No. 3

WAC Notes

Writing Across the Curriculum

Ideas for improving writing and thinking in any course

This newsletter provides a forum for Union faculty to share ideas about integrating writing into their courses to improve student learning. What works for you? Contact Mary Mar at marm@union.edu.

Less Writing = More Learning

We know that students improve their writing through practice and constructive feedback. Both are necessary for student learning, but finding the right balance is not always easy for instructors. Laurie Tyler of the Chemistry Department found this out the hard way. Tyler is determined that her students learn to be good scientific writers. But she found that, despite the time she spent responding to eight lengthy writing assignments, the quality of her students' writing was not improving. The solution she found provides ideas useful for instructors in any discipline.

TOO MUCH WRITING, TOO MUCH FEEDBACK

Eager for her students to learn the appropriate scientific style for reporting data, Tyler used to assign her CHM 260 WAC class eight full lab reports, each 10-18 pages long. The students learned a lot by doing so many lab reports, but Tyler was disappointed to see that they did not improve as writers. A few students sometimes wrote well, but even these students seldom found the time to focus on the writing with such a heavy workload. Tyler diligently marked each lab report with a green or purple pen, only to see that students tended to repeat the same errors on subsequent reports. In retrospect, she believes that too much feedback on each report prevented students from "digesting" it in a way they could apply toward their next writing assignment. All the writing and feedback were not yielding the results she wanted: improved scientific writing.

FROM LAB REPORTS TO MANUSCRIPTS

Tyler changed her approach by altering the writing goal and her means of achieving it. Instead of assigning the students lab reports, she asked them to write manuscripts like those a scientist would write for publication. She also broke down the assignments so that they would focus on only parts of the manuscript for the first half of the course, This lessened the writing load for students as well as her workload in responding to the papers.

At the beginning of the course, she asked students to read several online articles in professional chemistry journals to introduce them to the language, style, and genre of the scientific manuscripts they would be writing. Then, for the first writing assignment, students wrote only two sections of an article: an abstract and introduction. She provided a handout summarizing the purpose of each section and some tips for writing it.

Laurie Tyler

Subsequent assignments added one new section each, ensuring that students had an opportunity to improve their performance on one section that they had previously written and on which they had received specific feedback. The sequence of assignments was as follows:

1. Abstract + Introduction
2. Introduction + Experimental
3. Experimental (procedure) + Results/Discussion
4. Results/Discussion + Conclusion
5. Full manuscript
6. Full manuscript

The number of pages varied according to which sections were assigned, but the first four assignments were shorter than the earlier lab reports, and in the latter part of the course students were given longer to work on the full manuscripts consisting of all sections.

ENGAGING THE WRITERS: ASKING STUDENTS TO DO THE FRAMING

One other assignment strategy deserves mention. Tyler asked students to frame each manuscript in terms of their own interest, a strategy that not only engaged students but ensured that they took the communication of their ideas seriously. Students cared about what they wrote and took responsibility for making it interesting to readers. Tyler made it clear she wanted to see introductions that told her something she didn't know. This was not to be just another academic assignment; they had to find some way to communicate their results by showing readers a context in which the results mattered.

To do this, Tyler made available some of her favorite books on the topic of the course (chemistry of metals, in her case), well written books that dealt with general topics and were not overly technical. Students consulted these books when writing their introductions, looking for a context that was interesting and informative. These self-chosen contexts then framed their presentation of the results. For example, one student was interested in physics, so he tended to look for physical aspects as a context. His focus once was on the instrument used in the lab.

Students made the manuscripts their own, cared about them, and took their readers and their writing task seriously. And Tyler had fun reading them!

THE RESULTS?

You can no doubt guess. Tyler was pleased with the results, both in terms of her students' learning and the improvement of their scientific writing. They wrote much better than in her earlier version of the course. They cared about the quality of their writing, and she could see improvement on specific areas of weakness from paper to paper.

What accounts for the improvement?

1. **Sequenced writing assignments**: Students could work toward improvement on smaller, more manageable assignments.
2. **Focused feedback**: Students always heard what they were doing well and were given a few bulleted suggestions to work on for the next assignment.
3. **Professional expectations**: Students knew they were writing in the form professionals actually use. With support, they wrote in a new role: as apprentice professionals.
4. **Framing the assignment**: Even with an assignment that seemed to call for just reporting data, students were asked to make it their own, make the results and the communication of them matter, by providing a context of their choice that drew on the literature. Engaging their interests encouraged them to take charge of their learning and made them care.
5. **An audience that wants to know**: Professor Tyler was still the audience, but she made it clear that she wanted to be addressed as a professional who wanted to learn something new. Drawing upon their own interests, students sought ways to inform her and interest her, which improved their writing.

Adapting just a few of these win-win strategies to any course could lead to the same positive results: more student learning, better writing, and an instructor pleased to see that her teaching makes a difference.

Sept. 2009