other websites to generate more ideas. Remember, you want to find a topic that interests you! Select a topic that is narrow enough that you are not overwhelmed by all of the information available and broad enough to effectively cover the topic (this balance comes with practice, so give it some time). An example: Picasso’s Blue Period (narrow topic) vs. historical paintings (broad topic).
There are some excellent resources that discuss the research process and have some suggestions for choosing possible research topics. Contact Buffy, the Reference Librarian at the Community Library, if you need help choosing a research topic.

[Click on the link below and review the article on choosing a topic.]

**Choosing a Topic**

If you are assigned a topic, try to find an aspect of it which includes some of your favorite interests.

**Narrow your focus and turn your topic into a question**

As a natural outcome of the research process, you will continue to refine your topic over time. Once you have selected a topic, it is time to begin this focusing process. Here are some ways in which you can think about your topic and begin narrowing its scope.

[Click on these three links below to learn more about how to narrow your chosen topic and formulate a research question.]

- Customize your topic
- Turn your topic into a question
- General questions you can ask yourself
Usually the best research questions are “How?” or “Why?,” but you also need to think carefully about “Who?,” “What?,” “Where?,” and “When?” during this exploring process. Thinking about your topic in this way will help narrow the focus as well as help you define some key search terms.

Consider narrowing your topic by thinking about a certain time period on which you would like to focus; a certain region, country, etc. that is impacted by your topic; or a certain group of people (e.g. teenagers, college students, women) who are affected.

As you explore your topic, continue to make note of possible keywords you could use later when searching for information sources. Look for words used to describe your topic and also look for people, places, and events related to your topic. (Keep this list of key terms as a separate list.)

This could also be a great time to write out what you already know about your topic. You can begin to identify gaps in your understanding; furthermore, you may even surprise yourself with how much you know. This type of free writing can also be helpful because it gets you composing in your own words early on in the research process, and it can help ease some of the anxiety that naturally occurs for anyone working on a research project.

Eventually a thesis statement (what you will need to prove in your paper) will emerge out of your research, but don’t worry too much about that now. Later in this guide, we will define a thesis statement more clearly.

**Choosing your search terms**

Now that you have narrowed your topic and developed a possible research question, you are ready to begin finding information sources (answers to your research question). Look carefully at your research question and circle the main ideas. You are looking for keywords and key concepts that describe your narrowed topic. Gather and collect as many keywords as you can. This will significantly help you to begin your research. Also consider using a thesaurus to help you think of possible similar terms for your keywords.

[Click on the links below to learn how to choose keywords in your search for information resources.]

- Finding your keywords
- Finding synonyms for your keywords
Evaluating information resources

As you are researching your topic, you will want to be cautious about finding and using reliable and credible information. Regardless of the types of sources that you use, it is always a good idea to verify their credibility; but it is especially important when using sources you have found on the Web to carefully evaluate them before using them in your research.

[The link below will give you some pointers on how to best accomplish this evaluation.]

Evaluating information found on the Web

Remember, it is okay to use Wikipedia to learn more about your topic, but do not use it as a source that you cite in your paper. Wikipedia is good for broadening your knowledge base on your topic for your own purpose, but not a good source for a research paper.

Before moving on to learn an eight-step research process, here are some guidelines on note taking.

Taking notes

This section was adapted from *Research Papers for Dummies* by Geraldine Woods.

Note taking from the information resources you find is an essential component of the research process. Your sources will help you formulate an argument, document your evidence in order to prove your thesis statement, and find examples to support your information in your paper. You will do this by using quotes from experts, statistics, and examples you come across in your reading. This section is meant to help you develop an effective way to take notes as you research your topic.

To begin, keep a master list of all of your sources in one document and do this from the beginning of your research project.

1. Keep a master list of your sources.

   Before writing any notes, take down the citation information you will need to locate the item again. It is also helpful to include the page numbers from which you are working for ease with citations later.

Here are [10 citation tools](#) you can choose from to help you keep track of your sources.
The next step is to code each information source for quicker documentation and easier retrieval.

2. Code each information resource.

Give each new information source a code, for example: A1, A2, etc. for articles; B1, B2, etc. for books, V1, V2, etc. for videos; I1, I2, etc. for interviews, etc.

As you take notes from a source, remember to use the code you assigned that source from your master list!

In the beginning of the research process, as you do general reading and start to learn more about your topic, you will want to record the citation information of possibly useful resources so that you can return to them again later, if needed. However, you will not begin taking notes at this point. Rather, you will write a short description of what is covered in the resource instead. In other words, you will create a mini index. This is done to evaluate whether the source is one which is useful and will supply beneficial information.

For example, if you are reviewing a book that includes a small section about your topic, you will want to only write a brief description of what is covered in that section and where to find it (just like the index in the back of a book).

B1 - pgs. 150-155 – A history and description of Project Gutenberg; good bibliography

Another example, if you are reviewing a book about your topic (or a longer article), you may want to write a brief description of what is covered in each chapter of the book (or each subheading of the article). Below is an example of notes taken from a book about searching the Web.

- B1 - Ch 1 – History of the Internet, includes a timeline (1957-2011), pgs. 34-45
- B1 - Ch 2 – Description of Web 2.0 and social networking, pgs. 48-54
- B1 - Ch 3 – Web finding tools: general web directories, web search engines, specialized directories (descriptions and when to use), pgs. 59-72.

[The “B1” refers to the code given to the resource from the master list and “Ch 1” refers to Chapter One of that source.]

Note taking is an interactive activity. It isn’t simply reading through a resource and highlighting (or cutting and pasting) as you go. Instead you will want to engage with the ideas in a source and formulate your own questions and ideas. Use a combination of indexing and highlighting to be an effective note taker.
How to take notes: As you are going through your sources, if you are reading from a book or an article that can’t be highlighted, use mini Post-it notes to mark the information you want to record and then go back and write up that information after finishing a chapter or the article.

If you are reading from a book or article that can be written on, highlight the information you want to record as you go. (Again, use the strategy of reading a chapter or an article at a time and then typing up your notes.) You can also copy and paste into your notes information you want to record from digital resources, just don’t forget to include the code you assigned each resource from your master list of sources.

To avoid the risk of plagiarizing a source, use your own words when taking notes or use key phrases instead of full sentences.

Also read below to learn about when it is best to summarize, paraphrase or quote from a source. Taking the time to do this type of work now will save you in the long run. The more time you spend writing about your topic using your own words, the better.

Before moving on, take a minute to learn about when it is best to summarize, paraphrase, or quote a source by reading this short article. To help you avoid plagiarism, learn how to paraphrase using your own words.

What to take notes on: After you have narrowed your topic, you will want to begin taking focused notes on only those sections that pertain to your narrowed topic.

For example, if you decide you would like to write about Pablo Picasso’s blue period, you would focus your note taking only on those paintings. Your notes could include information about Picasso’s life during this period, details about his painting style during this period, and even information about his paintings during this period. Here are some notes from an article about Picasso’s blue period.

A1 – p. 33 – Picasso’s blue period 1901 – 1904
A1 – p. 33 – The blue period paintings are characterized blue or blue and green shades of color and only occasionally include warmer colors.
A1 – p. 33 – Picasso’s paintings from this time period are very popular, but during his lifetime he had a hard time selling them.
A1 – p. 33 – Prostitutes, beggars and drunks are common subjects.
A1 – p. 34 – Picasso sank into a severe depression.
Notice how you will create a separate entry for each idea, fact, or quotation. This will make it easier for you later when you want to move these notes around, group them in a different way, or arrange them in a different order.

After you have developed your thesis, your notes will become even more focused. At this point you will only record information or ideas that help you prove your thesis. (Although, you will also want to take notes on ideas that conflict with your thesis so that you can refute them in your paper later). You can probably see how the index of sources you created earlier in your research could really help you at this point.

Another benefit of using this highlighting and indexing strategy is that it gets you thinking about your information resources early on and writing about them in your own words. These steps take work, but it will save you time in the end. Especially when you are in the midst of writing your paper and you need that one essential piece of information you read, but can’t quite remember where . . . . Taking good notes and including page numbers will help you avoid this problem.

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**Finding information resources**

The following is an eight-step research strategy recommended in *The Elements of Library Research* by Mary George.

1 – Begin your research strategy by reading general background information on your topic.

Read background information on your topic [Click on the link to learn more.]

To locate resources for background reading, use your chosen keywords and their synonyms to search online and via the Library catalog. [Tip: As you do your review of an information source, check the bibliography for other sources on your topic.]

2 - As you learn more about your topic, continue to add to your list of possible search terms. These search terms could include any of the following: other keywords used by researchers to describe your topic; library book titles, authors and call numbers; subject headings; major events and dates; scholarly journal titles; publishers that specialize in your topic; and related organizations (institutions, associations, societies or government agencies).

3 – Finding books – use the catalogs below to search for specific titles listed in the bibliographies at the end of relevant articles and books you discovered in your background reading.
• **Library catalog**

• **WorldCat** (Items within this catalog can be borrowed from other libraries via our interlibrary loan service – give yourself plenty of time to order these materials.)

When you find a title, take time to also review the catalog record for designated subject headings (see example below). Click on the subject heading links to find other resources categorized under these same headings. Make note of the citation information for any of the resources that look pertinent to your topic and keep a list of the relevant call numbers as you move through this process.

4 – Use the call numbers you collected in step three to carefully browse the library’s shelves in these sections for other possible resources on your topic.

5 – Finding articles – search both general and relevant subject-specific databases to find articles on your topic.

• **General database**

• **Other LiLI databases** (click on “Full Resource Index” for a listing of all the available databases)

• **Google Scholar** (use our interlibrary loan service to acquire articles from this database – give yourself plenty of time to order them)

[Go slowly here. Look for an advanced search option within the database you are using and begin trying combinations of different keywords. Alternate searches will give you different results so be patient and try a variety of searches before you move on. If you are not
generating enough results, you can try changing the order of your keywords or try searching for keywords in different fields, such as the title or subject fields (or a combination of both). See the examples below.

OR

You can also try using OR to search with synonyms. See the example below.

If you are generating too many search results, limit your results to full text articles, peer-reviewed journals, and/or current publication dates. These search filters will generally be made available in most research databases.

6 – Quickly review the resources you have gathered up to this point to determine if they could be useful in answering your research question, or if they could lead to other resources. Remember to check the table of contents and the index in the back of books and read the chapters that seem most pertinent to your topic. For articles, read through the headings to
look for sections that may be related to your topic. This review process takes a little time to get used to, but keep at it. You will get better with practice. [Refer to the section on note taking again, if needed.]

7 – Now, look for any additional information resources you found in step six. As you learn more about your topic, you will eventually begin to see a way to develop your thesis and build a convincing argument.

[A thesis statement is the central argument of your paper spelled out in one or two sentences. It is the answer to your research question. It is your perspective on your research project and where you show how you intend to prove something that is not obvious. You can learn more about developing a thesis statement by reading this article. And you can read this article for questions to keep in mind as you think about your thesis.]

8 – If necessary, repeat steps three through seven. You will want to keep going through these eight steps and review resources until your thesis starts to become apparent.

[Identifying experts on your topic could be helpful, too. You might consider interviewing and possibly quoting them in your paper. Contact an author, teacher, museum curator, or someone else you have learned about during your research process. To help you prepare for the interview, read “How to Interview an Expert without Looking Like an Idiot”.

Contact Buffy, the Reference Librarian at the Community Library, if you need help researching your topic or if you have any other questions.

Writing the paper

Source for this section of the paper: Heather Voss, English teacher.

If you have followed these steps offered in this guide, you have written quite a bit so far about your topic. Now we will focus on the actual writing of the paper itself. But first you may experience writer’s block. Even prolific authors such as Steinbeck occasionally faced this challenge.
When I face the desolate impossibility of writing five hundred pages, a sick sense of failure falls on me and I know I can never do it. This happens every time. Then gradually I write one page and then another. One day’s work is all I can permit myself to contemplate and I eliminate the possibility of ever finishing.” –John Steinbeck

Hopefully, with the note taking you have done this far, you won’t experience writer’s block. But all writers have trouble with it sometimes, and getting stuck on a project is a normal part of the writing process. Luckily, there are some helpful ways to deal with writer’s block.

Beginning can be the hardest step, so just get something down in writing. Don’t edit yourself too much as you are working on your first draft. Judging your work in the beginning stages can slow your writing down and even be discouraging. The poet William Stafford says, “There is no such thing as writer’s block for writers whose standards are low enough.” Use this advice in the positive light and write something – even if it is truly awful.

You might also try verbally explaining your ideas to someone in order to begin. This strategy can really help you get started. Or take a walk. This can get the juices flowing and help you approach your writing with a fresh perspective. Just be careful not to use this suggestion as a way to procrastinate.

Read this article (“Overcoming Writer’s Block”) for more suggestions on overcoming writer’s block. And, for help with procrastination you might also try reading The War of Art: Break Through the Blocks and Win Your Inner Creative Battles by Steven Pressfield.

Writing an outline

Writing an outline before you begin to write your first draft will help you improve the quality and organization of your paper. An outline is a road map. Just as you need a map to take you to your points of interest on a vacation, you also need an outline to help you follow your points in your paper in a logical way. In an outline you will flesh out the main and supporting points of your paper. This is also a great time to think about the flow of your argument and to check your transitions.

To begin, put your thesis statement—the central argument, the answer to your research question—at the top of your outline, then list all of your main points, their sub-points and so on. You should have three to seven ideas to support your thesis in the paper. If you have less than three main points, you do not have enough evidence to make your argument. On the other hand, if you have more than seven, your paper is probably not focused enough and your paper might seem too vague.
For a research paper, you also need a section where you refute the opposing side. Write your outline with these main points and evidence in mind. Also ask yourself while you are writing your outline, “Does one idea logically follow the idea before it?” That is, “Does your paper flow logically?” If it does not, then consider reordering or removing the point. Remember, writing an outline is your road map for your paper, so please don’t skip this step.

Here is some more help as you work through the outlining process.

Now on to writing the paper . . .

As you write your paper, think of your reader as someone who is educated but does not know as much as you do about your topic. Keeping this type of reader in mind as you write will help you to write more clearly and carefully about your topic. It will also remind you to explain and describe your ideas in a simple but clear and organized way.

[Here is a detailed guide you can refer to while writing the paper.]

**Writing the paper’s introduction**

Write the introduction to your paper last. In the introduction you will want to entice your reader to read your work, cover the main points of your paper and include background information. After you have written your paper it is much easier to articulate these main points, so save this part until last.

When writing the introduction, it is important to capture the interest of your reader and explain the purpose of your paper. Capturing the interest of your reader can be accomplished with a hook – which is a specific example, story or problem that introduces your topic and provides relevant background information for the reader. (If you are using a problem for your hook, then include an example that illustrates the problem in the introduction.) The purpose of your paper is conveyed through your thesis statement.

**Writing the body of the paper**

The body of the paper is the easy part of your paper to write now that you have an outline. It is where you tell your readers about your idea and support this idea with reasons and evidence.
Always keep your audience in mind as you are writing the paper. Use many examples and make your points as clear as you possibly can. Remember, you are trying to convey your idea to your readers in a way that interests them and is convincing.

Throughout the research process you have been thinking and writing a lot about your topic. Now is the time that you will benefit from all of that thought and writing. In this main section of the paper, you will:

- Explain to your reader your perspective on your topic
- Give the reasons for that opinion
- Provide the evidence that supports your case
- Include the opposing viewpoints
- Refute those opposing viewpoints

Your outline is your road map as you write. To begin, write out your answer to your research question – your thesis statement (remember you are saving your introduction until the end, so don’t worry about that now). Now think in paragraphs. Write about your first main point that supports your thesis. To do this, include a transition sentence and then write your first reason for answering your research question the way you did. Then include evidence for that reason. This evidence can be a fact, an example, quote from an expert, or a comparison that you have learned from your research. Now you will need to explain how this evidence fits into your thesis.

Take time to read this article on writing transitions and here is a quick guide to help you think of transitional words and phrases as you are writing.

Continue on to your second main point and do the same as you did above. Write out a transition sentence and then include your second main point that supports your thesis and include the evidence for that reason, again gained from your research. Finally, explain how that evidence fits into your thesis. Continue using this template for each of the main points you want to cover in your paper.

After writing out the three to seven main reasons that support your thesis, you will want to include the main opposing viewpoints to your topic. This refutation should include, at most, only two main points. (You do not want to include too many arguments against your thesis because this can weaken your argument. Instead, look for the main points against your argument and try to combine them.) Then refute these claims.

Again, thinking in paragraphs, write a transition and an opposing viewpoint to your claim – what people might argue against your particular thesis. Using evidence from your research
explain why they are wrong and then explain how that evidence fits into your thesis or proves the opposition wrong.

Now it is time to go back and write your introduction to the paper. See the section above for more details.

Writing the conclusion of the paper

To write the conclusion of your paper, you will want to include a transition sentence and then sum up the strongest points of your argument. In a thoughtful and innovative way, sum up the main points of your argument and leave the reader with a call-to-action. This final punch can be something simple, but you want to leave your reader with the idea that your paper is important and they should take some kind of action because of its importance. (Use these videos to help edit your paper for clarity and conciseness.)

Here is a completed research paper as an example.