

GAME CHANGERS

EDUCATION and INFORMATION TECHNOLOGIES

Edited by **DIANA G. OBLINGER**

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Game Changers: Education and Information Technologies

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FROM THE EDITOR

I would like to thank the many people who made this book possible, particularly Gregory Dobbin for managing the project and Karen Mateer for her research.

—Diana G. Oblinger

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Georgetown University: Web Conferencing—A Critical Skill for the Connected World

Pablo G. Molina

INFORMATION TECHNOLOGIES provide new ways of doing established activities, and they can create new opportunities to do things that were previously infeasible or impractical. Communications offers many examples of this dynamic, including technologies and tools such as mobile phones, text messaging, and social networking. My 11-year-old daughter spends hours chatting via Skype with her classmates, for example, and one of my former students has hired a teacher in Pakistan to teach his native Urdu language to his U.S.-born children via Skype.

In an educational setting, the communications capabilities that are enabled by information technology allow for new pedagogical models, which can have profound implications for how today's students learn and prepare themselves for a workplace that itself uses these technologies in groundbreaking ways. One example is web conferencing tools, which can be used to cultivate the skills needed to create and execute compelling academic and professional presentations online. Faculty can incorporate web conferencing into their courses, placing students into the role of instructors, which research has shown to increase comprehension and retention of material. At the same time, inviting students in traditional courses to teach online is a reversal both in role *and* medium.

Students Teaching with Web Conferencing

As an adjunct faculty member, I teach Ethics in Technology Management and Managing Diverse IT Organizations across the Globe, courses for the university's Master of Professional Studies in Technology Management program.

I regularly teach with web conferencing technologies to accommodate my professional travel schedule. While I teach online, students participate in class by speaking on their phones or computer microphones, by chatting, or by responding to instant polls.

In the summer of 2009, Georgetown University undertook a campus-wide adoption of web conferencing services as part of its planning for the possible consequences of a swine flu epidemic. Among the disruptive effects of such an outbreak for the academic community would have been an inability for many faculty, staff, and students to leave their homes. As it turned out, few in our community fell ill, but the web conferencing services proved invaluable for academic continuity during the severe blizzards of early 2010 and when many faculty and students were stranded in Europe in the spring of 2010 as a result of the Icelandic volcano eruption.

In my courses, students must work in groups to write a research paper and present it to the class. The paper process starts with an idea fair, during which each student gives an "elevator speech" about his or her proposed topic to classmates. Once the students coalesce in research groups, they present their paper proposals to the class. In the fall of 2010, I began requiring student groups to present their research-paper proposals using web conferencing technologies. Students are also required to ask questions of their classmates about their presentations, as well as answer audience questions while presenting.

I record their presentations, and student groups gain access to a recording and evaluate their performances after the online session. They also review how others presented so that they can compare their presentation with those of others. Some student comments are technical in nature (problems with the webcam, the microphones, or the multimedia materials), while others are procedural (using good lighting or posting the notes behind the webcam so students don't look down to consult them). The richest feedback, however, relates to the actual research project and the student-presentation skills. It is during the self-evaluation exchange between the students and the professor that the learning process sparks to life. Following are examples of two such moments that occurred as a result of feedback provided by two student groups in my Ethics in Technology Management graduate course in the fall of 2011. The comments illustrate that web conferencing technologies assist students in practicing and improving their teaching skills. The technologies also facilitate the solicitation of feedback from fellow students for their research projects.

Group One: "In the process of preparing for and completing this assignment, we feel that we gained a solid foundation for the paper we are now writing. We feel that we did a good job putting together

a slide deck and coordinating our work. As a result, we feel that we were able to transition back and forth effectively and were prepared to reference each other's slides, which made for a more cohesive presentation. [. . .] In comparison to other teams, we also feel that we could have done better to include visual elements in our presentation. In the end, we both feel that this presentation was an extremely beneficial way to kick off our research, and it will provide us with good practice for the final paper presentation."

Group Two: "We did a really good job of keeping the listeners interested not only by what we said, but the content of the presentation. Visuals, such as the photos and the metadata, give examples of what we intend to discuss in our research paper. The examples also give an opportunity for the listener to relate or say, 'I remember when that happened,' something that we feel helps involve the listener. [. . .] With this practice run, we are now aware of these issues and can learn from them to assure [*sic*] our final presentation can go as smoothly as possible. We wanted to extend our gratitude for suggesting that we include speaking to facial recognition/social networking topics within our research paper as well. That is an interesting topic we will surely research and discuss in our paper."

Student feedback, along with formal comments from the course evaluations, supports further use of web conferencing technology in higher education. Such an approach challenges students to think critically about what they are learning and what they are trying to teach to other students. The process teaches students other beneficial activities as well, including how to

- prepare and use multimedia presentation materials, including speech, webcam video, and remote-participation tools to engage audiences online, lead discussions, and answer questions;
- collaborate with others to prepare and deliver their online presentations; and
- self-assess their online presentation skills for continuous improvement.

Learning by Teaching

In order to conduct compelling online presentations, students must research and understand their chosen topics, prepare their lectures, create and assemble supporting multimedia materials, craft participatory questions and

surveys, and anticipate audience questions. Those of us who teach online and in-person recognize that teaching online often requires a preparation that differs from that associated with a traditional lecture. The instructor must cultivate a dynamic, engaged climate in an online environment to ensure fluid participation of attendees. Students teaching online are challenged to achieve higher maturity levels in their subject-matter knowledge and pedagogical skills.

In addition to developing the knowledge of the subject matter that students need, faculty strive to refine the overarching skills that can help them advance in their professional careers. These skills include critical thinking, debating, researching, writing, collaborating, and presenting. The pedagogical use of web conferencing technologies also targets the ability to make informative and convincing presentations online. For this to happen, web conferencing must be pervasively built into the curriculum. Presently, student web conferencing is only built into a few core courses (in addition to the capstone course required of students to complete their Master of Professional Studies in Technology Management degree). Beyond this program and this institution, there is great potential for extending this practice to other programs and to other educational institutions.

Additional pedagogical applications exist for web conferencing technologies, particularly regarding experiential learning. Several Jesuit universities are working together to use technology and their academic expertise to train the next generation of knowledge workers in refugee camps in Kenya, Malawi, and Syria. They have established two Internet-connected computer labs in the Kakuma refugee camp in northern Kenya, managed by Jesuit father Luis Amaral and the Jesuit Refugee Services organization. Refugee students pursue an online associate's degree in liberal studies from Regis University in Denver, Colorado.

During a site visit to the Kakuma camp in October 2011, I proposed a system of online internships to aid in improving the employment prospects of graduating students upon their relocation or repatriation. To date, three graduating refugees from the program are participating in this pilot online internship program with Georgetown University for spring 2012. In order to succeed in this program, interns will need to become proficient with web conferencing technologies, as they will need solid web conferencing skills when showcasing their work to members of the Georgetown University community remotely.

Related Resources

The following links point to case studies, videos, and podcasts about web conferencing at Georgetown University.

- <http://www.cisco.com/en/US/prod/ps10352/webexcase/Georgetown.html>
- http://www.cisco.com/assets/prod/webex/cases/Georgetown_Law.pdf

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