

Research Strategies (abridged) -3

CONTENTS:

▶ Home	▶ 5 - Internet Research
▶ Preface	▶ 6 - Other Resources
▶ 1 - Taking Charge	▶ 7 - Case Studies
▶ 2 - Databases	▶ 8 - Learning to Read
▶ 3 - Information Fog	▶ 9 - Organizing Notes
▶ 4 - Periodical Maze	▶ 10 - Research Writing

[PDF of this Page](#) 

[How to Get the Paper Edition](#)

RESEARCH STRATEGIES - WILLIAM BADKE, COPYRIGHT 2008

Note that chapter order in the print edition will differ from the above. The online version will retain the former chapter divisions.

3

Blowing Away the Information Fog

[In the print edition the following discussion of hierarchies is included with a larger discussion of keyword searching (Chapter 3). The discussion of library catalogs is found in Chapter 5]

Hierarchies

I know this is starting to look technical, but it's not really. Let's start with a brief look at how knowledge is organized. Put quite simply (because I'm not capable of much beyond simplicity), every bit of knowledge has a context within which it fits. The way the whole of knowledge is organized is from broad categories (at the top) to narrow categories (at the bottom). The broad categories help to define the meaning and boundaries of the narrow ones. Let me illustrate. Here's a question: Can you define the following word?

ROCK

"Sure," you say. "It's a hard object that comes out of the ground."

To which I answer, "How wrong you are! Don't you know that 'rock' is a verb?" My definition, a symptom of my growing age, is that the only rock worth anything is the rock I do in my rocking chair."

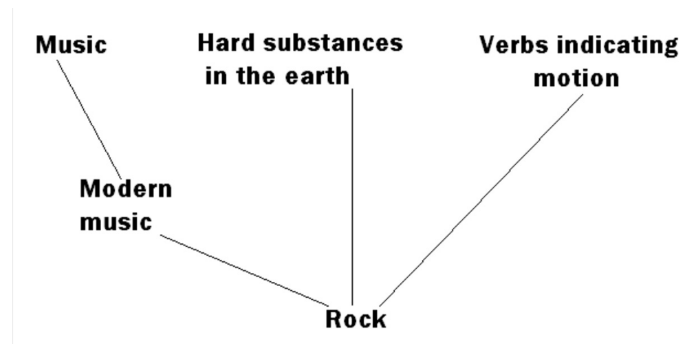
"I'm not wrong," you retort. "You're wrong."

To which your friend standing next to us says with a smirk, "You're both wrong. It's music. Classic Rock is real music, and I'd rather be listening to it than wasting time listening to you argue about word meanings."

What's the problem here? Why can't we agree on a definition for one word with only four letters in it? The reason

is simple: If I say, "I'm planning to take a whole evening to rock in my rocking chair," you know that my definition of 'rock' is something like 'a back and forth motion.' If, on the other hand, I say, "The rock that went through my window was two inches across," you know that 'rock' is now a noun meaning 'a hard substance taken from the earth.'

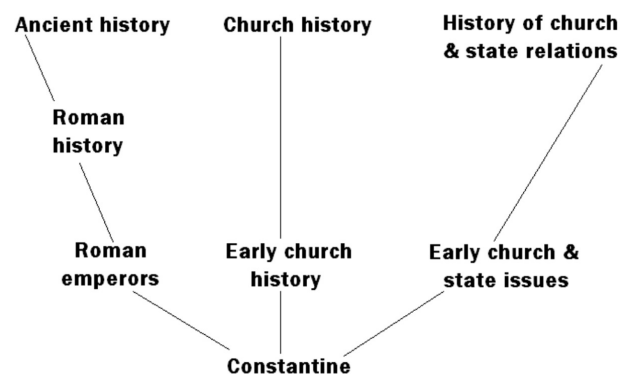
Words by themselves don't really mean anything for certain. They only have a definite meaning when you put them in a context. Words get their meaning from the sentences surrounding them. In turn, sentences become understandable within their paragraphs, and paragraphs make sense within the larger context of the complete document. The important word here is "context." Meaning is derived from context, and without context we have only confusion. So what? How do meaning and context relate to research? Exactly like this: All data exists within one or more information hierarchies (contexts). Let me illustrate with the word "rock."



"Rock" is a sub-class of more comprehensive categories. For example, "rock" may be a sub-class of modern music, right alongside other sub-classes like "adult contemporary," "elevator music," and the compositions of John Cage. "Modern music" in turn is a sub-class of the larger category of "music" along with other sub-classes like "classical," "baroque," etc. What we end up with is a hierarchy. Each higher grouping is broader than the one below it. But notice that "rock" is capable of having several different hierarchies attached to it, depending on the meaning we give to the word. It can also be a sub-class of "hard substances in the earth" or of "verbs indicating motion."

All data comes within a context. Without context the data cannot tell us what we need to know. Few concepts, however, are bound within a single context but are capable of belonging to a number of possible contexts.

Let's now move into an area that better resembles a research topic. Take something like the Roman emperor Constantine. Depending on how you approach him, he can exist within a number of contexts (= hierarchies):



You can deal with him as a sub-class of "Roman emperors" alongside other sub-classes like Julius Caesar and Nero. "Roman emperors" in turn are a subclass of "Roman history", which in turn is a sub-class of "Ancient History." Alternatively, you can deal with him as an important figure within the larger subject of "Early Christian Church History," since he was the emperor who affirmed Christianity so that it could eventually become the official Roman religion. Or you can discuss him within the higher class of "History of Church and State," since his marriage between empire and the Church led to many issues related to the wisdom of creating such unions. Each of these hierarchies leads to a different approach to the same topic.

All information is hierarchical. The rule is simply this:

Insight #1: In research, data is only meaningful when you understand the hierarchy (context) within which it is found. You must always know where your data fits within the hierarchy.

What higher class (context) does your topic belong to in the particular situation in which you find yourself? Are there other hierarchies your topic could belong to? Are there sub-classes of your topic that could become factors to consider?

Clustering Search Tools

[See the print edition]

Library Catalogs

Books tend to create fogs of misunderstanding, because they're blunt instruments. In order to write a book, you need a topic broad enough to be covered in a couple of hundred or more pages, but you need enough focus to avoid it becoming multi-volume or looking superficial. Thus finding a book specifically on your narrowed down topic may well be a challenge. If you can't find a book on Abortion, you might find one on Medical Ethics. If you can't find a book on Constantine, you might find a book on Roman Emperors or Roman History of his era or Early Church History. Generally, you need to assume that few books will be exactly on your topic. That is why strategies are needed. Library catalogs have been around forever, it seems, though electronic versions of them have been widely used only over the past twenty-five or so years. When you search a library catalog, you are searching the data record created for each book, a record that includes the following, among other things: Author, title, publisher information, format, description, subject heading(s), and call number. This is where it can get tricky. Library catalog searching interfaces differ widely from one another, so you need to "read" them in order to navigate them well. Some common interface formats:

- A catalog that offers an initial keyword search box and an advanced search link so you can move to a more sophisticated search screen.
- A catalog that allows you to specify (through a drop-down, a list, or a choice of buttons) what type of search you want to do (e.g., keyword, title, subject heading, etc.).
- A catalog that defaults to an advanced search with several boxes that enable you to specify type of search and then shape it with Boolean operators. In this case, a basic search link will be available as well.

Here is a three-part collage of various types of catalog you may encounter:

The collage consists of three screenshots of library catalog search interfaces, each with numbered callouts and labels:

- Simple Search:** Shows a search interface with tabs for "Simple Search", "Guided Keyword Search", and "Course Reserve". A "Find This:" text box is on the left, and a "Using:" dropdown menu is on the right. The "Using:" menu is open, showing options like "Keyword (relevance ranked)", "Keyword (use AND, OR, NOT, or 'a phrase')", "Title (omit initial: A, An, The, L)", "Author (lastname, firstname)", "Author/Composer Sorted by Title", "Subject Heading starts with", "Subject Heading contains keyword", and "Call Number". A "20 records per page" dropdown and "Search" and "Reset" buttons are at the bottom. A circled "1" and the label "Options" with an arrow point to the "Using:" menu.
- Index Selection:** Shows a search interface with a "Search:" text box containing "Title Alphabetical". A dropdown menu is open next to it, showing "Title Alphabetical" and other options. A "go" button is to the right. A circled "2" and the label "Options" with an arrow point to the dropdown menu.
- Boolean Search:** Shows a search interface with two "Search for" text boxes, each followed by an "in" dropdown menu set to "Title/Series". A dropdown menu between the two text boxes shows "and". Below are "Sort results by" and "Display" dropdown menus. A "Submit Search" button is at the bottom. A circled "3" and the label "Boolean operator" with an arrow point to the "and" dropdown, and another "Options" label with an arrow points to the "in" dropdowns.

Making the Catalog Work for You

If your topic is reasonably standard, you will probably do best with a controlled vocabulary subject heading search. It's safer in that you know you will find most books that are available on the topic. One problem, beyond sometimes finding too many books to deal with, is that you may only need a portion of the information found in

each book. For example, if your research question is, "How close to attainability is B.F. Skinner's utopian vision found in his book *Walden Two*?" you might well find that there are few books available specifically on *Walden Two*, and you are going to have to do a controlled vocabulary subject search on **Skinner, B.F. (Burrhus Frederic), 1904**—and then find material on *Walden Two* within books describing his thought. Of course, you'll also need to look at *Walden Two* itself.

If your topic is not a standard one or if it combines a couple of subject disciplines (such as the influence of *Walden Two* on the 1960's hippy movement), you may want to go for a keyword approach. Here are a few warnings, however:

- Keywords tend to target specific and/or non-traditional approaches to topics. The library you are using may not have enough diversity to meet your particular quirky need.
- Keyword searching, while it may narrow down your quest to exactly what you want, is a very inexact science. You have to input the right word(s) configured in the right way, and you are highly dependent on the actual terminology of titles in the collection.
- Be sure you don't use too many keywords at once. Start with one or two, and if that doesn't give you what you want, try one more. Rarely, unless you are nesting ANDs and ORs, will you need more than three.
- Never forget that, in an AND search, every time you add a term you eliminate data from your results. This may be good if you have too many hits, but make sure that the data you are eliminating is not crucial. It's better to have more results and have to sift through them to find what you need than to have a smaller set of results that doesn't meet your requirements.

Above all in catalog searching, use lateral thinking. Thinking hierarchically could help you. Ask yourself one or more of the following questions:

- What hierarchy (broader subject area) or hierarchies could this topic be a part of?
- If I can't find a book specifically on my topic, what topic is next above it in the hierarchy?
- If one approach is not working, what are other ways that I might look at the topic? (i.e., what other hierarchies could potentially contain the topic?)

E-Books

[See the print]



[For practice exercises with a key, and for an assignment related to the material in this chapter, see the print edition of this book.]

TOP OF PAGE

ON TO CHAPTER FOUR

This page revised June 21, 2010