STUDENT AS RESEARCHER: A NEW USE FOR ORAL COMPOSING PROTOCOLS

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Maria is a careful planner. She makes copious notes before she begins to write. Matt rushes headlong into a draft, grabbing the "first good idea I can hang onto." Clark considers his audience carefully before composing. Each of these young writers was a student in my freshman composition class. Each had never thought about *how* he or she composed, that is, not until I gave them a task and asked them to think-aloud on tape, to listen to and analyze their writing processes, using a simple code.

The technique I used is called protocol analysis. A protocol is a sequential record of a subject performing a task. Some protocols are video records of a subject's behavior; others are audio tapes the researcher uses to catch the flow of a writer's thoughts. Until recently protocol analysis has been used strictly for research on the writing process. However, it is my view that this technique can be used for purposes other than laboratory research. It can also be a powerful pedagogical tool for helping students discover and examine their own composing strategies. In order to demonstrate how students can become "researchers" by using oral composing protocols, I'd like to first briefly trace the history of protocol research on writing, and to point out some of the practical difficulties that the technique presents. Second, I'd

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like to describe how I used oral composing protocols to help students see whether they were using effective or ineffective writing strategies.

Eleven years ago Janet Emig wrote *The Composing Processes of Twelfth Graders.*[1] In it she described the writing processes of eight sixteen and seventeen year old secondary school students who composed orally into a tape recorder. A few years later, in 1976, Sondra Perl developed the first code for analyzing the composing behaviors of her subjects.[2] Perl studied the ineffective writing strategies of five basic writing students who were college freshmen. Similarly, Sharon Pianko and Ann Matsuhashi observed students' composing behaviors using video tape.[3] During this time, Linda Flower and John R. Hayes began a collaborative venture directed toward understanding the thinking processes of skilled and unskilled writers. Asking their subjects to think aloud on tape while writing, Flower and Hayes determined that mature writers have an elaborate repertoire of strategies that they can call upon to solve writing problems, once they have formed an internal (or mental) representation of the problem itself. The writer then begins to develop a complex network of goals that include large rhetorical goals such as "I want my readers to understand why teaching English is a rewarding profession," as well as goals and plans for how they are going to write the draft. In the latter case a writer might typically say: "I'm going to begin by jotting down a list of ideas about how I became a college English teacher." Flower and Hayes discovered that in contrast, unskilled writers, inexperienced in juggling the various demands of a writing task, could not move beyond their perceptions that "sticking to the topic" was their major goal.[4]

Although protocol analysis is an important research technique because of the rich data it provides, there are reasons why its use has been limited. Gathering, transcribing, and coding protocols is a costly business. The researcher must be paid for his or her time. A typist must also be contracted to transcribe what is on the tapes into readable text. Finally, coders must be hired to independently code the protocols before they are analyzed. Often these expenses are covered by a grant. It might appear that collecting thinking-aloud protocols is not affordable to those outside of a university research setting. However, I would like to suggest that it is.

Recently Lois Brown Easton reported in *English Journal*

an experiment she conducted to help students "embed the processes good writers use in producing and writing."[5] Easton trained her students in a seventh grade class to give and code protocols. She then examined the protocols herself, comparing them to her students' written products composed under ordinary conditions. Noticing the discrepancy between the richness of her students' oral composing and the lack-luster written drafts they produced, Easton taught them a series of strategies for creating more vivid description. Easton concluded:

> While I've not statistically related the quality of taped composition (oral composing) to written composition, I've observed generally that a student's taped composition is likely to be more direct, obviously organized, and stylistically sophisticated than the student's other written composition. Audience awareness is evident on the tapes (p. 91).

The protocols of Easton's seventh graders helped her identify characteristics of oral composing that she could translate into practical techniques to use in the classroom.

Another relatively simple and inexpensive way of using protocols in a classroom setting is to ask students to give protocols so they can examine their own writing processes. Most students aren't even aware that they *have* processes. This discovery can help them, first of all, understand the complex nature of writing, and, second, learn that they have a repertoire of strategies to draw upon in response to a writing task.

I invited students in a freshman composition class to think aloud on tape as they responded to a writing task which asked them to discuss women's roles in today's society for the ten to twelve year old readers of *Jack and Jill* magazine. The students were given a coding scheme which consisted of six categories: P (plan), E (evaluate content), Q (evaluate style), Ed (edit), A (think about audience), F (satisfice, or settle for less than what one wants in order to press on with the writing). I then told them to take their protocols home, to listen to and code them, and to write a paper analyzing their writing processes. In order to see the difference between the strategies these students used, I'd like to present and discuss material from the protocols and writing analyses of five: Clark, Mark, John, Matt, and Maria.

Clark was a planner. Making a number of inferences

about his audience, their interests, their worries, and their thoughts about their parents, he came up with a general plan — to put his audience in a context they could relate to, "to go into a little history and explain the 'why' of today's situation." He reported, "It may not have been the best idea, but I had a hold of it and it gave me a little direction, something I hadn't had much of until now." Throughout the second paragraph of his draft he was concerned whether he was using the appropriate style for his audience; however, he satisficed with what he wrote. In the middle of the third paragraph he developed a minor plan to use the analogy of going to Baskin and Robbins and having many flavors to choose from in order to make his point that women of today's generation have many more choices among roles than they have ever had. Before concluding, he reviewed his draft and tried, as he later reported in his writing analysis, "to figure out what I was really trying to say. I tried to wrap everything up into a neat package and conclude with a central idea; however, it didn't come off as well as I would have liked." Clark was willing to satisfice with his draft. He observed, "I think that conclusion would have to be rewritten. In fact, the entire paper lacks focus [but] this is something that could be worked on in a later draft."

We can observe Clark using a number of effective strategies that he becomes aware of as he listens to his protocol: he thinks about his audience, develops plans with this audience in mind, is concerned about the appropriate stylistic choices, and is willing to satisfice with the draft he has written.

Mark, in contrast, was what I call the conscientious and cautious composer. He was extremely self-conscious about being taped. In his written analysis he noted:

> I was too worried about pausing for long periods of time, so I hurried to get a sentence, any sentence, on tape. As a result while I was concentrating on writing a new sentence, I completely forgot what I had just wrote. And I never even thought about what was going to follow. . . .

For this reason, Mark began writing the minute the tape recorder was turned on and continued like a marathon runner determined to go the distance. He used, he noted, a trial and error strategy, writing a sentence at a time, then reading it back and doing word-level editing. Then he proceeded to the next sentence, repeating the process with little regard for the

informational or stylistic needs of his audience, save at one point when he remarked, "I hope I'm not using too big words." He later observed, "I have an overly critical person in my head who pounces on every sentence once it's written. I almost always end up changing a sentence after I've written it."

Mark did complete a draft. Listening to his protocol without reading his analysis, a researcher might easily conclude that he was "topic bound," that is, that he could not decenter from his perception of the task to consider his audience or his purpose. What was in fact the case was that Mark's response to being taped — to get done fast and not pause — affected his composing processes. Although he observed that even under ordinary circumstances he used a single draft, write-and-edit strategy which was time consuming and ineffective, he might have drawn upon alternative strategies had he been composing under other conditions.

Like Clark, John was also a planner. In fact, he was not concerned with completing a draft, but rather with the pre-drafting strategies of brainstorming, listing, notation, and satisficing. He chose to "jot down ideas as they come." John also thought about his audience and made a number of inferences about his readers which led him to develop a plan: "I'm going to start with women's roles in the past, and then I'm going to go into women's jobs today and how they got where they are now by sufferage." As he continued to write, John generated new sub-goals for his plan: "I'd like to get in some specific points about some roles they had . . . say what was wrong with some of their jobs."

John's protocol shows him applying writing strategies that he had learned in class. As he reported in his self-analysis, "By consciously using these strategies, I was able to overcome the problems I had writing on a subject I knew little about."

In Matt's case we can see the role that the writer's representation of the writing problem plays in his decision to use particular strategies. Matt noted in his analysis that he was writing under pressure with little or no time to prepare or give thought to "what I wanted to say." He immediately seized the first plan that came to mind: "I'll imply, that is, tell the kids that T.V. commercials are not an accurate portrayal of women's roles . . . then I'll explain to them why they portray the roles falsely." He observes in his protocol that he is

making a lot of word level editing changes rather than revising, and concludes that he is using the "one perfect draft approach." Matt made a number of stylistic changes as he thought about whether his choice of words was over his readers' heads. "I wonder if *nor* is too much for them?" "I think where I've got man and woman, I'll put mother and father instead. That's more basic." He later wrote in his analysis that he was surprised at the number of times he referred to his readers' reaction to his style in his protocol. "I rarely give any conscious thought to my audience . . . I guess I do a number of things that I've never been aware of."

Unlike Matt, Maria spent several minutes before she began to write, thinking aloud and making some brief notes about "what I want to say . . . my topic and the radius it covers." Then she began to plan an article that would create an interest in her readers:

> I'll get some examples of women's roles in different parts of the country. Then I'd see how . . . look over those ideas, see where those ideas came from because different ideas are going to be derived from . . . that is, show the roles that different people know. Then I'll organize these possibilities and discuss them.

Maria began by listing different examples: "O.K. First are kids who have mothers at home." However, after a minute she broke off. Realizing that her plan was too ambitious for the amount of time she had, she seized on a more simplified plan: "Wait a minute. I'm doing this all wrong. I'm going to start over and write it so kids are going to read it." She began to write a conversational first paragraph, asking her readers a number of questions. "Do you believe what you see on T.V. is actually true for all children? Or is your own mother different from the other mothers you know?"

At this point, recognizing that if she were going to finish she could not dwell on whether her style was appropriate for her audience, Maria satisficed by using her own college level style, acknowledging that she could revise at some future time. She later noted that because she used this strategy, "I could easily think of things to say and the words easily flowed on my paper, even though not written properly. When this happened I just left it as it was realizing that it would have to be changed later." Given the time constraint, Maria's strategies were efficient and effective.

Each of these writers — Clark, Mark, John, Matt, and Maria — used strategies that he or she saw as being appropriate to the writing task, strategies that they frequently used when writing ordinarily, as well as those that they were learning in the course. Like tennis players or chess players, the more strategies they could apply, the more flexibility and choice they had in responding to the task.

Whether the writer completed a draft in the allotted time was not a significant factor in evaluating his or her feelings about having successfully completed the task. For this reason, we must be careful not to assume that composing under a time constraint exactly replicates a writer's processes when composing in a natural setting, or over the period of time the writer ordinarily gives himself or herself to complete and revise a draft. What a thinking-aloud protocol does provide is a window on the writing process — a window through which the observer can watch the writer at work.[6] This technique can be used by teachers and students alike. It is a useful tool for seeing how writers handle the variety of constraints and conditions they confront each time they are asked to compose.

NOTES

[1] Emig, *The Composing Processes of Twelfth Graders* (Urbana, Ill.: National Council of Teachers of English, 1971).

[2] Sondra Perl, *Five Writers Writing: Case Studies of the Composing Processes of Unskilled College Writers,* Diss. New York University, 1978.

[3] See Sharon Pianko, "A Description of the Composing Processes of College Freshman Writers," *Research in the Teaching of English,* 13 (1979), 5-22. Ann Matsuhashi, "Pausing and Planning: The Tempo of Written Discourse Production," *Research in the Teaching of English,* 15 (1981), 113-134.

[4] Linda S. Flower and John R. Hayes, "The Cognition of Discovery: Defining a Rhetorical Problem," *College Composition and Communication,* 31 (February, 1980), 21-32.

[5] "Protocols in the Classroom," 71 (September, 1982), pp. 89-91.

[6] Herbert Lin first suggested the metaphor of the window. See "Approaches to Clinical Research in Cognitive Process Instruction," *Cognitive Process Instruction: Research on Teaching Thinking Skills,* ed. John Clement and Jack Lochhead (Philadelphia: The Franklin Institute Press, 1979), pp. 11-12.