# Stepping into the iPod age

## Academic use of innovative technologies further engages students

***by Eileen Liu***
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Bill Garland prepares for class with his tablet notebook. Photo credit: Eileen Liu

We are stepping into a new age of academia where learning consists of more than just lectures with a professor at the front of a classroom. Instead, innovative technologies such as podcasts, video casts, framework environments, weblogs, wiki software, touch screens and text messaging have pushed both students and instructors towards a new way to teach and learn.

Civil engineering professor Cameron Churchill is teaching engineering and social responsibility at McMaster this term and has encountered students who are unable to attend lectures because of conflicting lab schedules. To remedy this, he opted for podcasting his lectures.

Podcasting is a digital audio recording made available for downloading off the Internet. Users who download them can to listen to the podcasts on personal computers at their convenience or even transfer them to a portable music player.

The iPod Nano, a popular digital player.

In Churchill's case, he has been recording his lectures as he gives them and then allowing his students to download them and accompanying PowerPoint slides off WebCT, another technological innovation in the classroom. His students can now listen to the podcasts while traveling on the bus.

WebCT is a framework environment where students and professors can interact with each other over the Internet. Logging into the integrated environment allows professors to post announcements and assignments and students can submit their finished work while commenting and asking questions about course material.

The Internet has also provided other ways for academics to interact. Weblogs are online journals where students can reflect on their work and share their thoughts with others. Wiki software allows groups of people to edit websites together to contribute and share new ideas and information.

Geoffrey Rockwell is a communications studies & multimedia professor who has seen many of these new technologies at work. He believes technology can be an important and useful supplement to traditional modes of teaching.

"The trick is to choose carefully. Creating effective and engaging podcasts take time and takes people who have experience with the medium. This is expensive to do. But if you don't do it, you're not using the medium well. So it's a balance. There are situations that it works well and situations that aren't cost effective. Could we take that money and hire more teaching assistants? For the same amount of money, we could get smaller groups of people, better conversations and better learning," says Rockwell.

Wayne MacPhail agrees. As the principal of communications company, w8nc Inc., MacPhail has created a series of podcasts to help McMaster's engineering department recruit more students.

"The success of podcasts depends on how universities adopt it," says MacPhail. "If universities imagine that podcasts are a broadcast medium and don't use it as a tool for conversation with students, there are many opportunities missed."

Bill Garland is a professor in engineering physics. In his classes, he writes his notes on his tablet notebook as if it were a blackboard and the computer will project his writing onto a screen for students to view. As he speaks into a microphone, his voice and his pen strokes are recorded for his students to download later.

Surprisingly, Garland's class sizes haven't dropped. Instead, he finds students use his lecture recordings to supplement what they hear in class or as review for the exam at the end of the year. He believes "it's still worthwhile for student to see the expressions on his face. They hear other student's comments; they're part of the process."

"I wouldn't expect a professor to make a wholesale change of their teaching style," says Garland. "My approach is to do my standard stuff. When I find something new, I'll try it but I won't sacrifice my whole course for it. I don't want to be tied to the technology, but if I can use these tools to augment my teaching, it'd be great."

"Our type of University isn't going away," says Rockwell. "It's very effective to get people into the same room talking. But there are people who want to learn who cannot make it to the site. For them, there's a growth in distance education using different

technologies that are meeting their needs."

The Faculty of Health Sciences is also jumping on board with technology. This fall, they will be introducing 12 new courses that incorporate podcasts into the teaching. It's expected that students will listen to the lectures at home while class time is reserved for greater interaction and problem solving between students and faculty.

All professors interviewed agree that new technologies simply cannot replace sitting in a lecture hall with peers and an engaging instructor. McMaster's move towards innovation is creating "hybrid courses" where the technologies are integrated with traditional forms of teaching. Professors and students, alike, are walking that fine line between too much and too little technology to create the most beneficial learning experience possible.