

Thinking About Writing

The Relation Between Mental Processes and Writing Skills

BY VALERIE K. LANDIS

During the past 20 years or so, many articles and books about the teaching of composition have dealt with writing as a process. Dissatisfied with the focus on the end product, teachers, theorists, and researchers wanted to know (1) the "how" of composing, (2) ways to help the struggling student understand what he or she could do internally to produce an acceptable end product, and (3) what skills students could consciously practice and develop in order to consistently produce clear, meaningful communications.

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A concerted effort has focused on discovering the special kinds of thinking needed to activate the process. Almost all the researchers and theorists have come to view the process as recurring subprocesses, discrediting the linear model of prewriting, writing, and postwriting.¹

In reviewing recent research on the composing process, Ann Humes summarized the subprocesses involved in

writing as "planning," "translating," "reviewing," and "revising."² The following description of the four subprocesses is based on her review.

Planning

Planning is a thinking process that occurs before, during, and after words are put on the page and consumes a high proportion of the composing time. It encompasses both generating and organizing content and setting goals. The quantity and quality of the content goals, which govern what to say, and the process goals, which direct the writer's behavior, differentiate between good and poor writers.

Before writing, planning usually is brief and global in nature. Most in-process planning is mental. When done

in significant amounts, it evidences much right-brain activity. Good writers spend more time in planning than do average or poor writers. They also engage in more global planning, take longer planning pauses, and hesitate more before thought units than before sentence-level tasks.

Translating

Translating, which includes activities variously described as "writing," "recording," "implementing," "drafting," "articulating," and "transcribing," is the subprocess of transforming thought into its graphic representation. Most researchers stress the need for automaticity in translating. Studies using an electroencephalograph show a positive correlation between automaticity and left-brain activity. As translating skills become more automatic, writers translate more easily and more rapidly.

Reviewing

Reviewing occurs before, throughout, and after the composing process and involves both changing one's mind and modifying the text. All writers revise to correct errors and change surface features of the text, but more experienced writers revise to preserve or change meaning or to better meet their audience's needs.

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Research and Brain Processes

Recent brain research sheds new light on the composing subprocesses. During the past century much has been written about 19th-century discoveries by Broca and Wernicke regarding certain areas of the brain and their relation to speech and language. Despite amazing scientific advances in this area, however, today's scientists still stress the fact that understanding how the brain works is no simple matter.³

Certain basic principles about brain function are fairly well known. For example, because most people are right

handed, their speech centers are usually located in the left hemisphere of the brain.

Just as important but often neglected or glossed over is the fact that neither hemisphere acts in isolation. Both hemispheres function together almost simultaneously, with one or the other dominating. A constant exchange of information processing takes place between the two hemispheres, although one may dominate at certain times or in performing particular tasks. For example, in most right-handed people the left hemisphere dominates in verbalization. "The cognitive representations of emotions (feelings and symbols) are . . . represented in both hemispheres."⁴ However, recent research indicates that the right hemisphere plays a special role in perceptual judgments of a variety of affect-laden stimuli.⁵

Nevertheless, regardless of whether a person is right handed or left handed, one hemisphere of his brain more efficiently processes linearly, analytically, sequentially, and so on. Usually this is the same hemisphere that processes verbal perception and generation, analyzes syntax, and reduces a sentence to its meaningful parts. The other hemisphere specializes in perceiving relationships between parts, in recognizing spatial or visuo-spatial information.

The two hemispheres are in constant communication. Thus, for example, perceptual information—the processing of the imagination, the presentational symbolization and imagery of the right hemisphere—is communicated almost at the moment of its conception to the left hemisphere for verbalization. Hoppe notes that presentational symbolization and imagery, in contrast with signs, are closely linked with feelings.⁶

Writing and the Two Hemispheres

Writing, which relies on symbols at more than one level (e.g., words and metaphors), obviously is "a complex symbolic activity."⁷ This activity requires both hemispheres of the brain, the left to give

access to the explanatory sign qualities of clear and unambiguous language as well as the sequencing powers necessary to writing; the other to perceive and express the more evocative design qualities of language as word images, rhythm, recurring pattern, and metaphor.⁸

Writers, researchers, and theoreticians have noted the recursive, or circular,

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impressionist painting as a means of understanding the past and how people recall experience. (Monet as memory.) Use *Our Town* as a treatise on "I have come that you might have life and have it more abundantly." Analyze some news releases of the "Religious Right" in discussing religious tolerance and whether the United States is, or should be, a Christian nation. Use *M.A.S.H.* when you are discussing attitudes toward war and how people deal with stressful situations.

I think a worthy object of education is seeking to develop a healthy disrespect for "fact" and a healthy regard for clear thinking. It is said that before he died, Voltaire, a great questioner, said, "Now we'll see." I believe this to be a positive attitude. Questioning beliefs carefully, working toward more accurate, thoughtful understanding is a valuable enterprise. Part of a teacher's job is to help students know *what* they believe and *why*.

Your classroom should be a safe place where students learn to see, to think—where knowledge, perceptions of information, are questioned, where even their own thoughts, beliefs, and preconceptions are carefully analyzed.

In asking for classrooms to be safe places, I mean that they should be safe places to be dangerous, to be wrong. And also dangerous places to be too safe. □

REFERENCE

McCormick, Mona. "Critical Thinking and Library Instruction," *RQ (Reference Quarterly)* 22 (Summer 1983), 339-342.

WHY AND HOW TO TEACH RESEARCH SKILLS

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Special Resources

A unique component of teaching research skills in Adventist schools should be making students aware of the special Adventist collections throughout North America. These materials should be used in researching Adventist-related topics. Librarians can direct students to the appropriate location(s) for this research.

Students may obtain information by telephone or correspondence from the staff of the collection nearest to their school.

No single outline or method for teaching good research strategy meets the needs of every discipline. But whenever possible, librarians and teachers should cooperate in teaching students that there is always more to learn and no single key opens every door of knowledge.

Ellen White's statement is especially appropriate in this context:

Every human being, created in the image of God, is endowed with a power akin to that of the Creator—individuality, power to think and to do. . .

It is the work of true education to develop this power, to train the youth to be thinkers, and not mere reflectors of other men's thought.⁵

Adventist librarians and teachers should thus seek to train students to search out and evaluate information using good research techniques. This skill will serve them well as they make decisions throughout their lives. □

FOOTNOTES

¹ "The Story of a Story"—Parts I, II and III, *Adventist Review*, February 14, 21, and March 14, 1985.

² 1 Thess. 5:21.

³ Ellen G. White, *Evangelism* (Washington, D.C.: Review and Herald Publishing Assn., 1946), p. 69.

⁴ George R. Knight, *Myths in Adventism* (Hagerstown, Md.: Review and Herald Publishing Assn., 1985), p. 251 (Epilogue).

⁵ White, *Education* (Mountain View, Calif.: Pacific Press Publishing Assn., 1903), p. 17.

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nature of composing and have intuitively sensed the left brain/right brain transformational process. In *Becoming a Writer*, a book published in 1934, Novelist Dorothea Brande wrote,

Most of the methods of training the conscious side of the writer—the craftsman and the critic in him—are actually hostile to the good of the artist's side; and the converse of this proposition is likewise true. But it is possible to train both sides of the character to work in harmony, and the first step in that education is to consider that you must teach yourself not as though you were one person, but two.⁹

Language, Thought, and Writing

Theorists such as Berthoff assert that in composing, meanings are made; the

forms of thought¹⁰ are found by means of language and the forms of language are found through thought. Underlying this is the sense of a two-part activity in the mind: thought and its verbalization. Ponsot and Deen see language as the *medium* of thought, and writing as the *instrument*¹¹ of thought. Again we find the sense of a two-part activity, with writing making it visual. And Hammond notes, "All writing requires observation, imagination, and discipline."¹²

Hammond's inclusion of imagination indicates that the writing process needs more than linear, sequential, analytical thinking. Emig's sense of the recursiveness of composing is demonstrated in her conviction that writing enables new knowledge. She believes it involves the imaginative mind in creating meaning by processing the materials of its experience, in stating relationships, which lie at the heart of learning.¹³

Rico and Claggett describe the complex symbolic activity of composing as necessitating "a kind of internal dialogue between whole and parts, between image and sequence, between configuration and specifics, between initially vague global idea and gradually emerging parts."¹⁴

Moreover, language can only be realized in a social context. Therefore writing is necessarily a social process. Because it allows for open connection-making and intellectual dialogue, writing helps encourage thinking and learning.¹⁶

A Complex Process

Ironically, the more we learn about the function of the brain and the composing process, the better we understand how complex composing really is. We also realize that we may never be able to clearly spell out the methods for teaching it—too much of what goes on during the composing process is internal. Although certain functions may be localized in one hemisphere or the other, the brain functions as a whole at all times.

However, scientists are discovering that the brain is "both a highly ordered, and at the same time, randomly organized structure."¹⁷ While the overall pattern of the brain may be predictable, specific activity within it is not. At present, research can give only general clues as to what usually occurs during the composing process.

Moreover, textbooks that try to deal with the nonlinearity of the composing

process by incorporating the latest in brain research sometimes imply that one hemisphere of the brain functions in isolation from the other, a concept that is erroneous and misleading.

Categorizing the Observable

Detailed analysis of the composing process has led us to break it down into subprocesses, categorizing the observable. Unfortunately, focusing on a single category (subprocess) and its attendant skills implicitly denies for some readers the recursiveness of composing.

Textbook writers, following the course of the research, usually devote separate chapters to various subprocesses. This leaves many readers with the idea that each subprocess is an identifiable and separate activity and that the composing process is merely a sequence of subprocesses. Charts or other graphics presenting the subprocesses reinforce the implication about the linear sequencing of the writing process. Both strategies hurt inexperienced thinkers and writers. These persons have particular difficulty envisioning both the nonlinearity of the process and the rapid seesawing of brain activity involved in the subprocesses.

Almost invariably, inexperienced writers attack the composing process sequen-

tially, dealing with concepts that can be analyzed and verbalized. Research indicates that they focus principally on the end product, whether it be the so-called "zero" draft, first draft, or final draft, and spend most of their time translating.

Unfortunately, far too many exercises in the modern English curriculum reward primarily left-brain processes, i.e., analysis and linear, sequential thinking, making many students uncomfortable with any activity that requires creativity, imagination, or other thinking relying on right-brain dominance.

Understanding the Processes

The inexperienced writer has difficulty comprehending the role of those subprocesses in which the function of the right brain dominates. This may cause problems if teaching focuses too much on explaining the role of hemispheres or the nonlinearity of the process. According to research, the novice writer is concerned principally with the translating subprocess, neglecting the area of planning in which right-brain functions dominate. The inexperienced writer tends to limit both the reviewing and revising subprocesses to changing surface features of the text, activities in which left-brain functions dominate.

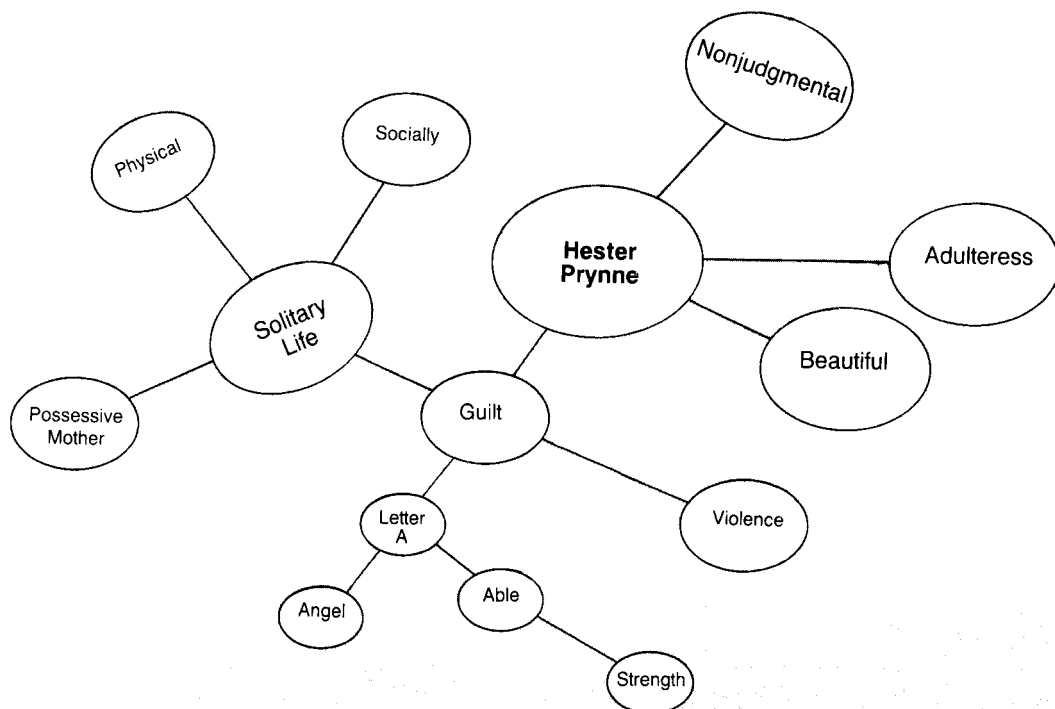
Many students focus on left-brain applications because of the paucity of writing required during their elementary and secondary school years. Few teenagers have done enough composing in their younger years to feel comfortable about tackling written assignments that require more than two or three sentences. For a variety of reasons, most secondary teachers rely on workbooks, short-answer formats, and multiple-choice questions. Students who feel comfortable in a discussion will often panic at having to write down what they have been talking about.

One obvious way to improve this situation is to give inexperienced writers more experience. Teachers in every subject area need to see writing as a routine means for communicating ideas and knowledge. They should require complete paragraphs as answers to questions and include essay questions on tests.

Dialogue journals between teacher and student or between students can help students become more experienced. Such journals are neither corrected nor graded and, therefore, are nonthreatening. By providing a specific audience, they offer practice in strategies employed by more experienced writers.

Another way to help inexperienced

Clustering for Character Analysis of Hester Prynne in Nathaniel Hawthorne's *The Scarlet Letter*



writers become more aware of the sub-processes used by sophisticated writers and more adept in using them is to help students visualize such processes. Planning comprises 65 to 85 percent of the composing time of good writers and relies heavily on right-brain input.

Clustering and Mapping

Planning, moreover, can be partially visualized by using strategies such as clustering or mapping. These techniques graphically portray planning elements: generating and organizing content, and setting content and process goals. (See page 31.) Clustering, a concept designed and formulated by Gabrielle Rico, is based on the idea that "thoughts and images, when given free rein, seem to come in clusters of associations."¹⁸ In clustering, a word or phrase becomes the nucleus of a graphic design consisting of lines radiating from the circled nucleus to other circled words or phrases that have been conceived by free association with the nucleus. This exercise is non-linear.

Mapping also is a graphic presentation of thought; in contrast with clustering, it can be nonlinear or linear. When mapping, a writer begins "with a geometrical shape—circle, square, and so forth—in a central position for the thesis. Extending from the center are as many lines as there are categories. Branching from the categories are several levels of smaller lines that represent the supporting details."¹⁹

Both clustering and mapping force the writer to focus on meaning, purpose, and audience, depending on which word or concept is central to the clustering or mapping. Both enable the writer to envision the relationships between ideas and concepts, to grasp the whole, detect patterns, and formulate ideas.

Any account of the writing process that considers the subprocesses (planning, translating, reviewing, revising) and includes strategies such as clustering or nonlinear mapping comes as close as possible to describing what we currently know about composing and the aspects of it that can be taught. However, no diagram can accurately present the way the brain hemispheres work together during the composing process. Research indicates that domination of one particular hemisphere over the other during the composing process changes with experience.

In teaching writing, teachers obvi-

ously need to give attention to form and style and spelling. However, they should make students aware that creativity—the ability to perceive relationships and patterns, to imagine—is a natural function of the human brain that should be nurtured throughout a person's entire lifetime. By becoming skillful writers, students can develop their creativity and thereby become more effective thinkers and learners. □

FOOTNOTES

¹ Ann Humes, "Research on the Composing Process," *Review of Educational Research*, 53:2 (1983), pp. 201-216.

² *Ibid.*

³ W. D. TenHouten, K. D. Hoppe, J. E. Bogen, and D. O. Walter, "Alexithymia: An Experimental Study of Cerebral Commissurotomy Patients and Normal Control Subjects," *American Journal of Psychiatry*, 143:3 (1986), pp. 312-316; K. D. Hoppe, "Mind and Spirituality: Symbollexia, Empathy, and God Representation," Paper presented at the meeting of The National Guild of Catholic Psychiatrists, 1985; R. Restak, *The Brain* (New York: Bantam Books, 1984); Linda Verlee Williams, *Teaching for the Two-Sided Mind: A Guide to Right Brain/Left Brain Education*, Touchstone ed. (New York: Simon & Schuster, 1983).

⁴ TenHouten, et al., p. 312.

⁵ K. D. Hoppe, personal communication, October 12, 1986.

⁶ ———, "Mind and Spirituality: Symbollexia, Empathy, and God Representation."

⁷ G. L. Rica and M. F. Claggett, *Balancing the Hemispheres: Brain Research and the Teaching of Writing* (Berkeley, Calif.: Bay Area Writing Project, University of California, 1980), p. 2.

⁸ G. P. Rico, *Writing the Natural Way: Using Right-Brain Techniques to Release Your Expressive Powers* (Los Angeles: J. P. Tarcher, Inc., 1983), p. 18. Book distributed by St. Martin's Press, New York.

⁹ Cited in *Ibid.*, p. 17.

¹⁰ A. E. Berthoff, *The Making of Meaning: Metaphors, Models, and Maxims for Writing Teachers* (Montclair, N.J.: Boynton/Cook Publishers, Inc., 1981).

¹¹ M. Ponsot and R. Dean, *Beat Not the Poor Desk: Writing: What to Teach, How to Teach It, and Why* (Montclair: Boynton/Cook Publishers, 1982).

¹² E. R. Hammond, *Teaching Writing* (New York: McGraw-Hill Book Company, 1983), p. iii.

¹³ J. Emig, "Writing as a Mode of Learning," *College Composition and Communication*, 28 (1977), pp. 122-128.

¹⁴ Rico and Claggett.

¹⁵ J. A. Reither, "Writing and Knowing: Toward Redefining the Writing Process," *College English*, 47:6 (1985), pp. 620-628.

¹⁶ C. H. Knoblauch and L. Brannon, "Writing as Learning Through the Curriculum," *College English*, 45:5 (1983), pp. 465-474.

¹⁷ R. Restak, "The Brain: The Endless Levels of the Mind," *The Washington Post* (November 2, 1986), p. C3.

¹⁸ Rico and Claggett, p. 29.

¹⁹ Marilyn Hanf Buckley and Owen Boyle, *Mapping the Writing Journey* (Berkeley, Calif.: Bay Area Writing Project, 1981), pp. 3, 4.

ARE TEACHERS READY TO TEACH PUPILS TO THINK?

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sense suggest that if teachers enter classrooms failing to use operative knowledge themselves, they cannot serve as models of higher-order thinking and decisionmaking for their students—either through the instructional dialogue they engage in or through the ways they choose to use materials and methods and evaluate learning. Teachers who see their job as merely dispensing information fail to see more complex ways of viewing subjects. For example, they fail to ask: How was that information derived? How is it changing and evolving? How might it be related to other curriculum areas? How might it best be used to foster operative knowledge, rather than mere recall of "right" or "wrong" factual information?

Hundreds of classroom decisions involving such questions can be made by teachers daily. Those decisions reflect the individual teacher's own level of personal and cognitive development—and dramatically affect what and how students learn.

As Mary Budd Rowe, one of the continuing leaders in science-process methods, has charged, too many K-12 teachers operate implicitly according to a model of learning that views students as "uncritical, essentially bottomless receptacles for information. . . [T]his tends to limit the teacher's function to one of conveying information and correcting student recitations."

In this model, she notes: "Knowledge is seen as a fixed commodity to be stored up for future use. (Learn it now. You will need it next year.) What students do learn is that someplace there are people who produce the 'right' answers. There is always an official response to be recited whether