## TEACHING WITH WRITING

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## An Interview with Michael Mix

By August Baunach for the WIC program

This is the first in a series of interviews with OSU faculty who've participated in the Writing Intensive Curriculum (WIC) seminars offered through the Center for Writing and Learning. The following interview is with Dr. Michael Mix, Professor of Biology and currently Chair of both the General Science Department and the Biology Department—Mix has been at OSU since 1970. The WIC course that he teaches is GS 333, Environmental Problem Solving.

WIC: You participated in one of the first WIC seminars, back in the Fall of 1991, didn't you? Can you say what prompted you to sign up for the seminar?

Mix: Well, it was sort of an evolution. I became interested in the idea of writing-intensive courses when they were being developed several years ago; a number of speakers came to OSU to talk about writing in the classroom and I attended those talks. After that we went to requiring WIC courses in the core, and then, last year, Lex [Runciman] began to offer the workshops—it was just sort of a natural progression.

The seminar sessions were wonderful—at least for me. Talking with Lex and with the other people who attended, I learned a lot

about teaching-with-writing. Writing skills are very important in environmental science.

WIC: Did anything you learned in those WIC sessions have an impact on the way you teach your writing-intensive course?

Mix: A number of small ideas—effective ways to use writing. I think that it's typical of those of us who have been teaching for a long time to think of term papers when we think of writing. Term papers are, of course, important. But a key idea was to recognize that, in addition to major assignments, much can be gained from very, very brief opportunities to write in class—whether it is to write questions or to summarize at the end of a day.

WIC: Do you use ungraded or minimally-graded writing assignments in your class?

Mix: Yes. For example, everybody thinks they understand something about DDT. So when we start the unit I throw out this assignment: "Write down two things you know about DDT." That takes a minute or two and then I have them come down and write their answers on the board. Sometimes I collect this kind of assignment, but often I don't.

WIC: Do you pick students at random to write on the board?

Mix: I ask a for volunteers to come down. If nobody moves then I start pointing a finger, but, once they get the idea, I almost never have to do that. In fact, once they get started, by week two it's a matter of holding them back! It's just amazing the way this can be used to begin or to continue activities. The students become participants—they don't just sit there half-asleep listening to Mix lecture! I don't do much lecturing in this class anymore.

Another example: yesterday we were talking about observations—observations that dealt with the environmental problems at Minamata Bay—a mercury poisoning case that began in Japan in the mid-50s. The class was presented with a number of observations—something like: "At such-and-such a time a woman brought in a child that was very, very sick; and subsequently other children were discovered with a similar disorder."

After that we had them do two things: first, write down a question that could be formulated from several of these observations; and second, derive a hypothesis that could address the question. In this case there was no right or wrong answer. But a good question would have been: "What is causing these disorders in children?" And a good hypothesis would be: "These disorders are caused by an infectious disease agent."

Initially you get some wild and crazy stuff because a lot of students memorize somewhere in their background what a hypothesis is—but they've never been asked to write one or to think about how science approaches a problem.

So, yesterday, that was their minimally-graded writing assignment. It took five to 10 minutes. They turned it in, and it will be graded "check-minus," "check," or "check-plus."

WIC: Would you say that active participation—through these daily writing assignments—motivates your students?

Mix: I think so. If they're forced to actually do something besides take notes, they tend to pay more attention. And, of course, I think they actually enjoy doing something.

WIC: What bugs, if any, did you have to work out of your minimally-graded assignments? Do you, for example, ever have to impose length restrictions?

Mix: Usually, if you give students an opportunity—if you say "one-to-three questions," or "one-to-two pages"—almost always they'll write the maximum, rather than the minimum, thinking "Jeez, I better do more if I want a good grade." I learned that last year.

For major papers, especially, I think it is beneficial to limit the length—it improves their thinking, tightens their arguments. Without the limits, I see a lot of rambling that merely fills the pages.

WIC: Do you get any feedback from your class about these minimally-graded assignments?

Mix: Last year, at the end of the term, I had seven or eight students that wanted to sit

down with me and talk about the course. It was strictly voluntary and I asked them a lot of questions—they loved the writing! They thought it was *extremely* valuable.

And I also had questionnaires that everyone was required to fill out; and the responses about writing were uniformly positive—whether ungraded, minimally-graded, short take-home assignments, or major papers.

WIC: How many students are in your course, GS 333?

Mix: About eighty-five.

WIC: Whew! That's quite a few for a WIC course.

Mix: It is. But it's a popular course and it's required for certain environmental science majors. Fortunately, this year, there's a teaching assistant who helps me with the course. Last year I did it by myself—and the number of hours and the days you spend reading. . . . Twenty-five students would be ideal—but nothing is ideal anymore. . . .

WIC: What does your teaching assistant do?

Mix: She reads. In fact, for most of the minimally-graded assignments, she will probably be the only reader. For take-home and major papers, of course, we'll both read.

WIC: Do you vary your short writing assignments, depending on the class discussion?

Mix: You mean create unplanned assignments? Spur-of-the-moment writing?

WIC: Right. With these short writing assignments, isn't it be possible to make adjustments, depending on the momentum of class discussion?

Mix: I do that, but I'm not sure how to describe it. In class, maybe we'll discuss certain ideas. . . , and there will be a couple of opinions expressed, or something. . .

Last year, for example, a question came up about statutes—environmental laws. What are the things that regulators should think about when they are writing clean water acts? And there were two people that spoke up: one of them, basically, presented what turned out to be an industrial point of view; and another presented what I call the environmental point of view. And I stopped the class and said: "Okay, I want you to take five minutes: assume you're regulating at this level and doing committee work: defend one of these two positions."

WIC: And is such writing used for discussion? Do you call on people?

Mix: It's a good way to promote discussion—there are just unlimited, golden opportunities to do that. Sometimes the writing will be both ungraded and uncollected, but I try to collect something every period.

WIC: Could you give an example of an ungraded writing assignment?

Mix: Hmm. Well, last year, we were talking about one particular environmental problem where there was a highly-questionable move made by an industry; and I could see lots of heads shake and looks of disbelief. So I said, "Okay, I want you to write down in *one word* your feelings about this maneuver by this industry. And I actually had them hand that in—ha-hah! That's my

all-time record for minimally-graded writing assignments!

WIC: Are these "one word" replies used to begin discussion at the next class meeting?

Mix: Actually, that time I used them to generate a discussion immediately after they came in. I mean, I just started reading: "Okay, well, this person wrote 'disbelief,' and this person wrote"—something like that.

WIC: Would you mention why you think it's important for students to write?

Mix: Why do I think writing is important for a student? Well, it is still probably the most important means of communicating—certainly in a professional career.

Also, I think, university students have very few opportunities to write in an unstructured format. But an unstructured format can allow them to bring their ideas together, to become more effective communicators. It helps them to develop a sense of confidence about communicating their opinions—verbally as well as on paper. That is the value of having them write one or two questions, of having them think about one hypothesis, or of putting down one word that expresses their feelings about a situation.

WIC: Do you think that teaching WIC courses involves a greater commitment of time on the part of the instructor?

Mix: Unless you've had a background in teaching-with-writing, yes. But most of the professors I know were educated in the "lecture system" of teaching. That's often all we know, so it's the easiest approach to take.

I can remember the transformation that I had to make to get used to being open to these ideas. Maybe it's one of these things where the older you get the harder it is—but I know it does take time.

Also, it's a matter of young professors having to teach for awhile—in whatever mode—to develop a level of confidence about teaching and being before university students. Some of the things that we've talked about today don't always work! But most of the time they do.

WIC: Having made the transition, would you say that it's more work to teach one way than the other? Could you make a comparison between the lecture mode and the writing-intensive mode of teaching?

Mix: For me, there's no comparison. Eight or nine years ago, I designed GS 333 and taught it in the lecture mode. From the beginning, I think, it was a popular course because environmental problem solving is an interesting subject.

But this is the second year, now, that it's been a writing-intensive course; and I'm much more interested in teaching it. The material is still fascinating for me. And—after talking to students over the years—I'm absolutely convinced that they learn more with the writing-intensive format.

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