Life can be an exciting, rewarding, and surprising challenge, even in its latter years. These are some personal reflections on the teaching of a web-based graduate seminar by an aging Professor Emeritus. This adventure has been full of surprises.

In the eyes of many of my colleagues, the attempt to try teaching on the Internet was a surprise, and viewed as a mixture of foolish technological whimsy and serious threat. To me, what started out as a challenge to creativity has developed into a promising improvement on the traditional graduate seminar, taught in a small room, around a table, at a fixed time each week. Could it really be done on the Internet, with students scattered around the countryside (if not the globe)? Could it be done by a professor shifting from wintry Michigan State University to sunny Tucson - and even continuing while the teacher attends a summer school at Cornell?

My colleagues were not convinced. Many said, "You can't do that!" Some told me I was too old - only kids have the necessary computer skills to surf the web! Others said graduate students need to see each others’ faces for a seminar to really work. And colleagues of my age said, "You won't be able to teach if you can't see their faces."

In truth, I wasn't at all sure myself. The Vice-President in charge of our Virtual University told me that a "producer" would be assigned to me. Some academics might have asked, "What is a producer?" or, "Why do I need a producer? I've been teaching for decades without one." But for me, who had pioneered the use of television for university instruction in the 1950s, I understood. As a TV producer who had enabled other professors to use that strange new media - back then - I was delighted to have a producer. Only later did I discover that the producer had a programmer and an artist, and that the team was going to produce this "on-line" class.

Preparation time was an unknown. Without offering the details here, I estimate that it took me about eight to ten times as long to prepare each lesson as I had been spending for preparation for classroom seminars. But I had been teaching a similar class for decades - updating readings, case studies, assignments, and supplementary materials each semester - but I had always worked from an outline before, never a written script. For this three credit graduate class, fifteen 3-hour lessons had to be prepared on the Internet. Each would have an introduction page, a table of contents, and a series of other pages with what might have been called a lecture, assigned readings from a text book and from other web sites, assignments, and instructions to students about posting their term papers, etc.

So where are the surprises? What are the pluses? After fifteen consecutive semesters of teaching this course online the evidence is beginning to become apparent. Here are some of the surprising pluses:
1. The quality of participation in this simulation of a live graduate-level seminar has been better in many ways than earlier experiences with a live group sitting around a table once a week with the professor. This has been particularly evident with international students and minority students.

2. The flexibility of timing of participation is appreciated by both students and teacher. The asynchronous conversations have been ideal for this type of seminar. Student participation begins slowly in the first few weeks, but then becomes lively through the most of the class, tapering off somewhat in the last few weeks when students are occupied by production of their term papers.

3. From the professor's perspective, there are some other positive surprises. International students, whose English language skills are more limited, seem more willing to express themselves than I have experienced in the seminar room. Women students, and particularly international women students, have been very active participants. Perhaps there is more balance in the interactions than in "live" classrooms, as no individual student can monopolize the conversation, and anyone who wants to pitch in to any conversation can easily do so!

4. The end-of-semester student evaluations show student enthusiasm for the virtual course, which has increased over the years.

Costs for the Aging Professor

Like almost everything else that has value, there are some costs. One is the preparation time, mentioned above, and the actual "teaching" time. This was a semester class for three graduate credits. Typically I would be in the seminar room with my students for three hours each week, in addition to some office visits, and increasing email exchanges with students, plus reading, commenting on and grading assignments and term papers.

A log I kept for the first offering of my 15 week Internet course showed online activity averaging 6 hours and 16 minutes per week for a class of five grad students. That does not include any of the preparation during the previous semester. It does include all time actually on the web with students, in e-mail communication with students, and in communication with the technical support team, and my own department technical support.

As the years have gone by, student numbers have grown, and (not as a surprise) I learned that my time invested in this class grows in proportion to the number of students. Since I try to give each classmate feedback with positive reinforcement in response to each of their inputs, and the student number has ranged from 6 to 24, I now think the ideal number of students for this particular on-line seminar is 12 students.

Benefits for the Aging Professor

Here are some of my positive reflections on teaching via the Internet:

No repeating of old stories. In my normal, informal seminars, there is some probability that I might (on rare occasions) tell something to my students that I had told them the week before - or possibly even an hour before. With several people involved in proofreading each
web-course lesson in advance, that does not happen.

No confusing statements with items stated backwards. Although I hate to admit it, sometimes in class I may say "North" when I mean "South," or "down" when I mean "up." Again, I don't make those errors in the Internet course.

No regular schedule of class hours at a fixed time each week. That gives me more flexibility in time-use. The students appreciate it even more. When one student suggested that we try a "chat room" at a fixed time each week, other students rejected the idea. They preferred the asynchronous conversations - as some "went to class" in the evenings, others on the week-ends, and one "attended" very early in the mornings, before going to work. And some live in different time zones around the globe.

More accurate record keeping for grading. Because student inputs are all available for review at grading time, both students and the professor have more reliable evidence for assigning grades.

No additional office hours for students. By being available daily for personal e-mail conversations, as well as the conversations on the appropriate web pages for each aspect of the class, there are very few occasions when a student wants to see me in my office. Such requests have been rare.

No travel from home to classroom in bad weather. Thirty or forty years ago, I never thought of that as a burden. But, as I am past seventy, and especially when there is snow or rain, it has become an issue.

No interruption of class for urgent bathroom calls. Again, my pattern has long been to break up a three-hour seminar with coffee for all students and myself along the way, and a break in the middle. But nature's calls are not as predictable for some of us "seniors," and the whole question does not arise while teaching via computer on the Internet.

Benefits for the students

Here are some of the things students have reported to me:

Increased dialogue between individual students and the professor. Students tell me they have more opportunities for personal conversations with me than they normally do in conventional seminars.

Increased tracking of individual students' inputs. Students can go back to earlier lessons and see what they had said. They can also surf to earlier conversations, and see what their classmates had said. That is also useful to me.

Increased flexibility of timing for class attendance and submission of assignments. This has made it possible for students to leave the country for several weeks in mid-semester, and keep up with the class. Several students have had unexpected time pressures from the workplace, for which we were all able to make adjustments.

Increased willingness to participate in class discussion for students with weak English
language skills, particularly international students. I mentioned this above, but students also mention it to me. They notice the difference.

Here are some examples:

Poonsin, a woman student from Thailand was a vigorous participant in the asynchronous conversations in the seminar. She was fearless in challenging responses to class questions; even some from men students. And she made excellent inputs of her own. One of those men students sent me an e-mail after a few weeks of class, to comment that he had been in another graduate seminar with Poonsin in the prior semester. There, she attended each week and took notes, but never opened her mouth. What a difference!

Barry, a domestic male student needed only a few more credits to complete the requirements for his Master's degree. But he had a full-time job that required travel. What to do? He enrolled in the Internet class, took his laptop with him, and completed all requirements on time!

Maria sent me an e-mail one day. The snow was over a foot deep, and she was able to stay in her warm room, and do this week's lessons without getting either cold or wet!

Tom was the type who "knows" the answer to everything, is always the first to have his hand up, and who requires special pressure from the teacher to stop talking. In this class he was "under control." He could respond to every question if he wished; but so could every other student. And he could give a "long-winded" response if he wished - but others could skim it, or skip it, if they wished. He did not hold up the class discussion, or prevent others from having their opportunity.

And here are some quotations from the students' end-of-semester evaluation forms:

What surprised you about taking this virtual university course?

"It is easier and more convenience than I ever thought."

"Ability to communicate effectively with classmates that you have not met before. In fact this was even easier than a face to face discussion where sometimes this becomes tainted with attitudes observable in body language. The fact that technology makes it possible to learn for someone who cannot always be able to go to class at certain specific scheduled times. The fact that it is possible to learn even for people outside US in this system."

What did you like about it?

"It is more understandable than a classroom teaching. I did not miss any point the instructor needed me to know. All my questions were answered by the instructor right after he got my messages."

"The pace of the course."
"It made learning available and accessible."

**What did you dislike about it?**

"The VU (Internet course) depends on the server which somehow sometimes did not work appropriately. I sometimes have to reconnect for several times within an hour!"
"The difficulty in engaging other classmates with discussion."

"Once a relationship has developed between people, the tendency is to want to actually meet the people and share experiences face to face. This course did not provide that."

**So what do I know now that I didn't know before?**

The combination of the computer and the Internet is not going to replace the classroom, the seminar room, or the laboratory. But like the printing press, the radio, television, the overhead projector, and "PowerPoint," it is one more excellent tool which can improve the quality of higher education, as well as increase access to it. And for us older professors, it can be a real blessing!