

INSIGHTS INTO THE RESEARCH PROCESS FROM STUDENT LOGS

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After more than a decade of intensive research into the writing habits of students and professionals, we know that the process of putting ideas on paper is not simple and linear but complex and recursive. Texts that attempt to teach this process range from rather loosely organized collections of writing suggestions to rigid heuristics that insist that invention must follow a specific series of steps. In spite of all of this attention to the writing process, little research has been done into the special problems that arise when the writer is also engaged in research. Is the process the same? Does the writer merely add another step or two to the writing process, pausing to find an article here or a book there to corroborate his ideas? Or does the research process differ in significant ways from the writing process? The writer cannot use very many prewriting heuristics when she is pursuing ideas that must be collected, synthesized, and ordered. Brainstorming about one's own experiences, for example, won't help.

If research is considered in writing process texts, it is treated quite casually as if it is a simple question of walking into the library, checking a book or two, and continuing to write. In research manuals and composition handbooks, the research process is still, more often than not, a simplistic series of neatly ordered steps that most students soon despair of ever imitating. In reality, the research process is not so simple. Think of the special skills research requires: selecting and narrowing a topic that can be adequately investigated with materials available in the local library; developing a thesis and knowing when to alter it as data accumulates; knowing where to look for information when the subject is not to be found as a heading; knowing what data to collect and when

to stop; synthesizing and reordering that data; and fitting the data into a rhetorical structure.

The research process and the writing process occur simultaneously. While the student is following the trail of data from outside source to her own text, she is also engaged in the process of focusing and organizing that data as she would focus and organize any piece of writing. Trying to do both of these tasks at the same time increases the work load exponentially. Work really does expand to fill more than the time allotted.

Students know all of this. That is why they dread the research paper. When I asked a group of students to list the problems that they anticipated in approaching a research assignment, these were their responses:

Picking a workable topic, a likeable topic—17

Finding the right and/or enough information—15

Finding time to get to the library—11

Fitting the material into one logical paper (organizing)—11

Knowing what to leave out, what to put in—8

Not knowing where to look in the library (finding books, articles)—6

Using note cards and footnotes—5

The problems that top the students' lists are the ones that we should expect to find there. Beginning researchers are often overwhelmed by the whole idea of finding information in a building. When they report that they cannot think of anything to write about, they usually mean that they have so many possibilities that they are incapable of selecting and narrowing. Research into creativity has shown that restrictions often stimulate creativity. Students must begin with some specific ideas either gleaned from prewriting exercises or imposed by the instructor. Students who do not overcome this cannot move on to the task of collecting information, not to mention the tasks that must follow before they can produce a finished paper.

To demonstrate some of the blocks and strategies that writers encounter in the research process, I asked students in a freshman English class on research writing to keep close track of their research progress in logs.¹ Using these logs and essays that they wrote after their first research assignment was completed, I will discuss some of the problems they encountered. When these journals were written, students were investigating an issue, event, or person in the year they were ten. First, I asked students to list three possibilities

for each of these categories and to try to find sources on several of these. Norma began with this range of possibilities:²

Year: 1959

Possible topics:

1. U.S. and Soviets space race—NASA newly formed
2. Alaska's statehood
3. Kansas governor George Docking
4. Fidel Castro overthrows Batista and takes over Cuba

Sources referred to:

- | | |
|---|--|
| <i>too much material no thesis emerges</i> | 1. Aviation Week. . . Science. Most of this info was about things U.S. and Soviets engaged in before 1959. . . Decided to abandon this subject as a topic there was becoming too much info to sort through and I wasn't sure exactly where to begin or what I wanted to say about this subject. |
| <i>again, no issue or idea emerging</i> | 2. Alaska's statehood—Found quite a lot of info on this subject, even though the final declaration of statehood was just the final formality; everything else had been completed before '59. Did not know exactly where I wanted to go with this as a topic |
| <i>little information and no interest</i> | 3. Kansas Governor George Docking—found only 1 paragraph about him as a governor after looking thru several Ks. History books, it would take quite a lot more digging to come up with any info and what do I really care about this subject anyway? |
| <i>sees possibilities and several different issues and approaches</i> | 4. Fidel Castro and Cuba—Newsweek May 4, '59 points up his already splitting political personality—good article should be useful in paper. . . Time, Feb. 2, '59, concerning why Castro was able to overthrow Batista and how this rendition was unique—got background info on whole situation. . . The only problem is, I'm not sure just now where to go with all this info. It is all fascinating, but am I going to just write a short history of Castro and Cubas first year, or should I try and tie it in with something I remember about this time; which is very little. If I am going to follow the Revolution from beginning thru its first year, I find I have a glut of articles in January (Everyone wanted to cover it in |

the beginning) coverage tended to taper off toward middle of year. Possibly because the new gov't was so inconsistent about its goals; need to find some articles to fill in the gaps.

As the following journal entries reveal, this task of topic selection is not a simple one. In most cases, this first step took several trips to the library and rather extensive reading. Robert's journal reflects the lack of direction many students experience when they encounter a broad topic and a large research library at the same time.

At this point I really don't know what I'm going to do my paper on. I'm looking through two yearbooks on the year 1970. Right now I'm thinking maybe sports or space age. . . I came across an interesting article on the placement of troops in Cambodia by Richard M. Nixon. Glancing through the sports section I noticed several surprising things. Cincinnati my home team (for 11 years) won their division in Football, Baseball, and Ohio State went to the Rose bowl. I found out that the population of Monroe (hometown) was 3,506. Also I found several interesting articles on student unrest throughout colleges including the shootings at Kent State. This occurrence happened close to our house and I do recall this event. . . It is Wednesday morning the 17th and after a couple of days of thought processing I have decided to do my research paper on the student unrest on the campuses around the country and also if Nixon's move to put troops in Cambodia had anything to do with it.

Ultimately, Robert focused on Kent State and even tracked down an eye witness through his Guard unit.

Problems encountered at this earliest stage can persist. Deanna's lack of a clear idea from the outset caused problems later: she wanted the topic to find her, and when she decided on a topic, she locked in a thesis immediately and refused to look at any other conflicting information or change her thesis.

Feb. 12: Notes to date are too scattered to have a productive idea. I need something to search that is fairly interesting. Today I thumbed through a World Almanac searching for major events or issues

starts with and famous faces during the period of 1965.
no clear Feb. 15: Still looking for a topic to explore. I chose
ideas sources, such as *The World Book Yearbook 1966*,
Facts on File Yearbook 1966, *New Dictionary 1967*
and *Who's Who of American Women 1968-69*.
These items provided scanning material for ideas.
But, nothing concrete has developed.

At this point, Deanna had to find an article to analyze. This forced
her to make a choice.
Feb. 19: To provide an article summary as an assign-
ment, my search has ended for now. Ian Smith in
Rhodesia made world-wide headlines in November
1965, by proclaiming Rhodesia's independence from
Britain. This caught my fancy, because a small coun-
try gaining independence from foreign political in-
tervention is somewhat rare nowadays. It sounds
bold and dangerous to even attempt.

Deanna never deviated from this thesis even when she encountered
contradictory information.
Catherine took a slightly different tack and admitted that she
could be easily distracted.

three Fri. Went into library to find topic for research paper.
broad I had some ideas that there was space activities going
options on in 1966 and that the Beatles were popular. I was
also thinking that I would be interested in doing
something on a local happening, development or
disaster.

background I went straight to the *World Almanac year 1966*
browsing and found it had a lot of information on 1965 in
it also so I looked into 1967 and found it had dates
to remember or important events and happenings (I'll
look that section up so I'll know the title). Anyway,
I was in that section in 1967 and the dates were
from Dec. '65 to Nov. '66. I also looked in '68 in
the section on events of the year. My time was
limited because I had another class. I was also
distracted when I needed a Kleenex and had to stop
and find one. Then I had to find a trash can on
the way out (it was by the reference librarian's desk).

And finally, Maria found more than she wanted to find at first:
2/15. Trying to find a topic for my essay is not as easy

as I thought it would be. Leafing through the 1974 yearbook from the encyclopedia, I found I was bombarded by subjects but nothing that interested me. I continued to look through the *The World in 1973*. I did find some interesting topics in the latter book.

She decides on "terrorism" as a topic, but she does not record how she decided on this topic:

2/16. I looked up the topic terrorism in the *Reader's Guide*. I was surprised to find so much on it. Now I have to decide whether to make a report on terrorism; N. Ireland or terrorism in the Middle East. I found one source, *Newsweek*, that is on N. Ireland.

*focuses on
topic
rather than
issue* 2/18. Today I looked for a source to take to class. I found many possible sources under terrorism. Because of this I think I'll just have a general topic covering terrorism throughout the world.

When she was overwhelmed with possible sources, Maria succumbed to them and broadened her topic. Evidently, she felt safe with so much to choose from. Students often have a difficult time judging how much information they will need. Whereas Deanna made her narrow thesis fit the first narrow article she found, Maria chose not to choose. In both cases, their papers were weaker because they could not judge their sources against their own ideas.

Priscilla was ahead of Maria and Deanna and even Robert because she had a topic in mind and she was able to evaluate her sources from the beginning:

2/12. Went to the library. Had already decided I would investigate Edmund Muskie's campaign in '72. Sources: *Facts on File*. I glanced through and found some information that will be helpful to me but someone else was using the same year so I will come back to it later.

Card Catalogue. Had about 3 or 4 books on Muskie. None of them looked like they would be of much help.

Reader's Guide. Found several good articles I will be able to use. Located the articles and glanced over them. Left the library with a good feeling. I had been successful.

Even in this early stage, it is obvious that students approach library research with such a wide variety of strategies that the standard

prewriting heuristics will be of only minimal help in arriving at a preliminary thesis that can guide the actual research. Catherine and Robert should have some idea of a topic before they start to browse, and somehow they must learn to stay on task. Deanna leaps into her topic when faced with an assignment deadline. She has no interest, no knowledge that will enable her to judge her reading, and a thesis that is so narrow that it proves almost fatal to her whole research process.

Already students have encountered the problems that they were aware of when they devised the preliminary lists of possible obstacles. These problems cannot be solved with the usual prewriting activities or by free writing or by mapping or outlining. The writers must learn to match their interests and their information needs to what it is reasonable to expect is available.

I am not ready to offer solutions to this problem. Selecting topics for the students or telling them the topic is open will not help them to learn this most important step in the research process. I only observe that this initial search must be carefully planned by the students and the teacher and that this planning must go beyond the prewriting strategies offered in most writing texts and classes.

Once students decide on a topic and a preliminary thesis, they begin to use some research skills to locate and select material. Most students experience some writing blocks at this stage. Information on their topic may not materialize: the neat list of fifteen possible sources they collected from the card catalogue and periodical indexes dwindles as the student eliminates those periodicals not in the library, those not on the shelves, those with misleading titles and useless information. Books may prove to be of little use—too narrow, too broad, or wholly unrelated to the topic. This was one of Deanna's problems with Rhodesia and Catherine's as she researched Queen Elizabeth honoring the Beatles. Neither girl could find material to support her first, very narrow article.

Students must collect and record information, but this leads simultaneously to the problem of knowing what to look for, what to record, how to record it, and what to eliminate. The students must evaluate their preliminary thesis, compare sources, and continually think about how all of this will combine into a unified paper. The students' journals reflect a wide range of strategies and frustrations at this stage:

Deanna: Feb. 19. Many of the articles provided straight factual reporting. I checked the *Christian Century* magazine for an angle, but only found both views by Rhodesians and Britains toward an equitable solution. This was not what I had in mind, so I also checked for an *Ebony* editorial reply only to find it not listed in the *Reader's Guide*. *Life* seemed to depict favorable support for Ian Smith.

Notice that Deanna doesn't think she can look up a reference she already has without using the *Reader's Guide*. More importantly, Deanna feels that she must find sources that support her own thesis in order to write a paper that reflects more than the encyclopedic facts. Again, she has an unchangeable thesis rather than a controlling question or an hypothesis at this point so that she is unable to evaluate and synthesize what she finds. She rejects everything that does not support her thesis.

Catherine likewise has yet to form a clear, controlling question. Her topic is still too narrow, but, unlike Deanna, she knows it and is struggling with the problem:

Catherine: . . . Once in the library I went to the Subjects Headings books, looked under music, bandsmen, musicians, artists, and found one reference under musicians or artists. Decided to quit messing around and go look up the *London Times*. I didn't find the *Times* where I thought it was beside the *New York Times Ref* so I looked in *NY Times Ref* for 1966 and didn't find any mention of the Queen honoring the Beatles which was in June according to the *World Almanac*. The first mention of the Beatles was Nov. under Queen Eliz when Lennon said the Beatles were more popular than Jesus. There were some articles on ships. . . Found Music Index articles available on tours, beatlemania, money, Lennon's apologies. I'm thinking I chose a topic with limited sources. Found the *British Humanities Index*. Under Beatles is a "see Lennon" ref. to *Beatle Break* in '66. Out of time.

Tuesday. Went to micro film and figured out how to load the machine. The ref. librarian was busy. Nothing in June '66 on Beatles and Queen. Went back to *World Almanacs* and discovered that the

first ref. of Beatles in the index was listed in the chronology section for 1965 in the 1966. That's so irritating because I thought I was being so careful to get an event in the year 1966. Well now what?

Catherine spends some valuable time learning how to use the library. She has to learn to run the microfilm machine. She has to find the *New York Times* and *London Times* indexes. Then she fears she is doing the assignment wrong. After talking to the instructor and looking in the library again, Catherine arrived "at a dead end for lack of information." Her topic was too narrow. She broadened her topic and continued working:

Mon. 2/22. After encouragement from today's class I am back in the library. First want to look at *Reader's Guide* which is being used so I'm looking in The Music Index 1965 under Beatles. I spent 30 min. getting info from Music Index and *Reader's Guide* and looking up call numbers. Variety and Bill Board were both not available on shelf. I looked on nearby carts and tables from them. I found one article titled the Best of the Beatles. . . I found another about an observation of the Beatles (Good Housekeeping). I think I need to look at the downtown library for Bill Board and Variety.

Now Catherine is thinking of alternatives. At the public library, she encounters even more frustrations, but she has a broader topic and some specific references.

Priscilla continues to stalk Senator Muskie. She has developed several strategies that help her organize her time efficiently, and she has a controlling question: why did Muskie lose?

2/15. Went to the library. Decided I would try the card catalogue again just to get some call numbers so I could locate the area of books about presidents, etc. It was a good idea! One thing I did was to find a book that looked interesting and then look at the index to see if Muskie was listed. Found quite a few useful books and checked them out.

Also located books written about Muskie (biographies?) If I want some background on him I can use those.

What I really want to focus on is how Muskie lost the race. Mainly through the dirty tricks of Nix-

on or what? . . . I decided to focus on [dirty tricks]. Other things contributed to Muskie's campaign loss besides Nixon.

Priscilla is trading off two good ideas here, trying to find a focus: The fact that Nixon sabotaged other campaigns too intrigued me. I will probably include Watergate as his grand finale. So far I have 4 books checked out and several magazine articles I have found. I started going through the books again and putting markers in pages I would like to use. . . .I completed all my bibliography cards on the books I used and also found several other books listed in one of my sources which I will investigate.

3/1. Went to the library and found one of the books I was looking for.³

The first step of any writing process—the exploration of a topic—is important, but in library research the usual procedures that lead from idea to product are complicated by the necessary collection of information from other sources. As these journals reveal, to match one's own concept of the paper with the available information is not always an easy task. Still, while that data is being collected and the writers are grappling with those frustrating but fairly elementary tools and skills of library research, they must be thinking about the other steps in the process: thesis, form, organization, audience, purpose, style. It is a wonder that the writers who have not been blocked before don't find themselves stumped as the process continues.

Deanna just about went under:

Mrs. 8. My efforts seem to be failing with my chosen topic. Political issues are not my best area in writing, but I chose it to hopefully improve it. . . .After receiving a D+ on my revision I realized that I enjoy calculus over English. I plan to abandon my current topic and throw in the proverbial towel. Now, I need a suitable topic on a smaller scale. So, the search continues.

After a conference, Deanna decided to continue to work with the Rhodesian topic. After two drafts, she produced a satisfactory paper.

Catherine joined forces with Mary, who was also working on the Beatles:

Fri. 2/26. In class talked to Mary about sources we have found. She also didn't find any books downtown and had also noted that the two magazines with the most articles were *Variety* and *Melody Maker* and neither one of them were available in either library. We compared other sources and I showed her one of my long articles I had found. She thinks she will do a paper on John Lennon. I wanted to change my topic also, but, after coming to class I am encouraged, and thinking if I can finish this paper on the Beatles I will be able to finish any paper on any topic in the future.

Maria is not quite so confident. She has too much material, but she too is beginning to work through the research process. Her problem, in contrast to Deanna's and Catherine's, is that she has continued to broaden her subject. Now she is searching for material to compare terrorism in 1973 and 1982:

- 3/2. I think I should find some other sources on terrorism. I don't think I know enough about the subject in 1973 or 1982. Maybe they'll help me on the paper.
- 3/6. Today I found a few more sources in the library. Although there are quite a few in the Reader's Guide, few of the sources are ever in. There are problems also with people tearing out the pages needed.
- 3/7. I think one more source on terrorism in 1981 would be advisable. The info is too varied with what I have. I don't really know if my outline I wrote today will be any good after I see the other sources.
- 3/8. The rough draft is harder than I thought to write, even with my outline. I'm having problems with just how much of the 1980's to mention.

Like so many comparisons, Maria's thesis focuses only on the comparison and not on any idea. As a result, Maria continues to have trouble controlling the mass of material she feels obligated to deal with. Inexperienced writers are often afraid to let go of material for fear they will be left without enough information to fill the required number of pages. Their final papers are collections of generalizations.

Priscilla, for all her initial confidence, still isn't certain of her final approach. She has developed her own procedures, but seren-

dipity, a factor often overlooked in the research process, plays a part. She knows her topic well enough to recognize a valuable resource when she comes across it accidentally on March 2:

3/1. I have found quite a bit about Muskie and the press and how Nixon planted false letters, etc. so I am going to try and tie it all in together.

3/2. As I read over my information I'm trying to make note of anything that would bring me in closer to a definite focus point. Muskie's temper and behavior really interests me. I hope I can tie it all together. Thesis: I'm not totally convinced his temper and Nixon caused him to lose. I have a feeling he would have lost anyway. I have also been keeping a note card for anything I think of that I have to do yet before I'm ready to write. Plan to go to the library tonight again. I need more information to confirm my feelings.

I found at the library I should have been looking at articles before Muskie started to go downhill not after. By accident I picked up the wrong year. I found quite a few articles that will be of value to me. Articles that talk not only about his temper but also some other reasons why he might have lost the nomination. I went home feeling relieved that I had finally found information that said "here are some reasons why."

3/6. Wrote out my large note cards with information from books I had checked out so I wouldn't have to keep paging through the books. . . On top of each card I wrote down where it came from so I could cross-check with my bibliography cards. Also put a heading on each card to tell me what the card is about so I didn't have to read the whole card. . . I felt restricted trying to follow the [composition text] book's example of an outline so I just closed the book and wrote out what I wanted. I found it easier to outline and also did less revising when I didn't have to follow a strict pattern.

3/2. Wrote out a thesis statement. Started writing the paper following my outline.

Priscilla is using her sources to get ideas, but not depending wholly

upon what she reads. She balances her own ideas against the facts and opinions she finds. She has learned more than the procedures for writing research: she has learned something about her own writing process and she has learned to trust her own procedures.

The procedures each student uses to make the research process his or her own are idiosyncratic, despite the neat mirage in the texts. The instructor must have confidence that the students have learned some rhetorical skills and that they can adapt these to the research process as Priscilla is doing. Personal conferences can be invaluable. This interaction gets the writer to think about not only the process but also about the ideas. Group inquiry and collaboration can sometimes be useful, an arrangement that Catherine and Mary entered into informally. The research logs were also helpful in that the students were forced to think about how they were doing their research. As we know, writing is often a way to discover what we know, and in this case the students discovered strengths and weaknesses in their own research processes.

Emphasis on the research process does not produce uniformly excellent papers. No instructor can control all the factors in any writing process. When all the variables of the writing process and the research process are combined, it is difficult to control the process so that students can master each part.

After these research papers were completed, I asked the students to write brief essays relating problems they encountered and solutions that they tried.⁴ Not surprisingly, they reported grappling with the very problems they anticipated before they began the process:

Picking a topic:

"I found I was gathering too much information and getting too involved in other views of the subject. I solved this by forcing myself to focus on one aspect when viewing the subject."

"I kept drifting into other areas of interest."

Finding enough and/or the right information:

"I double checked to be sure I had included all the necessary information."

"Finding the info on my topic was the easy part."

"It was hard to find information."

Finding time to get to the library:

Five students mentioned this specifically.

Fitting material in to one logical paper (organization):

"I tried to get all the facts in order."

"The hard part was forming the paper around my topic. I wish someone could make an outline for me to follow on my paper but then it wouldn't be my paper!"

"I decided to compare [three rock stars] and see what common factor might have contributed to their deaths."

"I first intended to go in a chronological order and then changed to writing everything I knew about a particular aspect of the subject in each paragraph."

"Occasionally if I had something I wanted to say in my head I would just write it down then and there and take the whole thing out and put it where it belonged in the paper. In other words, I did a lot of rearranging sentences and paragraphs."

Knowing what to leave out (or put in):

"If I did any reorganization, it was because I decided to leave out something that was no longer important."

"The biggest problem I had in writing my paper was knowing where to stop."

"A lot of material became irrelevant as my paper progressed."

Motivating oneself to get it done:

"I had a little trouble getting started. The opening paragraph was the hardest."

Not knowing where to look in the library (finding information):

"Priscilla led me to the library and we went through Reader's Guide."

"I found it's hard to get books on popular subjects because they are usually checked out or stolen."

Using note cards and footnotes:

"I spent a great deal of time with the end notes and bib. to make sure I had them down correctly."

In addition to their comments on these anticipated problems, students commented on development of a thesis, "I had trouble writing down exactly what I wanted to say," and audience, "It really helped to have someone who knows nothing about the subject read the paper," and problems so common for the student that the student didn't think they merited mention, "I'm not conscious of any major problems that I ran in to while doing my research paper. One reason for this might be that they are dead ends and obstacles that I run into every time I do research."

These comments reflect a wide range of success in a single class. Surely if there is so much variation in one classroom, then the suspicions that I have harbored for so long are confirmed: students rarely follow the neat linear model outlined in so many research manuals and composition texts; the research-writing process is much more complex than most of us realize; and finally students are wonderfully adept at devising their own strategies, successful or not.

This preliminary study has confirmed my belief that the blocks writers encounter in the research process are more complex and, in substantive ways, different from those we encounter in the writing process we use to write other pieces. As I continue to develop my understanding of the variables that make research such a challenge for so many student writers, I will continue to observe, conference, and read their logs to discover their blocks and strategies, hoping finally to describe a research process that will enable more students to proceed as Priscilla did so that they will not be defeated by the blocks that Deanna and so many others encounter.

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NOTES

¹These logs were written by volunteers from my College English 102 class. The student writers ranged in age from 18 to mid-30s. Their abilities ranged from C's to consistent A grades. In other words, these are the logs of a cross section of a typical English 102 class at Wichita State University, an urban commuter school.

I asked them to address these points in their journals: their reactions to articles they read, how they were developing their topic, problems they encountered.

²The marginal comments are my observations of the process that is occurring.

³In conference, Priscilla stated that writing in the log forced her to be more organized.

⁴All students in the class responded to this inquiry, not just those who had volunteered to keep logs.

