TEACHING TECHNICAL WRITING: RESOURCES AND STRATEGIES

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The last few years have seen a dramatic increase in the number of students enrolling in technical writing courses and in other practical expository writing courses. At the University of Texas at Austin, enrollment in the introductory technical writing course has doubled in the last few years, the result in part of a sizable increase in enrollment in the College of Engineering which requires most of its students to take not only the freshman course in rhetoric and composition but also the three-hour course in technical writing. But the increase in engineering enrollment does not account for the large numbers of non-engineering students who enroll for the course; we have found that as many as half of the students enrolled are from other disciplines: anthropology, social sciences, nursing. Moreover, the increase in enrollment in technical writing has more than been matched by the startling increase in another of our practical writing courses, a sophomore-level course in expository writing. Just a few years ago, we scheduled two sections of this course and had some difficulty in registering enough students. Now we have about 25 sections, of 25 students each, each semester, and approximately that many of technical writing. And we could have more of each course each semester: staffing problems have compelled us to turn students away.

During these last few years we have seen a parallel decrease in the number of students registering for upper-division literature courses, although our upper-division courses in expository writing have grown considerably in number and enrollment. This state of affairs -- and I have no reason to believe it is peculiar to the University of Texas at Austin -- has some rather obvious implications for departments of English: they must either identify and employ trained teachers of technical writing and expository writing - a difficult task since there are so few colleges and universities with professional training in this field - or they must find means of preparing teachers whose primary expertise is in literature to teach these practical courses. I take it for granted that a sizable number of teachers who have been trained in literature will be willing to add skill in teaching technical and expository writing to their professional qualifications -- for self preservation, if for no other reason.

Do resources exist that will permit the literature-trained teacher to prepare to teach technical writing, short of going to one of the few schools offering professional training? Yes, and it is my purpose in this article to discuss some of them. What I shall have to say makes no pretense of completeness, but I believe I can offer some suggestions that will enable the interested teacher to make a very good start toward becoming professionally prepared. The suggestions fall into the categories of self-help, primarily through reading; attendance at professional society meetings devoted to technical writing; attendance at seminars, symposia, and institutes devoted to the teaching of technical writing; internships; and, if possible, the taking of graduate course work in teaching technical writing.

Before setting down specifics, let me point out that the teacher trained primarily in literature brings a great deal from that training that will be of benefit in teaching technical writing. Quite apart from reading literary works themselves, an experience which surely has led to sensitivity to language -- and not merely emotive language -- that teacher has also had to do a great deal of reading -- and writing in all probability -- in functional prose, prose the aim of which is to convey information. As Reginald O. Kapp wrote in The Presentation of Technical Information, "The purpose of Functional English can be stated in a few words. It is always to convey new information. The information may consist of all kinds of facts, of inferences, arguments, ideas, lines of reasoning. Their essential feature is that they are new to the person addressed" (New York: Macmillan 1948). This definition could easily fit many

critical articles about literature, or many of the interpretive pieces in professional journals. When the critic writes about imaginative literature, he writes functionally -- or at least I like to believe that he does. So I would argue that the typical English teacher's training in literature is not a waste when he or she comes to teach functional writing; far from it, it may indeed give perspective and insight into the subtleties and nuances of meaning that will stand the teacher in very good stead when attempting to help students learn to convey information skillfully and effectively. One of the main difficulties, I imagine, will be the lack of comfort and ease in dealing with the subject matter.

Self help

Probably the best, and most obvious, way to become acquainted with technical writing is to read: textbooks, collections of articles about teaching technical writing, and actual examples of various kinds of technical writing -- reports, manuals, brochures, proposals.

Since the number of textbooks on technical writing is so large (a recent text lists more than 75 in its highly selective bibliography), I will list just a few that I believe will give a good introduction to the subject, as well as some insight into ways in which a course may be structured:

Gould, Jay R. and Joseph H. Ulman. Technical Reporting. 3rd ed. New York: Holt, Rinehart and Winston. 1972. This book is very good on the basics.

Houp, Kenneth W. and Thomas E. Pearsall. Reporting Technical Information. 3rd. ed. Beverly Hills: Gencoe Press. 1977. This is a widely used text.

Jordan, Stello, Joseph M. Kleinman, and II. Lee Shimberg, eds. Handbook of Technical Writing Practices, 2 vols. New York: Wiley-Interscience. 1971. This two-volume work, some 1374 pages, is scarcely suitable as a textbook for the conventional course in technical writing but it is an invaluable storehouse of information for the teacher, covering almost every conceivable aspect of technical writing, especially with reference to the forms and practices in government and industry.

Mathes, J.C. and Dwight W. Stevenson. Designing Technical Reports: Writing for Audiences in Organizations. Indianapolis: Bobbs-Merrill, 1976. A highly respected text.

Mills, Gordon and John A. Walter. Technical Writing. 3rd ed. New York: Holt Rinehart and Winston, 1978. I have thrown modesty to the winds in listing a book I co-authored. I suppose, but it is also a widely used text and one held in high esteem by many teachers of technical writing. It employs a rhetorical approach to the subject.

Pearsall, Thomas E. and Donald H. Cunningham. How to Write for the World of Work. New York: Holt, Rinehart and Winston, 1977. This book may be found particularly useful in the two-year or community college.

In addition to texts, there also exist some collections of articles on the teaching of technical writing:

Cunningham, Donald H. and Herman A. Estrin, ed. The Teaching of Technical Writing. Urbana, Ill.: National Council of Teachers of English, 1975. This anthology contains not only articles which attempt to define technical writing and what teaching the subject entails but also how teachers teach the course and how they evaluate their students' products.

Pearsall, Thomas E. Teaching Technical Writing: Methods for College English Teachers. Washington. D.C.: Society for Technical Communication, 1975. This pamphlet (25 pages) gives useful information about what should be covered in a technical writing course, and its bibliography lists some eight bibliographies of use to the prospective teacher.

Sawyer, Thomas M. Technical and Professional Communication. Ann Arbor: Professional Communication Press, Inc. 1977. This useful book contains articles on teaching in the two-year

college, the four-year college, and the professional school. One especially useful piece is Carolyn M. Blackman's "A Bibliography of Resources for Beginning Teachers of Technical Writing." Ten pages are devoted to listing publications on every aspect of teaching technical writing.

The following books do not deal expressly with teaching technical writing, but are most useful:

Gould, Jay R. Directions in Technical Writing and Communication. Farmingdale, N.Y. Baywood Publishing Company, Inc. 1978.

Gould, Jay R. and Wayne A. Losano. Opportunities in Technical Writing Today. Louisville: Vocational Guidance Manuals, Inc. 1975

Sparrow, W. Keats and Donald H. Cunningham. The Practical Craft: Readings for Business and Technical Writers. Boston: Houghton Mifflin Company. 1978.

Balachandran, Sarojini. Technical Writing: A Bibliography. Urbana-Champaign: American Business Communication Association and the Society for Technical Communication. 1977. This annotated bibliography is 147 pages.

Finally, the Society for Technical Communication, in its anthology series, publishes collections of articles on such subjects as teaching technical writing (in-house programs), writing technical articles, proposal writing, and technical editing. Complete information about these publications may be obtained by writing to the Society at 815 Fifteenth Street, N.W., Washington, D.C., 20005. The Association of Teachers of Technical Writing has also published some useful anthologies: Teaching A Technical Writing Course (ed. Merrill Whitburn) and Teaching Technical Writing: Cassette Grading (ed. Charles R. Stratton). In process are two more: Training of Technical Writing Teachers (ed. John Harris) and Teaching Audience Analysis (ed. Paul Anderson). Additional anthologies are projected. More can be learned by writing to Donald H. Cunningham (Editor, The Technical Writing Teacher), UPO 685, Morehead State University, Morehead, Kentucky, 40351.

Although reading all or part of the items mentioned above can go a long way toward preparation to teach technical writing, there are additional possibilities. One is to audit a technical writing course taught by an experienced teacher. Some schools (Brigham Young, for instance) require prospective teachers to attend a course for a semester before undertaking a section of their own -- regardless of rank. It's a good way to learn. Another is to visit a technical writing/editing department in a local company. Having an opportunity to observe at first hand just what goes on in a technical publications department is an invaluable training aid. A final way is to write to companies and ask for examples of the kinds of writing done by their technical people. Professor Mills and I found it immensely helpful to study literally thousands of documents before we undertook to write our book on technical writing.

Professional societies and technical writing

Yet another way of enhancing knowledge of technical writing and how to teach is through joining professional societies devoted to technical writing, attending and participating in the annual meetings, and reading the society publications. I will list these in the order of their importance to the teacher of technical writing:

The Association of Teachers of Technical Writing (ATTW). Established seven years ago, the Association now has approximately 800 members. Membership dues include subscription to the thrice-yearly publication, The Technical Writing Teacher, a journal devoted entirely to the teaching of technical writing. Most of the articles in The Technical Writing Teacher are specifically aimed at providing the reader with new ideas and methods for teaching a successful course. In addition as noted above, the Association has begun publication of a series of anthologies on various as-

pects of the teaching of technical writing. So far ATTW has not held an annual meeting on its own but has met concurrently with the Conference on College Composition and Communication (CCCC). Information about membership may be had by writing to Nell Ann Pickett, Secretary-Treasurer, Hinds Junior College, Raymond, Mississippi, 39154. Currently I am President of this Association.

Conference on College Composition and Communication (CCCC). For some years now, this organization has programmed a number of papers on technical writing at its annual meetings. It is a satellite organization of the National Council of Teachers of English (NCTE). Articles on the teaching of technical writing appear from time to time in its quarterly, College Composition and Communication, as well as in NCTE's College English.

Society for Technical Communication (STC). This society was established, in the mid 1950's primarily for persons professionally engaged in technical writing, editing, illustrating, and production; a good many of its members, however, are teachers and its quarterly publication, Technical Communication, often carries articles of interest to the teacher of technical writing. Moreover, its annual conference always devotes a considerable part of its program to education. Information about membership may be had by writing to Curtis T. Youngblood, Executive Director, 815 Fifteenth St., N.W., Washington, D.C. 20005.

American Business Communication Association (ABCA). This society's publication, Journal of Business Communication, often prints articles on the teaching of technical writing. Information about membership and publications may be had by writing to ABCA, 317-B David Kinley Hall, University of Illinois, Urbana, Il 61801

Modern Language Association (MLA). For the last several years, MLA has devoted a portion of its annual program to technical writing. Speakers have usually been prominent in the field. Many of the papers have been published in the Journal of Technical Writing and Communication, edited by Jay R. Gould and published by Baywood Publishing Company, 43 Central Drive, Farmingdale, NY 11735.

Additional information about societies, organizations and meetings devoted, at least in part, to technical writing may be found in Carolyn Blackman's article in Thomas Sawyer's Technical and Professional Communication cited earlier.

Institutes, seminars, and workshops

Many colleges, universities, and professional societies now offer institutes and workshops on the teaching of technical writing, which provide helpful, intensive training. Some of the better known programs include:

Rensselaer Polytechnic Institute's Technical Writing Institute for Teachers. Directed by David L. Carson, this five-day institute employs a staff of prominent teachers and gives training in all aspects of technical writing, including sessions on such topics as the history of scientific and technical writing, applications of rhetorical theory to technical writing, audience analysis, graphic arts, writing in industry. Information may be had by writing to the Office of Continuing Studies, Rensselaer Polytechnic Institute, Troy NW 12181.

The University of Michigan's Teaching Technical and Professional Communication Conference. Headed by Professors J.C. Mathes and Dwight W. Stevenson, this five-day program is one of the best known. Information may be obtained by writing to the Conference Coordinator, Department of Humanities, College of Engineering. The University of Michigan, Ann Arbor, Michigan 48109

NCTE Pre-Convention Three-Day Workshops. For several years now, NCTE has sponsored on occasion three-day, intensive training in the teaching of technical writing, making use of the services of well known teachers of the subject as its staff.

Still other workshops and institutes will be found announced in the pages of The Technical Writing Teacher and the Journal of Technical Writing and Communication. Also worth mentioning is the fact that many institutions (and professional societies) offer workshops on technical writing, usually through continuing education. Designed primarily for practicing engineers and scientists, such workshops may nevertheless prove quite useful to the teacher of technical writing.

Internship and graduate courses

Thomas E. Pearsall and Frances J. Sullivan in their STC publication entitled Academic Programs in Technical Communication (1976) name six institutions that offer either an M.A. or M.S. in technical communication: Boston University, California State University at Fullerton, Illinois Institute of Technology, University of Minnesota, Oregon State University and Rensselaer Polytechnic Institute. All but one of these schools offer a work-study program or internship in conjunction with the academic programs.

Still other institutions offer some graduate work in technical writing. At the University of Texas at Austin, we give one graduate course in the teaching of communication theory. We are in the process of instituting an internship program in connection with the graduate course in technical writing. The internship would require the student to arrange for employment in the technical publications department of a cooperating company; the student would then devote a semester or summer to full-time work as a technical writer/editor, at the same time selecting a faculty member as his supervisor and registering for the graduate course in teaching technical writing. During the internship, the student would submit periodic interim reports and a final report to his faculty supervisor.

Strategies for teaching technical writing

So far I have emphasized resources that will lead the beginning teacher to individual strategies for teaching a course in technical writing. I doubt very much if any experienced teacher of technical writing believes he or she has arrived at final, definite answers to the question of how best to teach. Most, however long they have been at it, are eager to share ideas, plans, projects, and models of assignments with others who share interest in the subject. To that end, Elizabeth Harris in our department has put together a resource book, copies of which are made readily available for all who teach our technical writing course but especially for those who are new at it. An outgrowth of a semester-long symposium on technical writing, the resource book contains a wealth of materials -- lesson plans, reprints of articles on a philosophy or theory for the course, and suggested assignments teachers have contributed on a wide variety of topics: style, organization, rhetorical modes, various report types, letters, and the research report. Not only does such a resource book provide models to follow but it also helps to generate new ideas and plans.

As I wrote in "Confessions of a Teacher of Technical Writing," which appeared in the first issue of The Technical Writing Teacher (Fall 1973), pp.3-9, and is anthologized in Cunningham and Estrin's The Teaching of Technical Writing, "a basic course in technical writing should aim to guide students toward the acquisition of skill in practical communication; specifically . . . facility in writing business letters, various kinds of basic types of exposition peculiarly pertinent to engineering and scientific reports, some common kinds of reports, and a long library research report. More generally, and accompanying the above, I try to familiarize the students with the requirements of acceptable style in technical writing, with problems or organization, with problems of writing introductions, conclusions, and transitions, with standards of

acceptable format, with some elementary graphic aids, and with the skills involved in finding and using published information. If time permits, I also try to give students some experience in making oral reports (usually on some phase of the research they are doing for a long paper)."

In conclusion, I believe that the use of the resources I have mentioned -- and the strategies they will lead to -- will go a long way, perhaps the entire way toward transforming the teacher of literature into a competent teacher of technical writing.

This article first appeared in English in Texas, Summer 1980, and is reprinted with permission of the editor.