In 2010, Jefferson School of Population Health (JSPH) started offering graduate courses online. Clearly, online education is a convenience for students, especially those who have other time consuming commitments with work and/or family. Reaching a vast, global audience is vital to sustaining programs and making an impact. Online education however, poses questions and controversy among faculty and students. Will the lack of in-person, face-to-face communication diminish the learning/teaching experience? What do we lose when we move away from the traditional classroom experience?

Evidence suggests that online learning can actually be more effective than traditional classroom learning – at the K-12 level, undergraduate, and in professional continuing education. Research also shows that multi-component training (combining reading, writing, interaction, and other delivery methods) is more effective than a text-only online course.

The JSPH online curriculum is tightly structured, to help students approach each topic from diverse perspectives, through multiple activities. Each week contains a standard set of components:

1) Introduction
   A guide to the week’s materials

2) Readings
   A textbook chapter or published papers

3) Assignments
   Usually a short written assignment, with emphasis on analysis and evaluation

4) Lecture
   Online lectures are pre-recorded, and typically quite short (20 minutes) to maintain interest of the students. In addition to teacher lectures, it is possible to post video-conversations with experts on the topic, as “electronic guest speakers.”

5) Discussion Board
   Typically two questions, encouraging students to explore a topic from multiple perspectives. These are conversations among the students, with the teacher as a guiding but mostly silent observer. Students add references and examples with their replies. These discussion strings can get lengthy and involved, and are the online equivalent of classroom conversation.

6) Assessments and Evaluations
   Teachers can post exams or tests

This weekly structure allows students to work through the week’s materials and assignments in a logical sequence. Though there is a systematic way to work through the components, they do not necessarily need to do it in the same order. This structure allows the teacher to create a variety of materials, assignments and projects through reading, listening, watching, writing, online discussion. This mix of methods helps keep the students’ interest and energy high while playing to the different strengths of each student.

Writing is an essential skill for all students, but even more so for online students. Everything, all communication, is written: assignments, discussion responses, and papers. Strong and comfortable writers have a distinct advantage as online students and those who may not yet be strong writers quickly improve writing skills.

The variety of writing styles on a discussion board helps students develop their own style, and optimize their writing for focused and thoughtful communication.

As an online teacher I observe several benefits to the students including: stronger immersion in the subject matter; stronger analytical thinking and writing; and greater exposure to research and exploration.

Interactive writing results in a stronger immersion in the subject matter through its written, explicit, and “viewable by all” communication, therefore requiring a more thoughtful, in-depth response to questions and to other students’ positions. Online students use references and sources to back up their viewpoints and opinions, more than those in the classroom setting.

With the large amount of writing, students need to write efficiently and effectively. I encourage analytical writing, focusing on pros and cons, strengths and weaknesses, successes and challenges – with emphasis on opinion and points of view and minimal preamble. The written arguments and examples go deeper than in-person classroom conversation.

The online venue also functions as an online research lab. Students link to online references (including papers available through Jefferson’s JeffLINE online library), and links to web sites and blogs. For example, Dr. John Halamka’s well-known health informatics blog is a favorite source for materials.

One of the challenges created by online education is time needed by the teacher to sort through the discussion boards, papers, and assignments. In an effort to anticipate the various needs of students, JSPH created a position intended to assist the teacher in reading the discussion boards, and coach students toward more effective participation, and grading. Known as the Online Programs Administrative Liaison or OPAL, this person also helps students and teachers troubleshoot technical concerns.

A perceived downside of online education is the lack of personal, face-to-face interaction among students, and between students and teachers. To my own surprise, this has not been a detriment to the learning process. Online students quickly develop and show their personalities: methodical and balanced, fiercely argumentative, list-makers, casual conversationalists, rigorously referenced writers, diagram-drawers, or tentative but developing a stronger voice. Within 3 weeks,
each person finds their style, their strength of communicating, and it’s a pleasure to see these styles mingle in an online conversation.

Two or three real-time video conference sessions can help develop the rapport among students, and between students and teacher.

A multi-modal, online course is a powerful platform for students to learn and for teachers to teach. It requires more dedication and more work from both parties. But this extra investment in time and effort pays off in greater immersion, with broader research and exploration, than one would achieve in the in-person classroom setting.

Harm J. Scherpbier, MD
Harm Scherpbier teaches health informatics, both as in-person and online classes, and shares his experience with online teaching from a faculty perspective. The author can be reached at: harm.scherpbier@jefferson.edu

References

