Abstract

Describes the Service Manual Project developed by the author to teach his Technical Writing II class to interact with professional literature in a more sophisticated and useful manner. Once technical students begin looking at printed matter they work with day in and day out, they begin analyzing it and seeing it in a different light. They realize that the manuals they are dealing with are written by real people who make decisions about how to place the material on the page - how to connect it to other material - and how to present it to the reader. The project also requires students to apply technical writing basics learned in Technical Writing I and to make critical editorial decisions. Describes the technical writing principles involved: topic headings, "white space", organization, lists, conciseness vs. wordiness, and jargon vs. non-technical terms. Discusses changes created by students such as: reorganizing information in text, applying "white space" to crowded text, rewriting existing information, eliminating wordiness, Spanish translation, and rewriting headings and creating subheadings. Finds that students appreciate someone "outside their area" respecting their vocation, their career focus, and the information that connected them with their training. (VWC)
Editing Professional Literature:
Getting Technical Students Involved in Writing

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Overview

- Purpose
- Technical Writing Basics
- Changes Created by Students
- Results of the Project
- Student Comments

Purpose
- Encourage students to interact with professional literature in the writing classroom
- Apply technical writing basics to workplace information
- Learn to make responsible, editorial decisions

Technical Writing Basics
- Topic headings
- Use of “white space”
- Organization
- Lists
- Conciseness vs. Wordiness
- Jargon vs. Non-technical terms

Changes created by students
- Reorganized information in text
- Applied “white space” to crowded text
- Rewrote existing information, eliminating wordiness
- Rewrote headings and created subheadings

Additional changes created by students
- Moved visuals closer to associated text
- Reorganized and reformatted tables of contents
- Reorganized and reformatted troubleshooting guide
- Created a “fold-out” instead of flipping pages back and forth
- Added “shop hints”—alternative methods—to existing procedures
- Spanish translation

Student comments
- “I didn’t realize writing a manual would be this difficult or time-consuming.”
- “This assignment made me realize that writing instructions is not that easy.”
- “These books were obviously written by technical writers and not technicians.”
- “It was hard work.”
Student comments

- "I think my version is easier to read."
- "It wasn't exactly a fun assignment, but I liked it because we got to deal with Caterpillar stuff."
- "I learned one thing—it's easier to be a technician than a technical writer!"

Results of the Project

- Purpose and Audience importance reinforced
- Language issues related to audience are reinforced
- New view of service literature
- Value of technical communicators shown
- Relevancy of writing demonstrated
- Enthusiasm about working with relevant literature
- Students actively involved
INTRODUCTION

One of the most difficult things I do as a writing instructor is to show students how technical writing—or any kind of writing for that matter—can connect to their future as technicians. How many times have you heard students say, “I really don’t need English!” or “that’s outside my area of expertise—I don’t need to know that.”

The ironic part of that statement is that I understand what they’re saying! When I think back to what I learned back in high school and junior college, I don’t remember anyone saying “here’s why you need this” or “you’ll need this later on when you’re working because you may have to know that .625 is the same as 5/8" on blueprints,” or “You’ll need this geometry someday when your foreman tells you to cut a pipe brace that runs 15 feet up the side of an oil drilling rig.”

What I think we as teachers sometimes overlook is the relevance of what we’re doing. It’s easy sometimes to get caught up in the teaching mode and teach and reteach the same thing over and over without explaining the relevance. We know and understand, as teachers, the importance of what we teach and believe in but our students may not. They need to be shown the connection between what teachers teach and what they are expected to learn. Students need to be connected to their technical training in other facets of their education. We all know that no matter what we do as teachers, we have to draw on a broad base of information—the same is true for students! They need more than just technical training in order to succeed.

The technical students I deal with are typically interning with a specific corporation or dealership. They spend one-half trimester on campus taking technical courses and general education courses—then spend the other half-trimester working for
their sponsor. They're focused on becoming technicians in automotive, diesel, and air conditioning industries. The training they receive is hands-on and relevant to what they do for half a trimester when they're not on campus. These students want relevant training—and I strongly believe that what we provide should be relevant—not just part of a program that's always been there.

When these students come into my class, typically in the second and third trimester, I try to stress the importance of communication on the job—with other technicians, customers/clients, and with supervisors/managers. Many of these students already write detailed service reports which outline the work they've done—but they don't really believe that communicating through writing is all that important. However, the head of OSU-Okmulgee's Caterpillar Advisory Council has pointed out the importance of good writing by saying “if I have an $800 service job in my shop, I'll accept an $800 service report. If I have a $20,000 warranty job, I want a $20,000 service report!”

If we use the term “writing across the curriculum,” I believe that writing across the curriculum should begin in the writing classroom. One of the ways I've discovered to get students actively involved with their writing is by having them work with professional service literature from their own field. I've used what I call “the Service Manual Project” in four different trimesters—both half-trimester classes and full trimester classes. In all cases, it's been an effective teaching tool, allowing me to reinforce some basics of technical writing and helping students to become more critical thinkers.
The project also shows students what technical communicators have to go through to produce workable service documents and professional literature that is effective for a variety of audiences.

**PURPOSE OF THE PROJECT**

The primary purpose of the Service Manual Project in my Technical Writing II class is to encourage students to interact with professional literature in a manner that they're not used to. Generally, students use service manuals, installation manuals, overhaul manuals, operator's manuals, and other written service literature to do their jobs. Rarely are they asked if the literature is effective or not! And, once technical students begin looking at printed matter they work with day in and day out, they begin analyzing it and seeing it in a different light. They realize that the manuals they are dealing with were written by real people who made decisions about how to place the material on the page—how to connect it to other material—and how to present it to the reader.

The project also requires students to APPLY technical writing basics learned in Technical Writing I and to make critical editorial decisions. If Bloom's Taxonomy is applied to the project, students pass through all six levels (knowledge, comprehension, application, analysis, synthesis, evaluation). In addition, the project shows students the value of good writing as well as encouraging them to interact with professional literature in a manner that they're not used to.
TECHNICAL WRITING PRINCIPLES INVOLVED

Since students learn "the basics" in Technical Writing I, they already know what kinds of issues they're dealing with. The basics students apply are:

- Topic headings
- "White space"
- Organization
- Lists
- Conciseness vs. Wordiness
- Jargon vs. Non-technical terms

Therefore, it is not necessary to introduce much new material for the project. Most of what's new consists of manipulating the text in Microsoft Word—setting up columns, creating visuals, and other formatting issues.

CHANGES CREATED BY STUDENTS

Using basic principles of technical writing, students have made significant changes in literature taken from their field of study. The following changes have been made by students in the Technical Writing II class:

- Reorganized information in the text of a manual
- Applied "white space" to crowded text
- Rewrote existing information, eliminating wordiness, rewrote headings and created subheadings
- Moved visuals (graphs, charts, and tables) closer to associated text
- Reorganized and reformatted tables of contents
Reorganized and reformatted troubleshooting guides
- Created a “fold out” instead of flipping pages back and forth
- Added “shop hints”—alternative methods—to existing procedures
- Spanish translation

While there are certainly other changes that have been made, these are representative of all the classes that have completed “the Service Manual Project” since it began.

Although students had varying degrees of success, as with any assignment, the primary change was to make information easier to read and understand for the intended audience.

RESULTS OF THE PROJECT

One of the first things I noticed about this project was that students appreciated someone “outside their area” respecting their vocation, their career focus, and the information that connected them with their training. In some cases—and we’ve all seen this—some teachers look down on technical students as less than intelligent or, somehow, less than more academically-oriented students. When teachers outside the technical areas show real interest in what students are doing—it changes students’ attitudes. That change in attitude by teachers also changes students’ attitudes, generally for the better.

In some cases, I suspect that students enjoy being put in the role of teacher when they have to explain what they consider a basic principle to their writing teacher!

Reversing roles gives students not only a sense of worth, but also a sense of accomplishment and recognition. Revising service literature gives students a different view of what they work with everyday. Many times, they haven’t looked at it critically and haven’t understood what made it difficult or easy to work from; editing that same
literature allows them to demonstrate their product knowledge combined with their writing skills which, suddenly, do have some merit and relevance.

The obvious benefit—and the one I like the best—is that students are actively involved in the writing process. I prefer for them to be enthusiastic about what they're doing and for them to feel like they're making constructive changes in something they have a stake in. In addition, relevancy of writing is demonstrated—because in some cases, students don’t agree on how effective a book is—leading to discussions about how action is interpreted into language.

CONCLUSION

Getting students to connect with the writing process and getting them involved are the two most important benefits of the Service Manual Project. When students see that their writing can make a difference, they are much more enthusiastic about learning something they consider “English” that is “outside” their field of study. In addition, students are more enthusiastic when what they are training for becomes relevant in other areas of their education—they begin to see things as being connected and not just separate hoops to jump through for the sake of getting a degree.
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