***An Introduction to* Technical Communication Today**

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Many instructors consider technical communication their favorite course to teach. Courses in technical communication are intellectually challenging, and the students are highly motivated to learn. Moreover, as our society continues moving further into the Information Age, the importance of technical communication is increasing. So, the relevancy of these courses is already significant and growing only more so.

In this Instructor’s Manual for *Technical Communication Today*, our aim is to provide you with a pedagogical foundation for teaching a basic course in technical communication, usually at the college sophomore, junior, or senior level. This Instructor’s Manual is divided into three areas:

**Part I: Pedagogical Rationale for the Course.** Professor Johnson-Sheehan will discuss the pedagogical principles on which *Technical Communication Today* was developed. He will define technical communication, discuss typical students in the course, and describe your role as the instructor.

**Part II: Model Syllabi, Policies, and Assignments**. These models will give you classroom- tested materials that you can adjust to your own needs. You will learn strategies for writing an effective assignment.

**Part III: Chapter-by-Chapter Teaching Strategies.** Teaching strategies are provided for each chapter, as well as discussions of the exercises and projects at the chapters’ ends. We have also included quizzes you can use to improve student retention.

If you are teaching technical communication for the first time, the aim of this Instructor’s

Manual is to give you a basic understanding of the course, while offering you some strategies for success. If you have taught the course before, this manual should highlight the features and strengths of *Technical Communication Today*, so you can better incorporate this text into your pedagogical approach.

**Pedagogical Rationale for the Course**

Today, it is still fashionable to assign yourself to a pedagogical camp. Some people want to be called *social constructionists.* Others want to be called *cognitivists* or *social cognitivists*. Some see themselves as following an “ideological” approach flavored with Marxism. To be honest, I have always resisted being a card-carrying member of any theoretical camp, preferring to keep my options open. However, if someone were to corner me, I would call myself a *pragmatist* in the American tradition of C.S. Pierce, William James, John Dewey, and Donald Davidson. Pragmatism puts an emphasis on learning through doing. Meanwhile, pragmatism assumes that issues of truth and knowledge are always evolving to suit the practical needs of our society.

In the spirit of pragmatism, you will find *Technical Communication Today* to be a highly practical book that teaches the process of communicating in today’s technical workplace. *Technical Communication Today* is built on three premises:

* Networked computers are the central nervous system of the scientific and technical workplace; therefore, any successful writing process will have networked computers (e.g. laptops, mobile phones, tablets, cloud storage, social networking, etc.) at its core.
* Innovation and entrepreneurship are essential to survival and success in today’s scientific and technical workplace; therefore students need to learn how to think like innovators and entrepreneurs whether they want to work for themselves or enterprise companies.
* The scientific and technical workplace is now inherently global and transcultural; therefore students need to learn how to communicate across cultures and work in diverse teams of people.

Consequently—here is the pragmatist in me—students need to learn technical communication by engaging in the activities of the technical workplace. By centralizing the networked computer, innovation, and transculturalism in the writing process, this book will help you prepare students for careers and lives in the Information Age. My aim is to show them how to survive in a complex scientific and technical workplace that is evolving quickly.

**Defining Technical Communication**

To begin, let us first unpack the definition of technical communication offered in Chapter 1 of

*Technical Communication Today*.

*Technical communication is a process of managing technical information in ways that allow people to take action.*

This definition is different from the typical ones you will find in other textbooks on this subject. In the past, technical communication has often stressed the “translation” or “transfer” of technical ideas. Quite differently, this definition stresses that the communication process itself is an important form of inquiry. Information is something to be creatively explored and managed, not translated or transferred.

The key words in this definition of technical communication offer some insights into how the course should be taught.

*Process*—Students need to learn that communication is a recursive activity. In other words, they should understand that preparing a document or presentation is not simply a matter of translating the ideas in their heads into words on paper. Rather, they need to see the process itself as a recursive activity of interpretation, discovery, reflection, invention, and expression. While communicating, the student will discover that the activities of researching, organizing ideas, drafting, developing a style, designing, editing, and delivering information are not simply means to an end. Rather, they are important steps in a process of inquiry that helps a person decide what he or she believes and what actions should be taken.

*Managing Technical Information*—In this electronic age, the challenge is to properly manage all the information available. Students need to learn how to sort through the glut of information—some of it contradictory and some of it misleading—to shape their ideas and arguments. Computers have heightened the need for “information management” (IM) approaches to workplace activities. Students should see that information is something that flows. Their role as communicators is to manage that flow.

*People*—More than ever, technical communication needs to put people at the center of concern. At one time, technical communication was more about machines than people. Of course, people were the users of these machines, but the emphasis of technical

communication was primarily on the workings of machines. Today, technical communication is much more about people working and living in a society permeated with technology. Increasingly, issues of ethics, politics, law, and transculturalism need to be addressed in the technical communication classroom.

*Take Action*—Ultimately, taking action with information is the aim of technical communication. Computers allow us to store vast amounts of information, so we are less concerned about retaining information in our own gray matter. Rather, we need to teach students how to use information to do things—take action. Meanwhile, the emphasis in technical documents and presentations has shifted toward giving people only what they need to achieve their goals. Students need to learn how to present information in ways that allow their readers to take action.

More recently, innovation and entrepreneurship have become dominant features of the scientific and technical workplace. As manufacturing has been automated or moved off shore, the North American workplace is now heavily dependent on innovation and entrepreneurship to compete globally. Students can no longer assume that others will come up with new products, services, and methods. They will need to do the innovation themselves!

Fortunately, in my experience, students in science, technology, engineering, and math (STEM) are very eager to be innovators and entrepreneurs. Indeed, one of the most exciting things about teaching technical communication at the college level is the ability to motivate students by tapping into their creativity. They get very excited when I tell them, “We have a problem to solve with a new product or service, and I have no idea what the end result looks like. That’s what I’m asking you to do.” Then, hand over the project to them. They love it.

**Getting to Know Your Students**

New teachers of technical communication often remark to me that they are pleasantly surprised by the intelligence and motivation of the students in the course. You will likely find that students who elect to take technical communication are more studious, mature, and pragmatic than the first-year students you taught in composition. Most technical communication students are working toward careers in technical fields. They want to be engineers, scientists, medical personnel, social workers, archeologists, psychologists, and architects, among other careers. They are typically more focused on their studies than first-year students, and they have a clearer sense about how technical communication will fit into their lives.

In my long experience teaching the course, I have noticed the following two important qualities in my students:

• *They learn best by doing*. Lecture and class discussion are necessary to a point; however, these practical-minded students typically learn best by working on a specific task or project. Therefore, I like to give them plenty of time to work in class on their projects, especially in groups.

• *They are self-motivated*. When I began teaching technical communication, I was pleasantly surprised to see how eager my students were toward doing the work. They were especially motivated by projects that allowed them to apply things they learned in their majors.

A well-crafted course in technical communication takes advantage of these two qualities. The course needs to be oriented around activity, because these students are pragmatic and practical.

Equally important, though, is to remember that they are creative and innovative. STEM students are often mistakenly assumed to be less creative than students in the arts or humanities. Nothing could be further from the truth. They are eager to be innovative. They want to explore new options and concepts. I strongly recommend setting up open-ended experiences that allow them to express their natural creativity through innovation and entrepreneurship.

**Developing Your Role as the Instructor**

The good news is that your students’ motivation and maturity will allow you to adopt a less central role in the classroom. I have always been skeptical about the idea of a completely student-centered classroom. We, as instructors, have an important role to play—and that role isn’t simply showing up each day. Rather, you should see yourself as a *mentor* to these eager students. They are *apprentices* who are here to learn from you. Your students are already being apprenticed as future scientists, engineers, and technicians in their majors.

My best advice, therefore, is to view yourself as a mentor who is helping these students gain the communication skills and formal abilities they need to succeed in the technical workplace. *Technical Communication Today* will help you foster this mentor-apprentice relationship with your students, because the book is built on *process* as a foundational concept. You will see that every chapter leads students step by step through the process of communication, just as a mentor would introduce an apprentice to the activities of his or her career.

One note: Some instructors new to this course are concerned that they are not “scientific” or “technical” enough, because they have never worked in a technical workplace or even taken courses in technical subjects. Of course, a background in technical subjects is helpful to teach this course, but it is not necessary. Your role, after all, is not to be an engineer, scientist, psychologist, architect, etc. Your role is to be an expert in communication. Let your students be the experts in their own fields. After all, none of us would ever be able to master all the technical knowledge of these students’ fields. Usually, after a semester of teaching technical communication, most new teachers’ concerns about not being technical enough are gone.

**Fostering Your Students’ Writing Processes**

When I began teaching writing in the late 1980s, the concept of a “process theory” was still rather strong. Many of the principles of process theory had been developed in the 1970s and enhanced in the 1980s. So, the idea that students should be taught to develop a writing process was rather entrenched and rarely questioned.

Today, in academic journals, there is talk about “post-process” theories of teaching writing, though I find myself questioning what it means to be “post-” (i.e., after-) process. Are we abandoning process theory? Or, are we beyond it in some way? As reflected in *Technical Communication Today*, I’m still a strong believer in process theory; however, I also recognize that the process theory developed in the 1970s is evermore outmoded in this computer-centered

age. After all, the 1970s notion of a writing process was developed around the pen and typewriter

as communication technologies. So, the stages of writing from that era (pre-writing, drafting, revision, and proofreading) were based on pen and typewriter as the media of communication.

The pedagogical approach you will find in this book is not post-process but rather “new process.” It recognizes that the media of communication have changed due to the advent of the computer; and, as a result, the process of communicating must change to suit these new media. Nevertheless, I believe students still learn best by paying attention to the process of communication. In this book, you will see that the process theory familiar to all of us has been modified to reflect how people invent, compose, revise, and design on their computers.

**Addressing Ethics, Transculturalism, and Mobile Culture**

Finally, before concluding this already-too-long section of the Instructor’s Manual, I will highlight three important features of the textbook: ethics, transculturalism, and visual-spatial thinking.

At every turn, you should try regularly to work issues of ethics and transculturalism into your lectures, discussions, classroom activities, and projects. These issues have always been important in technical communication, but networked computers have made them especially consequential. The Information Age has brought about many new ethical dilemmas and challenges that students

need to learn how to address and solve. Meanwhile, your students will be regularly communicating with people who are from different cultures. You need to prepare them for these new workplace realities.

*Technical Communication Today* should offer you many opportunities to incorporate these issues. Discussions of ethics and transculturalism are regular features in all chapters.

Meanwhile, the case studies at the end of each chapter—most of them involving ethical,