Research Strategies (abridged) - 10

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Tips on Research Writing

Research doesn't mean much if the presentation of your results is flawed. The kiss of death for any project is to have your research paper returned with the comment: "Excellent bibliography, but your argument could have been developed more clearly."

Two problems stand out as the most common roadblocks in the writing process: Getting your outline straight and writing persuasively. Let's deal with each in turn.

The Final Outline

Earlier, I argued that you need to have a preliminary outline pretty much from the beginning of the research process to act as a guide for the gathering of resources. In the early stages, organizing your outline is not crucial, but eventually you are going to have to structure it in a final form. Outlining is a major problem in any research presentation. If you are attempting (in fear, no doubt) a thesis or dissertation, the problem only compounds itself.

Let's visualize what we're dealing with first, then look at some possible solutions. The reason why the outline is so troublesome is that people receive information in sequence rather than absorbing all of the facts at the same time. Simply because a twenty page paper may take fifteen minutes to read means that some information must be presented before other information is given.

Let's look at it another way. Putting forward an argument (that is, the statement of a response to your research question) is like building a house. You have to lay the foundation before you can move to the upper stories. Everything you build rests upon whatever you've already laid down. Perhaps the best way to learn outlining technique is to look at specific steps and see these illustrated with specific examples.

Step One: The Research Question

As we have seen, the first step toward putting together even a preliminary outline is figuring out what issue you want to deal with. This involves narrowing your topic and stating a *single* research question. For our purposes, let's choose the topic of "Burnout in the Workplace." Our narrower focus will be "preventing burnout," and our research question is, "How can today's office worker best resist burnout in the workplace?"

Step Two: Preliminary Outline Headings

Now you need to assess your question to determine what data you are going to need to answer it. For our example, presumably you'll need an introduction to burnout, explaining what it is and raising the issue that there must be means to resist it. You might, as well, assume that resisting this problem will involve recognizing the signs of burnout and taking some counter-measures to overcome those signs or to prevent them happening in the first place. Thus your preliminary outline has three possible headings already: Knowing the Signs of Approaching Burnout, Counter-measures, and An Introduction to the Problem of Burnout.

Step Three: Organizing the Headings

Organizing the outline in sequence is usually the hardest part. What you want is a logical order that is helpful to the reader. Above all, you want to avoid the impression that your paper lacks direction or that the direction it is taking is strange and hard to justify. A good outline should not be all that noticeable because your goal is to take the reader from introduction to conclusion as comfortably as possible.

A Few Tips

- Get general and introductory matters out of the way first. Just as you needed a working knowledge of the topic when you started your research, you now need to give your reader a similar working knowledge, including background information and a clear statement of the question you're dealing with. In the case of our burnout example, you would probably have to define burnout, demonstrate what a problem it is, then ask what things could be done to resist burnout in the workplace.
- Look for a natural order to your headings, if you can find it. In our burnout example, it seems more natural to discuss first the need to recognize the signs of burnout and *then* to consider possible countermeasures to resist burnout (i.e., knowledge before action seems like a natural order).
- Here are some other possibilities:

  - In a historically-oriented paper (e.g., "The Early Conquests of Alexander the Great"), you might simply want to move the paper along chronologically.

  - In an analysis of issues related to a topic, you can follow an ascending or climactic order, looking at smaller factors or arguments first, then moving up to the more crucial factors. Your last section could begin, "The most serious difficulty with_____, however, is_____." Ascending or climactic order adds power to a paper by leading the reader into increasing tension, much like an action movie builds to a climax. Resist giving away the most exciting parts of your paper early on—if you use up the good stuff too soon, you'll have little left to keep the reader interested in the rest of what you have to say.

  - You need to include all relevant points of view on an issue, not just the one you support. When a research project ignores opposing arguments, the reader feels cheated, and the case you are making is weakened, not strengthened. An argument that pays no attention to other voices will not stand up to a challenge.

Comparing and Contrasting

If you are comparing or contrasting two or more viewpoints, there are basically two ways to go about it. Now's a good time to get your wits about you, so go have some coffee or take a walk, then read on If the two views you are discussing are relatively simple to explain and analyze, try a *longitudinal method* by which you discuss all aspects of view A and then moved on to discuss all aspects of view B. Suppose, for example, you were dealing with two views on the issue of human cloning—**Go Ahead** and **Wait a Minute:What Do You Think You're Doing?**

Your outline might look like this:

I. Introduction to Human Cloning
II. The Go Ahead Position
    A. All Science is Legitimate.
    B. We Can Trust Scientists Not To Put Us At Risk.
    C. The Benefits of Having Clones Outweigh The Risks.
III. The Wait A Minute Position
    A. Is all Science Legitimate?
    B. Can We Trust Scientists Not To Put Us At Risk?
    C. Do The Benefits Outweigh The Risks?
IV. Conclusion

You can see that we are presenting one position in total, then the other, using our discussion of the second position as a base to deal with the arguments against the first. Thus the Go Ahead Position will be covered as objectively as possible. The analysis will come with the Wait a Minute Position.

But suppose that the arguments are getting complicated, and you're afraid your reader will have forgotten what the first position said about the legitimacy of science before you have time to discuss it in the second position. In such a complex situation, you'll need a *cross-sectional approach*, which deals with both sides of each sub-topic in turn:

I. Introduction to Human Cloning
II. Is All Science Legitimate?
  A. Yes
  B. Maybe not
III. Can We Trust The Scientists?
  A. Yes
  B. Not always
IV. Do the Benefits of Having Clones Outweigh the Risks?
  A. Yes
  B. Maybe not
V. Conclusion

Now you have the chance to deal with both sides of each issue in turn. By the time you get to your conclusion, your reader should have a cumulative understanding of the issues and of the reasons for your position.

A couple of other tips:

- Avoid stringing out a list of 7 or more headings without subheadings, because this tends to damage the unity and coherence of your paper (just like leading someone down a winding path creates more confusion than guiding the same person down a short city block with sights to see on all sides). How do you cover the ground without multiplying your outline's headings? You do it by having a few main headings and adding subheadings to them. Thus you *group* your points, arguments, etc. under 3 to 5 main categories and let subheadings pick up the detail. This makes a tighter structure that has more of a chance of achieving unity in the paper. See the outlines above for examples of useful ways to do this.

- Attempt objectivity at the beginning and do your analysis later. Here I need to get on a soapbox for a few moments:

Why does objectivity come before analysis? Because every view needs to be heard before you criticize it. Suppose you are doing a paper on the well known (at least to me, since I created him) social scientist Horace Q. Blowhard, who has the audacity to argue that the death penalty should be instituted for traffic offenses in order to restore public order. Your paper, entitled "Why Don't You Stand In Front of *My* Car, Horace?" intends to rip the man to shreds. But how can you do this most effectively?

If you are still unclear about the fine points of intellectual maturity, you may want to begin you paper with the words, "Horace Q. Blowhard truly lives up to his name. If there were ever a reason for tar and feathers, Horace (no friend of yours or mine) would be it." From here, your outline would be:

I. Condemnation of Blowhard
II. Some of the Most Vile of his Views
III. Concluding condemnation.

But this is utterly the wrong approach. O ye contenders for justice and all for which it stands, halt and listen up: *No one deserves to be torched verbally or in print before he or she has been given a fair and objective hearing.* Not even Horace Q. Blowhard. I know what you're thinking now—when did true objectivity ever exist? All of us are subjective, so why not just state our views without worrying about truth and fairness to other viewpoints? Why try to give anyone an objective hearing? My answer is that, while this is neither the time nor the place to get into the murky depths of Postmodernism, all of us know that it's possible to hear someone, understand that person and treat that person's views fairly.Sure, our presuppositions will get in the way to some extent, but our goal still needs to be to understand the positions of others as best we can *before* we level either praise or crushing criticism. A good measure of objectivity is still possible for most of us.

Devastating attacks do not come before we have explained the position of our opponents. They come after, when both you and the reader have enough knowledge of the opposing position to determine whether you are launching the right missiles. Anything less than this is poor sportsmanship, bad form, bigotry, whatever you want to call it. Mature writing makes sure every view has been heard fairly before it is analyzed.

Some Tips on Research Writing

Introduce your paper well

Introductions serve two purposes:

- They give you a chance to provide your reader with a working knowledge of your topic.

- They let you state your (*single*) research question.

One thing to avoid here is the temptation to multiply your research questions along the lines of:

"Why, then, did Skinner write *Walden Two?* Did he indeed believe that he could create Utopia with the methodology of behaviorism? Was he blind to the problems in his approach? Did he later change his mind?"

What you've done is create a shotgun blast heard around the world. Your reader has no idea what your real goal is because you have so many of them. The paper itself will be as superficial and as scattered as your introduction. Keep your introduction lean if

not mean.

Sometimes a real life illustration is helpful to get the topic going. For example, if you are doing a paper on a historical figure, you might want to begin with an anecdote from that person's life that typifies what you want to say about him/her. Beyond that, stick with the purposes of an introduction—to provide a working knowledge and to state your research question.

Be focused at all times

There is something almost magic about a successful research paper. If you have a solid, narrowly-focused, analytical research question, you can pretty much see in your mind's eye the problem to be addressed. If you have a well-structured outline, you can envision the path through the paper to a conclusion before you even start writing it. Don't begin writing the paper until everything comes into focus and you have that "Aha" experience that tells you that you know exactly what you plan to do. If it's all fuzzy in your mind, it will remain fuzzy through the writing process, and the product will be fuzzy too (a triple fuzzy can't be a good thing).

If you keep the narrow focus on what you are doing, magic will happen.

Always describe before you analyze.

You thought I had long since fallen off my soapbox. Don't worry. I won't bring it up again. But do it. Your writing will look more mature.

Avoid ridicule.

When you disagree with a certain author or viewpoint, you need to maintain a level of respect and decorum. Your opponent is not a "moron,""idiot,""stupid" or "useless." (Believe it or not, I've seen all of these terms in student papers). This kind of language reminds me of an elementary schoolyard with two kids arguing about an issue until one of them runs out of ideas and says, "Oh yeah? Well, I think you're stupid." Ridicule is the lowest form of argument. It reveals immaturity and a lack of ability to address the issues in an intelligent manner. Such language only reflects badly on you.

Be logical.

By this, I mean that, whenever you are traveling along a certain train of thought, make sure your reader is in the caboose behind you. Don't flit around. Don't jump to another track without warning. Always remember that you are writing for someone who doesn't know where you're going. Lead your reader along gently, step by step. Stay on track. For example, when you move on to a new area of discussion, use a transitional phrase such as, "Turning to the issue of …"

Having a clear sense of your research question and outline is a great help here. If you have a single focus for your paper and understand the steps you need to take from question to solution, it's easier to help your reader stay with you. To make sure you're really on track, ask yourself for each paragraph in your paper:

- Is this paragraph in the right place in my paper (i.e., does it match the heading it's under)?
- Does this paragraph contribute to the solution for my research question? There are times when I come across a research paper with a "bulge" in it. What's a bulge? It's a body of information that has little relationship to the paper topic. How did it get there? The researcher worked for a long time on something that, as it turned out, didn't really relate to the final paper. But no one wants to admit a big waste of time, so the researcher simply plugged the less-than-relevant material into the paper anyway. This turned what might have been a lean and mean research essay into an ugly project with an unsightly bulge in the middle of it. The poor reader is left to figure out what the bulge has to do with anything else.

Be explicit.

I don't know how many students there are out there (good, otherwise intelligent, students) who believe in ESP. They assume that their professors can read their every thought even it is never expressed. Thus we get a gem that looks something like this:

"In looking at the issues of Nicea, we must focus of the Arian Debate. The facts are well known and thus we move to the specific role of the famous Athansius in dealing with …"

What's a Nicea? What's an Arian Debate? Who's Athanasius and, if he's so famous, why have I never heard of him? If you don't explain yourself clearly throughout, your reader has no idea whether you know what you're writing about either.

Aim for clear writing rather than erudition.

The mark of an educated person is not the length of words and sentences used but *the ability to communicate complicated information in plain language.* Be concise. Say what you mean. Avoid like the plague every long word where a shorter word would work as well. Try never to be ambiguous.

Watch out for flawed arguments.

These include:

- *Misrepresenting authorities.* If you are appealing to someone's work as support for your argument, be very sure that you represent that person accurately. Don't quote out of context, suppress information that would give a more honest picture, or do anything similar. This sort of misrepresentation is best left to the tabloid newspapers.

- *Arguments from origins.* Just because a viewpoint arose from a dubious source, it does not necessarily mean that it's wrong. If a nasty government that exploits the poor of its nation comes up with a wonderful invention to help end famine in the world, is the invention of no value simply because the government it came from is exploitive? Of course not. Those who know about such things are going to have to examine this invention and make their own assessment, regardless of its origin. Similarly, we can't always assess the value of an idea by considering the person who suggested it.While it might seem legitimate to doubt the advice on family unity put forward by someone who has been divorced seven times, you have to look at the person's material itself. The concepts may be sound even though the author does not exemplify them.

- *Arguments from insufficient evidence*. I am constantly amazed at the way some researchers skip over weighty problems without making their case. They use expressions like, "It is obvious that …" or "Such a view is unacceptable today …" or "In my opinion …" even though much more effort is needed to convince the reader that it really is obvious or unacceptable. My reaction when I see statements without sufficient evidence is to assume one of three things: the writer hasn't done enough research to discover that a controversy exists, the writer has no evidence to offer and is trying to bluff through the problem, or the writer is vain enough to believe that his/her mere opinion is all any reader needs in order to be convinced.

How much evidence is sufficient? Enough to be convincing. When you write a research paper or report, you need to imagine a reader who is slightly hostile, who is *not* prepared to believe you. Then you must present enough support for your argument that your hostile reader will at least say, "Well, you make a good case." You don't need absolute proof, just enough evidence to get your reader to take your view seriously. If you don't have the evidence to do this, then you will have to be a lot more humble about sharing your views. Admit that evidence is scarce and that, therefore, any position you are taking on the matter is tentative.

Sometimes, the evidence is not available at all. If that's the case, admit it. Write something like, "There continues to be much debate over this issue, and no consensus seems possible until more evidence is found." (Do not suicidally write: "I can't understand this issue, so I haven't made up my mind.")

Know when to quote and when not to quote

You should quote:

- When you want to back up your view with that of a prominent scholar who agrees with you.

- When something someone has written is catchy or memorable in its wording. For example, Bruno S. Frey, in his book, *Dealing with Terrorism: Stick or Carrot,* gives the following clear analysis of the difference between deterrence and brute force:

- "Deterrence is not necessarily the same as using brute force. Deterrence involves the *threat* of damage to an adversary. It would be most successful if it were possible not to actually carry it out." (p. 28)

In a few short sentences, he explains a crucial distinction in such a way that little more needs to be said.

You should not, however, quote:

- When you can say it just as well in your own words.

- When the material you want to quote is over 5 or 6 lines long (unless it is absolutely crucial in its original wording and is necessary for the central theme of your paper).

- When you already have a quotation every page or two in your essay. You don't want to fill your paper with quotations. Your reader primarily wants your wisdom, not that of everyone else.

Know some basic Rules for Quotations.

Make it a habit to present your own material first, then back it up with a quotation. Quotations should not normally be used to present new data. Here the issue is one of authority. Every time you present new data with a quotation, you are deferring to the authority of your source. That knocks the wind out of your own authority as an author. Let's put it this way: *Whose paper is it?* It's yours. Stand on your own two feet and make your own statements. Quotations are for backup and support.

Thus the pattern you should use is something like this: In your own words present some data or a viewpoint, then follow up with something like "As Joseph Schwartz has argued…", then quote from Schwartz in support of your data or viewpoint. Even if you are just presenting the views of someone (e.g., B.F. Skinner), present those views in your own words first, then if you need to, follow up with a quotation from Skinner that summarizes his position well.

Never, never, never, ever write a paper that strings together long quotations interspersed with only a few lines of commentary by you. Such papers are doomed, since your professor knows that her ten-year-old could paste together the same quotations just as well. A research paper is supposed to be predominantly a presentation of material in your own words, showing that your can present data and use that data analytically to answer an important question. Use quotations sparingly, merely as support for what you are saying.

If you have a book or article that quotes another source, and you want to use that quotation, the rule is to find the original source that the quotation came from and quote that source directly. Until you go back to the original source, you can't know for sure whether the quotation was accurate or quoted in its proper context was. Only if you can't find the original source should you use the book or article in which you found the quotation. Even then, you need to indicate what you are doing:

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Raymond Sludge, *The Red Rose,* 47, as quoted in Horace Roebuck, "Roses are Forever," *Flower Journal* 42 (May 2000): 76.

But think twice before you use this option. Some professors will punish you for doing so (and, of course, professors are the ones with all the power).

Know the uses of footnotes/endnotes/citations.

These days, most students are using short forms of citations (e.g., Jones, 241) instead of the more traditional footnotes and endnotes. In this case, only the first of the purposes below is going to interest you. But don't forget that you can still add footnotes related to the other purposes below, even when you're using a short citation method.

The purposes of Footnotes/Endnotes/Citations include:

_ Citing works you have quoted or borrowed ideas from. Most students are aware that direct quotations need to be noted/cited. But you need also to footnote borrowed ideas if they are relatively unique. Here's a (perhaps simplistic but helpful) rule of thumb: If you use an idea that you can only find in one or two of your sources, it's better to cite the source(s). If the material is found in three or more sources and you can't see that these are borrowing their idea from a single source in the past, don't bother with a note/citation.

_ Stating further bibliography for the reader who may be interested in pursuing the matter. This procedure, which might look a bit tedious, shows the extent of your research and could earn you appreciation from the reader (and a higher grade if the reader is a professor). Even if you are using a short citation format in the body of your paper, you can still add further bibliography as a footnote.

_ Citing sources that agree with your position. This is especially useful if you know you've gone out on a limb and you suspect your professor is ready to cut it off at the trunk. The support of five other scholars who agree with you may not prove your case, but at least it shows that you are not a flake. Begin this type of footnote/endnote with something like: "So too Steven Johnson, [etc.]" or "This position is also held by …"

_ Defending a certain position against possible objections. Here you are not sure someone will object to what you are saying, but you see a potential flaw in the argument. It's better for you to point out the problem yourself and respond to it before your reader can raise it as an issue. A format for this could begin, "It might be objected that … but [then give your response to the possible objection]." This type of note shows your reader that you are not trying to present a whitewash with only your side represented. If, however, you find that the possible objection you are responding to is important for the whole thrust of your paper, include it in the actual text of your paper. Notes are for additional or less relevant material.

_ Dealing with a related side issue that might spoil the flow of the essay itself if it were to appear in the text. This use is rare, but you may want to add to the depth of your paper in this way. Be careful, though, that you don't make the multiplying of notes a habit. I once spoke with a world famous scholar who admitted to me that he had a problem with his use of notes. I refrained from grinning only because I'm a polite librarian. One of this scholar's most celebrated works was published as two equal length volumes. The first volume was the text of his book and the second was his endnotes. I'd say he has a serious problem (though his notes are often fascinating). Avoid having the same difficulty yourself.

Watch your conclusions.

A good conclusion briefly summarizes the main focus of your paper and makes your final position clear. Avoid flowery, sentimental, or overly long conclusions. Say what you need to say and end it mercifully. In general, half a page at the end of a fifteen page paper is more than enough.

Give your final paper a professional look.

Your final project should avoid typographical or spelling errors (use your spell-checker). Find out what style manual your institution is using, and follow it rigorously for title page, outline page, page format, bibliography, etc. With bibliographies, make sure you follow the format rules you've been given. If you haven't been given any, then choose a style manual and follow it

You may be using a bibliographic manager like EndNote or RefWorks that has a bibliography generating function. While this is a big help, remember that no bibliography generator is foolproof. You will have to troubleshoot everything. The best way to do this is to have a crib sheet for your style (a list of the most common examples of form—books, articles, web pages, etc.) and compare it with the bibliography that you've generated, fixing things as needed. Word to the wise—Professors tend to assume that a sloppy product is evidence of a sloppy mind.

Research can be exciting, even fun.

FUN??? Yes, as long as you see the path of discovery as an adventure. Research can be done well by virtually anyone, no matter what your initial ability may have been. I trust that I have introduced you to sufficient strategies so that you can develop your skills to do first class work. The next stage is up to you.

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Updated February 4, 2008