What's Happening with Invention?

This study examined 27 current college textbooks on rhetoric and composition to determine the emphasis placed on invention and the organization of invention material. Results revealed that the average percentage of material devoted to invention was 11%, the lowest percentage in an individual text was 1% and the highest was 32%. The standard pattern for the low-percentage text was to discuss invention in a short section at the front of the book, with subsequent sections devoted to concerns of arrangement and style. The higher-percentage texts were not as likely to be dominated by a strict invention/arrangement/style format. A representative pattern in these texts was a general discussion of invention, arrangement, and style in the front of the book, followed by chapters on different types of papers or rhetorical situations, chapters which included a more specific discussion of invention. Results also revealed varied distribution of formal and informal methods for three main categories of invention activity including observation, intuition, and collaboration. Findings suggest that information about invention can help influence pedagogical methods in college writing instruction. (An appendix listing the 27 texts previewed is attached.) (KEH)
What's Happening with Invention?

In a recent New York Times Book Review essay entitled "O Muse! You Do Make Things Difficult!," Diane Ackerman catalogues some of the strategies that writers have employed to stimulate their creativity. Dame Edith Sitwell, for example, used to lie down in an open coffin. D.H. Lawrence climbed naked into mulberry trees. And the poet Schiller kept rotten apples beneath his desk-lid: whenever he got blocked, he would raise the lid and inhale deeply. Ackerman notes, incidentally, that Yale researchers have demonstrated that the fumes of rotten apples do work (1).

What these anecdotes allow us to glimpse is what used to be happening with invention, that activity which, along with arrangement and style, is one of the three major task areas that writers have faced since classical times. In this essay, I will investigate what is happening with invention now — not, however, in the practices of famous writers, but in college rhetorics, and more specifically, 27 rhetorics recently listed by Suzanne Webb in the Writing Program Administration’s annual bibliography of textbooks. If not coffins and mulberry trees and rotten apples ... what methods are being taught? And generally, in this age of the writing process, how much attention is invention being given?

I will use invention in its classical sense — from the Latin word invenire, meaning, "to find, to discover," and will refer specifically to the way that we find and discover ideas and material for essays. With this definition, it seems obvious why invention should be a matter of critical pedagogical importance to writing instructors. But ironically, such was not always the case.

As Sharon Crowley demonstrates in "Invention in 19th Century Rhetoric," rhetoric in that century did not emphasize invention much at all, chiefly
because the theory it inherited from the 18th century assumed that a student's invention capacity depended on natural genius or preexisting knowledge, and hence could not be taught (51-2). In the view of John Genung, one of the most influential of the 19th century rhetoricians and author of the popular textbook, The Practical Elements of Rhetoric, the business of a rhetoric text was not with "the work of origination," but with the mechanical matters of organization, style, usage, and types of discourse (cited in Young, 131). It was Genung and others who forged the paradigm that, according to Richard Young, "dominated the teaching of rhetoric in the United States throughout a good part of the 20th century" (130). This, of course, would be the paradigm we know as the "current-traditional." Ross Winterowd characterizes the scene up through the mid-1960's: "As composition became a massive, if not respectable, enterprise in American schools and universities, the emphasis was squarely on style and structure, to the virtual exclusion of invention . . . stylistics was virtually the all" (37).

The near-elimination of invention from textbooks in favor of conventions and the mechanics of discourse is ironic from the perspective of classical rhetoric. If we inspect Aristotle's Rhetoric, we find that of the three areas -- invention, arrangement, and style -- invention receives by far the greatest attention: 60 of 82 pages, or, 73% in the W. Rhys Roberts translation. It is further ironic if Donald Murray is correct in his estimate that professional writers spend 84% of their writing time in invention (cited in Mitchell, Writing with a Computer, 26). I am not sure that I agree with Murray’s statistic; I would prefer to award some of that percentage to revising. But whatever the figure for invention, it is bound to be substantial enough to merit considerable -- if not proportional -- attention in the writing classroom and the writing text, if indeed we are in the business of training students to
do what writers actually do.

What has appeared since the mid-60's, of course, has been the increasing focus on writing as process and the formation of a "new rhetoric" to challenge the current-traditional school. Richard Young notes that the new rhetoric is "based on [italics mine] the notion that the basic process of composition is discovery". Hence, he observes, "much of the recent work of rhetoricians has been devoted to finding ways of teaching the process of discovery and of making it a part of a rhetoric that is not only new but practical" (132).

If that has indeed been the case, if the last twenty-five years have seen a growing emphasis on invention, we would expect to find some evidence of it in current textbooks. It was with that interest in mind that I approached the 27 specimen texts from the WPA bibliography.

There were four questions I wished to answer:

I. How much of each text is devoted to invention?

II. How is the invention material laid out? Is there one section at the beginning of the text or is it interwoven throughout? If a text covers different paper types, for example, is invention part of each discussion?

III. In terms of what strategies or heuristics is invention generally being taught?

IV. Finally — though not least importantly — I wondered what the implications of what I found would be for my own teaching.

Here are the results:

I. First, regarding what I counted as invention: I treated material as invention if a text treats it as such. Hence if such Aristotelian topics as definition or comparison are employed as ways of finding or discovering material, I counted them. If, on the other hand, a text focuses on definition
or comparison as patterns of organization — and treats them as such in a section designated arrangement — I did not count them, even though the discovery of new material would be a possible by-product of their use as organizational strategies.

I began at the point in the writing process directly after a topic is decided upon, and ended at the point where discussion begins of how to work the material which the invention process has discovered — that is, when the work of analysis begins.

This sounds straightforward. However, I found the question of what exactly invention is and when it occurs to be more elusive the further along I got. Questions regularly arose, for example, as to whether to count heuristics for writing introductions, or whether to count material on logic, as Aristotle had, or material involving questions of audience, or material on how to read a source carefully for its main ideas, or on how to prepare for an essay exam, or on how to keep a journal, if the journal was not discussed as an aid to invention in the writing of a paper. Generally, I did not count these categories of material.

For each of the 27 texts I proceeded by tabulating the total number of pages of invention material and then dividing that figure by the total number of pages in the book (in a couple of cases, a text is a compendium of rhetoric, reader, and handbook, and the separate sections are labeled as such. In these cases, I counted only the section designated rhetoric). Salient statistics include the following:

--- across the 27 texts, the average percentage of material devoted to invention is 11%.

--- the lowest percentage in an individual text is 1% (Reading and the Writing Process).
The next lowest (A Crash Course in Composition) is 2% and there are six other texts below 5% (Problem-Solving Strategies for Writing, Writing in College, The Writing Process, Writing: Resources for Conferencing and Collaboration, Writing with a Computer, Writing with Style).

The highest percentage in an individual text is 32% (A Community of Writers). The next highest text (Writing with Confidence) is 16%.

Several of the low-percentage texts fit the profile "current-traditional" (see Berlin).

II. The standard pattern for the low-percentage text is to discuss invention only in a short section at the front of the book, with subsequent -- and proportionally much larger -- sections devoted to concerns of arrangement and style. A Crash Course in Composition, for example, devotes one page to brainstorming and then has nothing further to say on the subject of finding material except for a brief discussion a hundred pages later of using the library. Most common in the introductory sections are brief descriptions of several strategies. Writing with Style, for example, covers ten heuristics in seven pages.

The higher-percentage texts are not as likely to be dominated by a strict invention-arrangement-style format. Even though they tend to follow the stages in the writing process, they are less inclined to keep those stages -- and hence invention -- rigidly separate. A representative pattern in these texts is a general discussion of invention, arrangement, and style in the front of the book, followed by chapters on different types of papers or rhetorical situations, chapters which include more specific discussion of invention. In the latter case, texts (e.g., Writing with Confidence; The Prentice Hall Guide for Writers) may discuss the heuristics that seem particu-
larly appropriate for each paper/situation.

III. In "Classifying Heuristics," James Kinney notes that we learn from epistemology that there are three ways of knowing: empiricism, rationalism, and intuitionism (352–4). Based on the way that the rhetorics translate these ways of knowing into strategies (and with rationalism's logic generally treated as a mode of analyzing what has already been invented), I established three main categories of invention activity:

1. observation
2. intuition
3. collaboration

I then examined the texts to find the extent to which these different categories were being covered and also which specific methods were favored for (2) and (3). I found the following results. First, regarding observation: of the 27 texts, seven identify it specifically as a means of invention. The other twenty do not. Many of the latter, of course, imply a role for observation in the writing of descriptive papers. What I was looking for, however, was the establishing of meta-awareness of observation as an invention method, one that can transcend a particular kind of writing.

Second, regarding intuition: this is the category in which most of the familiar invention heuristics occur. There are lots of them. Some books present many, simply lumping them together and inviting students to choose whichever they like. At least three texts, however, attempt to subdivide and thus further guide the student. Tilly Warnock, for example, in Writing is Critical Action, observes that when it comes to inventing, there are two types of students: the "gushers" and the "ekers." Hence she divides her invention heuristics into two categories: "loosening" heuristics, to help loosen up the ekers, and "control" heuristics, to help the gushers find focus. A related
taxonomy is Lisa Ede's. In Work in Progress, she divides intuition-based heuristics into "formal" and "informal." Those are the category titles I decided to employ.

In my survey of the 27 texts, I found the following distribution of informal methods. The number in the right-hand column indicates the number of texts which present a given method.

<table>
<thead>
<tr>
<th>Informal Intuition Methods</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brainstorming</td>
<td>22</td>
</tr>
<tr>
<td>Freewriting</td>
<td>20</td>
</tr>
<tr>
<td>Looping (Chained Freewriting)</td>
<td>4</td>
</tr>
<tr>
<td>Clustering</td>
<td>16</td>
</tr>
<tr>
<td>Branching</td>
<td>5</td>
</tr>
<tr>
<td>Mind-Mapping (Clustering with drawings)</td>
<td>1</td>
</tr>
<tr>
<td>Visualizing</td>
<td>3</td>
</tr>
<tr>
<td>Writing Dialogues</td>
<td>3</td>
</tr>
<tr>
<td>Talking into Tape Recorder</td>
<td>1</td>
</tr>
<tr>
<td>Incubation</td>
<td>4</td>
</tr>
<tr>
<td>Meditation</td>
<td>1</td>
</tr>
</tbody>
</table>

I included structured intuition methods in the "formal" category. Here is what I found across the 27 texts:

<table>
<thead>
<tr>
<th>Formal Intuition Methods</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalistic Five Questions</td>
<td>14</td>
</tr>
<tr>
<td>Burke's Pentad</td>
<td>3</td>
</tr>
<tr>
<td>Other Directed Questioning</td>
<td>9</td>
</tr>
<tr>
<td>Aristotelian Topics (e.g., Comparison)</td>
<td>12</td>
</tr>
<tr>
<td>List and Order (Structured Brainstorming)</td>
<td>4</td>
</tr>
<tr>
<td>Tagmemics (Particle/Wave/Field)</td>
<td>4</td>
</tr>
</tbody>
</table>
Third, regarding collaboration: Given the increasing influence of collaborative learning theory, I expected to find some degree of emphasis on collaboration in the invention stage, especially in dialogue with others or in group brainstorming. Interpreting "collaboration" as interchanges with people or sources outside of the self, I found the following results:

- Library Research: 18
- Interviews: 7
- Questionnaire: 1
- Group Discussion: 3
- Talking with Individuals: 1

Of the five types of collaboration in this category, only the last two -- for a total of four textbook instances -- involve collaborative learning as it is commonly understood. The first three -- library research, interviews, questionnaire -- are the traditional data-gathering strategies we associate with the research paper.

What is further interesting about the split is what it signals about the difference, invention-wise, between two of the main types of papers we ask our freshman to produce: standard expository papers and research papers. Of the 27 texts, only four identify research as a means of invention for standard expository writing. In classical times, of course, "outside" knowledge was considered a valuable external aid to invention -- generally. In this set of rhetorics, however, by far the standard gambit is to exclude research from conversation about invention and instead confine it to a separate section,
sometimes an appendix, on the research paper. Meanwhile, in these freestanding textbook sections that cover research, observation and intuitive heuristics, whether formal or informal, are not discussed — as if they were inappropriate in research writing. I would submit that that omission helps to explain the common sterility of the research paper.

IV. My principal goal in undertaking this study was to educate myself about invention, partly so that as a writing director I could converse meaningfully and helpfully with my colleagues and partly so that I could develop my own teaching. With the latter particularly in mind, I am including, in the way of a conclusion, the following list of what I learned that will directly influence my pedagogy as I continue to revise my syllabi for freshman and advanced writing courses.

1. First, and most important — I understand more fully now the epistemological breadth of invention. I will include systematically all three main categories — observation, intuition, and collaboration (research included) — in my program. I will present them as a triumvirate right from the start.

2. I find that I align myself with the new rhetoric where invention is concerned. If I choose a text from the list of 27, it will be one that reinforces invention throughout the course rather than confining it to the front end. My favorite texts in this regard were The Practice of Writing by Robert Scholes and Nancy Comley and From Sight to Insight by Jeff Rackham and Olivia Bertagnolli.

3. Instead of creating sensory overload by presenting heuristics in a clump, I will engage students in categorizing which demonstrates that different heuristics do different jobs.

4. I like the wide range of specific invention strategies which this study has revealed — a range that is much wider than that found in any single
text. I will share this range with my students, drawing from across the entire collection of 27. I want the student repertoire of heuristic options to be as large as possible.

5. I believe that the history of invention can itself be a subject for discussion in the writing classroom. It is fascinating, for example, to see how much "new" rhetoric derives from Aristotle. It is likewise fascinating to analyze the changes. They provide a handle on the difference between the classical mind and the modern mind — and hence between writing (and thinking) then and writing now. A particularly stimulating essay in this regard is S. Michael Halloran's "On the End of Rhetoric: Classical and Modern."

6. Finally, I am going to continue reading the New York Times Book Review. I am sorry to relate that not one of the 27 texts I surveyed provides the sort of anecdotes I included in the first paragraph of this article. Now, I'm not likely to recommend coffin-sitting or climbing naked into mulberry trees as ways of stimulating invention. But I think that the tales of Sitwell's and Lawrence's respective use of them help ease student entry into the community of writers, an entry which means not only responsibilities, but the rights to all the vast, accumulated storehouse of materials and experiences and stories which help to make membership worthwhile.
Appendix

The Rhetorics

The Act of Writing, by Eric Gould, Robert DiYanni, and William Smith (Random House)

A Community of Writers: A Workshop Course in Writing, by Peter Elbow and Patricia Belanoff (Random House)


A Crash Course in Composition, 4th ed., by Elizabeth McMahan (McGraw-Hill)

Critical Thinking, Thoughtful Writing, by Eugene Hammond (McGraw-Hill)

Discovery: Reading, Writing and Thinking in the Academic Disciplines, by Linda Robertson (Holt, Rinehart, and Winston)

Forming/Thinking/Writing, 2nd ed., by Ann E. Berthoff with James Stephens (Boynton/Cook)

From Sight to Insight: Stages in the Writing Process, 3rd ed., by Jeff Rackham and Olivia Bertagnolli (Holt, Rinehart, and Winston)

The Practice of Writing, 3rd ed., by Robert Scholes and Nancy R. Comley (St. Martin’s)

Prentice Hall Guide for College Writers, by Stephen Reid (Prentice Hall)

Problem-Solving Strategies for Writing, 3rd ed., by Linda S. Flower (Harcourt Brace Jovanovich)

Reading and the Writing Process, by Susan Day, Elizabeth McMahan, and Robert Funk (Macmillan)

Work in Progress: A Guide to Writing and Revising, by Lisa Ede (St. Martin’s)


Writing: An Introduction, by Irwin H. Weiser (Scott, Foresman)
Writing as Thinking, by Lee A. Jacobus (Macmillan)

Writing for College, 2nd ed., by Robert E. Farber (Scott, Foresman)

Writing in College: Style and Substance, by Patricia Simmons Taylor (Scott, Foresman)

Writing in Context, by Chris Anson and Lance Wilcox (Holt, Rinehart and Winston)

Writing is Critical Action, by Tilly Warnock (Scott, Foresman)

The Writing Process, 3rd ed., by John M. Lañnon (Scott, Foresman)

Writing: Process and Intentions, by Richard C. Gehhardt and Dawn Rodriguez (D. C. Heath)

Writing: Resources for Conferencing and Collaboration, by Mary Sue Koeppel (Prentice Hall)

Writing with a Computer, by Joan P. Mitchell (Houghton Mifflin)

Writing with Confidence, by James W. Kirkland, Collett B. Dilworth Jr., and Patrick Bizzaro (D.C. Heath)

Writing with Style: Rhetoric, Reader, Handbook, by Laraine Fergenson (Holt, Rinehart, and Winston)

Writing with a Voice: A Rhetoric and Handbook, 2nd ed., by Diana Hacker and Betty Renshaw (Scott, Foresman)
Works Cited


