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ABSTRACT

The Technical Communication Program which began in 1971 at the University of Minnesota in the Department of Rhetoric involves an applied approach to communication. Differentiating this undergraduate program from others in communication is the fact that its approach to communication skills training involves both writing and speaking, as well as graphics. Moreover, communication must be coupled with another applied field where the graduate may acquire basic skills for job entry into business, industry, or public service organizations. The application of competencies in communication is therefore seen within the context of scientific and technical fields. To accomplish this practical orientation, a cooperative education or internship program has been developed. As a result of this program, the faculty has become more involved in ongoing communication programs outside the university, and, subsequently, the department's approach to communication teaching and research has become more vital, practical, and problem oriented, with an emphasis on "applied communication." (LL)

CAREER DEVELOPMENT FOR TECHNICAL COMMUNICATION MAJORS AT THE UNIVERSITY OF MINNESOTA, ST. PAUL

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Department of Rhetoric

Paper presented at the Speech Communication Association Convention in San Francisco, California, December, 1976.

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The Technical Communication Program at the University of Minnesota in the Department of Rhetoric began in 1971. From the beginning, the principal direction of the program was toward employment of graduates in business, industry, or public service organizations.

The program was initiated upon the idea that many business, industrial, and public service agencies had a need for technical writers. There were few collegial programs in the country that prepared students for entry into this profession, and there were no programs at the University of Minnesota in the field.

With the cooperation of the Institute of Agriculture, Forestry, and Home Economics (the academic location of the Department of Rhetoric since 1908), and sister departments in the College of Liberal Arts (namely English, Speech Communication, and Journalism); the Department of Rhetoric developed the proposal to establish the new academic program. The proposal was approved and students were admitted in the Fall of 1971.

In 1972, the program was re-examined by the faculty with the help of professionals in the fields of technical communication, public relations, and organizational management. The program was broadened to

include the following areas:

Technical Communication
- Writing and Editing
- A/V and Media
- Graphic Communication
- Organizational, Managerial, and Training
- Communication Theory and Research
- Oral Communication

Technical Field (applied) Elective to be chosen from:
natural sciences
horticulture
food science and nutrition
animal science
agronomy
forest products and marketing
computer science
ecology and environmental studies
health sciences or public health
engineering
soil science
statistics
design and textiles
geology
health sciences

Basically, this program involves an applied approach to communication which includes both the skills of writing and speaking, graphics, and communication theory and research. In addition, students are required to study in an applied field outside of communication where they may acquire basic skills for job entry.

Two elements seem to differentiate this undergraduate program from others in communication:

First, the approach to communication skill training involves both writing and speaking, as well as graphics.

Secondly, communication must be coupled with another applied field wherein the graduate may seek both professional identity and employment upon graduation.

Students majoring in Technical Communication cannot be certified to teach.

Graduates from the program have accepted positions in the following areas: technical writer, environmental impact assessment writer, training coordinator, information specialist in a government R & D laboratory, cooperative extension communication assistant, personnel assistant, interviewer for a polling organization, market researcher, technical editor, and abstractor for a technical search service.

As I have pointed out in previous papers("Integrating Career Competencies into the Communication Curriculum," CSSA, April 12, 1975, and "Types of Positions Available in Business and Government for the Graduate in Communication," SCA, December 29, 1975), the approach that we have taken to both advising and teaching undergraduates has been that of communication "facilitator," "gatekeeper," and "linker." The application of competencies in communication is seen within the context of scientific and/or technical fields and our teaching and research has been focused upon problem identification, analysis, and case study in applied areas.

To accomplish this practical orientation with students, we have developed both a technical communication internship and have helped the college to develop a cooperative education program called "The Professional Experience Program." Both are taken for credit off-campus in business, industrial, or state agency locations.

The response from both students and faculty has been good. Moreover, with our location in the major metropolitan area of the Twin Cities, we have had excellent cooperation from professionals in the business and government areas.

The internship program is conducted essentially the same as some of the other programs described elsewhere.

The important product of this program has been the involvement of faculty in the on-going communication programs outside of the university. Faculty have been asked (because of their need to advise students) to participate with certain business and industrial organizations as consultants, many have joined professional communication groups such as the Society for Technical Communication, the International Association of Business Communicators, Bureau of Mediation Services, State of Minnesota, local industrial editors groups, management groups, etc.

Through increased faculty participation in off-campus activities, there has been a subtle change in the nature of course offerings as well as learning exercises in departmental courses. All in all, the department's approach to communication teaching and research has become more vital, practical, and problem-oriented. This is what we have called "applied" communication.

Members of our faculty have been instrumental in forming a new group of communication professors called "The Council for Programs in Technical and Scientific Communication." (A copy of the proceedings of this new association in convention are available from the Department of Rhetoric,

University of Minnesota, St. Paul, MN 55108).

More importantly, faculty involved in the off-campus work in the field have a much higher credibility with students who are looking for career guidance along with academic counseling.

Because (or as an indirect result), the nature of the courses offered within the program have changed drastically over the past five years. You cannot tell much from course titles alone, but the following new courses may give you an inkling of how our focus has been evolving:

1. Scientific and Technical Presentations
2. Scientific and Technical Graphics
3. Direction of Training in Business and Industry
4. Research in Communication Strategies
5. Communication in Technological and Environmental Assessment
6. Dissemination and Utilization of Information
7. Transfer of Technology

In a correlative area we have developed, sponsored, and directed special public seminars in the following areas:

1. Communication in Environmental Assessment
2. Frontiers in Biomedical and Bioscientific Communication
3. Environmental Mediation
4. Transfer of Scientific and Technical Information

Students and/or faculty have been involved in consulting, research or direct instruction for the following firms and agencies:

1. Minnesota Agricultural Extension Service
2. Bechtel Corporation
3. Pillsbury Company
4. United States Department of Agriculture
5. Control Data Corporation

6. USDA Forest Service
7. Environmental Balance Association of Minnesota
8. Minneapolis Housing Authority
9. State of Minnesota Department of Transportation
10. United States Department of Health, Education, and Welfare.

Both students and faculty have attended conferences and conventions to present their research at meetings sponsored by the following groups:

1. American Association for the Advancement of Science
2. National Science Foundation
3. Society of Technical Communication
4. Aspen Conference on Bioscientific and Biomedical Communication
5. Forest Products Research Association
6. United States Department of Transportation

The effects of the applied orientation of our program have been (and will continue to be) far-reaching and somewhat revolutionary. Our teaching, research, and service functions have moved into a different orientation with unique emphases and unlimited potential for growth and application. In fact, the predominant paradigm of our work has evolved to a stage where we view communication as a faciliatory function at every level of study.

The emphasis has been placed upon the trained professional as a researcher, linker, or gatekeeper within the larger context of an organization where the unique aspects of the information (or messages) "drive" the system. Research is therefore conducted almost always in the field where the effects of time, subject, organization, and sub-systems are uniquely and dynamically working to produce phenomena that are less likely to be generalized across populations.

We have found that such variables as information-seeking ability, communication apprehension, communicator credibility, and information avoidance depend upon the specific field of inquiry, the ego-involvement of the participants (in this case scientists) and the perceived utility of information at a given time with carefully-defined audiences.

To be able to work effectively in this area of applied communication, we have discovered the necessity of retraining ourselves and requiring that our students be broadly trained in the liberal arts and communication as well as in specific technical fields such as those mentioned above.

Applied communication depends upon an understanding of, an appreciation for, and competency in (not only) speech, but such fields as:

- writing and editing
- audio and visual media
- graphics
- organizational, managerial, and training systems
- communication theory and research

I am particularly pleased that SCA has formed a new section in the area of applied communication. I think that a great deal of the study and research in new career opportunities that has emerged in our association will result in innovative theory, research, and application in course development, programs of study, and career opportunities for our students.

At Minnesota, we have learned that applied communication has a very definite future in the marketplace as well as "the practical affairs of man."

And after all, isn't that where the rhetoricians wanted us to be all along?