The iPod Revolution: Coming to a Classroom Near You

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Abstract

The Apple iPod has, indeed, changed the way we listen to music, as Steve Jobs predicted during its launch in 2001. It is also presenting new opportunities to educators in colleges and universities. Schools like Duke and Georgia College have made headlines by integrating iPods into a variety of disciplines. Can the iPod do more in a class than be an example of technological innovation? This paper explores the experience of several universities in using the iPod in higher education classes. Examples of applications will give some direction to educators thinking about using this device in their classes.

Introduction

When the iPod was introduced on October 14, 2001, Steve Jobs, Apple's chief executive officer, predicted that it would "change the way we listen to music" (cite).   It has certainly done that. Apple shipped over 21 million iPods in the final quarter of 2006 alone, a 50 percent increase over the same time period the year before (Apple Reports, 2007). Apple maintains an 83% market share in hard-drive-based music players (Wolverton, 2006). Apple's iTunes music store had sold over 2 billion songs, 50 million television episodes, and over 1.3 million feature length movies by the end of 2006 (iTunes Store, 2007). iTunes has more than 70 percent of the market in legal music downloading (Flynn, 2007).

In the fall of 2004, the iPod made its first big splash as a learning tool in higher education. That August, Duke University distributed iPods to all 1,600 of its entering first year students (Belanger, 2005; Carlson, 2004). Duke saw the iPod not only as a music player, but also as a tool to disseminate course content, a recording device for classroom and field use, a study support tool, and a file storage and transfer medium (Belanger, 2005).

Other universities quickly followed by providing support for iPods, either student-owned or university-provided. Apple developed a product, iTunes U, to allow universities to distribute content for iPods easily (iTunes U, 2007; Young, 2006).   In order to assist university faculty who are contemplating using iPods, or supporting student use of iPods, in their classes, this paper examines the experiences of universities in using these devices. We begin with the leader, Duke University.

Duke University

2004-2005

Belanger (2005) documents Duke's initial experience with iPods during the 2004-2005 academic year. Fifteen fall courses and 33 spring courses used the iPods. Courses in economics, education, information science, music, religion, Spanish, theater, Turkish and writing used iPods to record lectures and classroom discussion. Courses in anthropology, Asian and African studies, education, electrical engineering, the environment, German, information science, music, public policy, and writing used iPods for field recording, including interviews and audio data. A few courses, in economics, Spanish, music, theater, and Turkish, used the iPods as study aids, and some others, including information science, music, electrical engineering, engineering, and music, employed the devices for file transfer and storage.

Belanger reported that students and faculty at Duke found the iPods were convenient for conveying course content and reduced the dependence on computer labs and libraries. iPods were especially useful as recording devices. They also increased student engagement with classes and research.

Among the problems reported in Belanger's report were difficulties integrating multiple information systems, issues with purchasing or licensing digital content, limited documentation and training, and lack of a variety of input devices or tools for integrating audio and text. Both students and faculty were not fully aware of all the iPod's capabilities to enhance academics.

Belanger reported that Duke experienced several significant institutional impacts of the iPod project. The publicity the project generated contributed to collaboration with other institutions and with hardware and software vendors. It also sparked a detailed examination of the role of technology in education, which in turn generated the 2005-2006 Duke Digital Initiative.

2005-2006

Duke's experiences with the second year of the iPod program are documented in Earp, Belanger, and O'Brien (2006). Duke's experiences during 2005-2005 were complicated by the introduction of a new iPod model capable of displaying video as well as audio (Apple Unveils, 2005; Markoff and Holson, 2005). Duke also participated in a test version of iTunes U. This allowed students and faculty to expand the uses of these devices, but created challenges for technical support. Duke's Center for Instructional Technology supported the use of iPods in 13 science, math, and engineering courses; 37 courses in languages; 26 courses in the social sciences; and 31 courses in the humanities. Applications included requiring students to subscribe to external podcasts

from sources such as Public Radio International, recording class materials and lectures, capturing student oral examinations, and display or playback of audio and video content in class.

Earp, Belanger, and O'Brien reported that the biggest challenges during the second year were obtaining multimedia content in a timely and affordable manner, the rapid changes in the technology, the demand for video capture exceeding classroom capacity, and the transition of teaching and learning to a multimedia environment. For 2006-2007, Duke moved away from providing iPods to students (Read, 2006) and toward treating them "as a course supply, much like a textbook" (Earp, Belanger & O'Brien, p. 15).

Georgia College and State University

Georgia College and State University in Milledgeville, Georgia, started using iPods in the classroom much earlier than Duke, but without quite as much fanfare. In the fall semester of 2002, students in two courses, "The Gothic Imagination" and "War, Politics, and Shakespeare" were loaned iPods. Students downloaded content provided by their professors from computer labs on campus (Sellers, 2003; iPod at GC&SU, 2004). In contrast to the Duke model, students at GC&SU receive iPods from the university only for use in a specific course (Burk, 2006). iPods are used in over 30 courses.

Each semester since, the iPods have been incorporated into more classes, spreading even to the study abroad program (iPod at GC&SU, 2004). In the fall of 2005, GC&SU created the "iColony," a virtual learning community (The iColony, 2006). Similar to the residential learning communities on campus organized around themes such as wellness or international issues, the iColony brings students together with common interested. In contrast to the other communities, however, students in the iColony are not required to reside together.

Purdue University

The use of iPods at Purdue grew naturally out of a previously existing project to provide recordings of lectures on cassette tapes (Read, 2005). For some years, Purdue had been making recordings of lectures available to students in the library. In the fall 2005 semester, the university began "BoilerCast," podcasting about 70 courses. In its first three months the service had more than 34,000 downloads (Cohen, 2005), and in its first year, it used for 130 and delivered more than 240,000 downloads (Talley, 2006). The service is now being replaced by Apples iTunes U.

Stanford and the University of California, Berkeley

Stanford University initially viewed distributing podcasts as a way to reach out to alumni and the general public (Stanford, Apple team up, 2005). In partnership with

Apple, Stanford began placing lectures, performances, music, and other Stanford-produced content on its own iTunes site, Stanford on iTunes, in October, 2005. The University of California, Berkeley, quickly followed suit, launching its own iTunes site the next semester (Cal puts lectures, 2006).

The two schools differ in their approach to distributing content. At Stanford, there is a public iTunes site and an iTunes site available only to the university community. The University of California at Berkeley makes its entire iTunes site available to the public. UC Berkely on iTunes U had over 330,000 downloads at 10,000 subscribers between its launch date, April 22, 2006, and the end of the month (University-Branded Site, 2007).

University of Wisconsin-Madison

Apple originally tested iTunes U at six schools, the University of Wisconsin-Madison, Brown, Duke, Stanford, the University of Michigan School of Dentistry and the University of Missouri School of Journalism (Course content, 2006). At UW-Madison, the Division of Information Technology made 76 small grants to faculty so that they could purchase recording equipment. Content includes lectures, interviews, music samples, and foreign language broadcasts (Podcasts, 2007).

University of Michigan School of Dentistry

At the University of Michigan Medical School, video of lectures has been available for several years (Anderson, 2005). A study comparing student preferences for video, voice over PowerPoint, and podcasts found that students preferred the podcasts (Dental students launch, 2007). Students found the audio material more mobile and the iPod easier to use. The initiative to use podcasting came from students, and students run the recording and distribution process (Anderson, 2005; Dental students, 2007).

University of Miami Miller School of Medicine

At the University of Miami's Miller School of Medicine, professors are mixing voice and video to create vodcasts. In addition to recording lectures, faculty members are providing condensed versions of classroom material for first year students. The vodcasts do not replace audio lecture podcasts, but provide supplemental material that reinforces the lectures.

University of South Carolina

In the Department of Theater and Dance at the University of South Carolina, Erica Tobolski is using iPods to teach voice and diction. Proper formation of sounds requires students to shape their mouths in particular ways. Videos of proper pronunciation distributed by vodcasts give students models to imitate outside of class. The portability

of the iPod allows the students to take their lessons with them. With both audio and video content, students can either watch or listen to the supplemental content.

Conclusion

Use of the iPod in higher education has now spread to dozens of schools and hundreds of applications (Pascual, 2007). The ability to combine video and audio in the newer iPods has increased the range of instructional uses. A common theme in all the accounts of integrating iPods in the classroom is the ease with which faculty and students can generate and distribute content. This paper has presented the experiences of many different universities and disciplines. It is clear that the iPod can be successfully integrated into any college or university course.

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