The Rest of the Story:

Why and How to Teach Research Skills

It was a fascinating and inspiring story involving prophetic revelations, a diamond mine, missionaries to Africa, and the providential funding of Battle Creek Tabernacle and Avondale College. Thousands had heard the story and most, if not all, believed it unquestioningly. But does the fact that a story has been heard from "several good sources" make it true?

Taylor D. Ruhl is Director of Library Services at Pacific Union College, Angwin, California.

How important is it to check the facts before we believe, repeat, or print something?

Eugene Durand, assistant editor of the *Adventist Review*, decided not and checked the accuracy of the story before publishing it. He was surprised to discover that there was no evidence for the main parts of the story, and, in fact, certain glaring errors made it untrue. As a result, he wrote the "Story of a Story."[1] Why didn't he just print the story as fact, since it could have served "a good purpose"? How important is it to check the facts before we believe, repeat, or print something?

Christians are instructed to "prove all things" and "hold fast that which is good."[2] Ellen White instructed that

BY TAYLOR D. RUHL

cept through experience.

As students become more adept at using their library skills, they will feel a sense of excitement in tracking down a fact or reference, and will achieve greater confidence about the basis for their knowledge. They will come to see how research can help them think, speak, and write more accurately and with greater authority.

First Steps

Before students learn about the card catalog and specific reference tools, they should be taught to ask for help in locating sources so that the librarian can demonstrate the library's many resources. Many students have no idea that the library contains encyclopedias, concordances, style manuals, specialized dictionaries (dealing with medical or legal terms, biographical information, etc.), directories of associations and manufacturers, political handbooks, atlases, poetry indexes, books of quotations, listings of books in print, weekly world news digests, and computer data bases to help them locate additional information. In the library, written instructions near points of constant use will prove helpful.

The Card Catalog

But what about the library catalog? College students should already have a basic understanding of the information found on a catalog card as well as how books are listed and cards are filed. Ideally, this training should have taken place in an academy English class or even earlier. However, even faculty members make frequent mistakes in trying to use library catalogs, assuming that they know all about this area. Therefore, teachers and librarians should emphasize the fact that anyone may need help in using the catalog. This is especially true today when the card catalog is not the only format for a library catalog, and could largely be replaced in the next 10 years.

Learning to Ask for Help

Course-related library instruction, preferably given in the library at the point of use, will help make students more knowledgeable and less embarrassed to ask for help. Students learn to use libraries by practical, successful experience. What should library instruction teach, and when, and how? There are two especially helpful methods of teaching library skills.

Library instruction helps teach the student how to learn.

The first is within the classroom setting. Teachers can invite librarians to discuss assignments that involve the use of the library. The librarian can spend 15 or 20 minutes answering questions about search strategy, library resources, and tools specifically helpful with current assignments. In doing so, he or she should make a special point of encouraging students to ask for help either while in class or when they are using the library. It is usually best to use specific reference tools for illustration rather than showing students a simple answer to the assignment.

In the second method, the librarian can meet students in the library, either in small groups, or by individual appointment, and help them use reference tools for their research assignments.

Selecting the Best Sources

As a result, students will have positive, practical experience in learning to find the information they need. Since they will still need to choose between a number of available sources, they should learn to evaluate and select the best. They should learn that not everything found in a library is appropriate or relevant, and that careful selection of sources is an important research skill. They should ask eight questions about a source:

1. *How valid are the qualifications of the author?* Just because an author is in print doesn't necessarily make him or her qualified to speak accurately on the subject. Librarians can tell a student whether biographical information about authors is available and guide them in using it.

2. *What is the scope and purpose of the source?* Does it match the student's need? Or will it be frustratingly inappropriate for the assignment at hand?

3. *Does the author have any major bias or viewpoint?* Students should be taught that every author has personal opinions and prejudices. Educated use of a source recognizes this and seeks a variety of interpretations.

4. *What is the intended audience?* Popular, technical, professional, juvenile, scholarly, or specialized groups?

5. *How relevant is this source to the topic?* Has the student clearly defined his or her subject? A reference librarian can often help a student clarify and narrow a topic in searching for sources about it.

6. *Is the work out of date?* A source can be too old to contain current information or too new to offer insight into a historical subject. Sometimes a mix of old and new perspectives on a topic is best. But this selection should be made intentionally, not by default.

7. *How do the author's peers evaluate this work?* Numerous resources can help students determine how experts have judged the author's research. Librarians can help students locate the appropriate evaluations and teach students to use them.

8. *Is the information in the source correct?* What accurate and dependable evidence supports the author's views? Does he or she include appropriate documentation (footnotes and a bibliography)? What evidence does the author provide to establish the validity of the content of a source other than his own opinion? An undocumented source should be seriously questioned and if possible corroborated before being accepted and used as factual.

Continued on page 30

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

Continued from page 16

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] I 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.

THINKING ABOUT WRITING

Continued from page 18

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 thought[10] 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