hen the Pew Internet & American Life Project released results of a phone survey of U.S. adults in early 2005, I was not one of the more than 22 million adults who owned an iPod or MP3 player. Nor was I one of the more than 6 million people who had downloaded a podcast.¹ No, my love affair with podcasting began later, during my graduate studies the next year, in an accidental and serendipitous way. Though I would later spin my story to say that I was on a news-deprived quest for current-events recordings from National Public Radio (NPR), in truth I came to discover the wide world of podcasting through a chance click in the Apple iTunes online store while I was looking for copies of Desperate Housewives episodes.

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1. This statistic does not include MP3 downloads of music tracks, which are a separate category.
I was studying abroad in Northern Ireland at the time, and the shortened days and frigid nights had left me craving a slice of Sunday nights at home. While trying to navigate the iTunes store, I stumbled across a page of free (!) podcasts that I could download or subscribe to. Suddenly, the women of Wisteria Lane moved to the back burner. After all, they would cost me $1.99. So I started instead with podcasts of my favorite soap operas. Each night, as I climbed into bed, I could plug my headphones into my laptop and drift asleep to the familiar voices of favorite characters on Guiding Light. Later I subscribed to Story of the Day from NPR and to a hodgepodge of political podcasts. I’d listen to them while on breaks from writing term papers or while on long trips on the bus.

Since the podcasts were easy on my budget and slightly addictive, I continued to subscribe. By the time I boarded a plane to return home to the United States, I was regularly downloading twelve different podcasts series, including the fictional ramblings of one of the characters on my favorite Wednesday-night television drama.

My experience in creating podcasts came through much nobler endeavors. It began with a research project in the working-class neighborhoods of North Belfast and a frustrated conversation over pints in a pub. I was on a research high after an interview with two women of very different political backgrounds. They were friends, brought together by the work of a local nonprofit, and their mutual admiration shone from the lightning-fast banter that they tossed back and forth throughout the interview. It was clear to me that they were a perfect example of a friendship from different sides of the political divide.

But my friend at the pub just couldn’t get it. He suggested that their friendship might be contrived, a mere show for my benefit, or that if real, it didn’t mean as much as I thought. Exasperated, I pulled out my recorder and played the conversation back to him. As their Belfast accents filled up our corner booth, I could see his posture slacken and the battle turn my way. In that moment, I decided that only a podcast could finish telling my story. Over the next months, armed with just an MP3 player and some freeware suggested by a friend, I worked to piece together the story of North Belfast through interviews, conversations, and the sounds of the streets. The result was crude, elementary, and slightly difficult to listen to. But I was hooked.

When I came home from my stint abroad, I thought that podcasting was still some little-known page in the iTunes store. But I soon discovered that podcasting was already widespread on U.S. college and university campuses. Students were jumping on board. Armed with my same recorder—though it was now slightly rougher for the wear—I asked students at colleges and universities across North America about their iPod and MP3 use, their familiarity with podcasting, and just how they saw podcasting as part of the classroom.

Podcasting in the Real World: Student Use (and Misuse) of Podcast Technology

For students, the iPod is about convenience. “It’s pretty ubiquitous to see those little white headphones running around,” says Caroline Walker, a student at the University of British Columbia. The iPod is small, it’s mobile, and it stores everything from songs and podcasts to photos and games. “I use my iPod Nano every day outside of class,” says Jared Westfall, a student at Bentley College in Massachusetts. “What I really like about my iPod is it is small and compact, it can be taken anywhere. I love using it as an alternative to listening to the radio while driving. Also, it is nice to have extended features such as listening to podcasts, putting photos on it, using it as a small hard drive and having a contact list.”

In fact, the iPod topped the list of the most “in” things on campus in 2006, according to Student Monitor’s Lifestyle & Media Study. Mentioned by 73 percent of students, the tiny technology knocked beer, which had ruled the charts since 1998, to #2 on the list (the Internet bumped beer from the top spot in 1997).2 Not surprisingly, college-age adults make up the largest proportion of iPod-owning adults, according to the 2005 survey by the Pew Internet & American Life Project. One in five of those aged eighteen to twenty-eight owned an iPod or an MP3 player.

Yet though iPods are ubiquitous, podcasts are less so. “I’d never even heard of a podcast before I took [a course that uses podcasting],” says John Vickery, a student at Duke University. Among those who have heard of podcasts, most typically stumble into podcasting by accident or because they’re seeking a very specific type of information. Michael Martinez-Mann, a student at DePaul University, stumbled onto the free podcast page on
iTunes after listening to his CD collection “about five times” while doing a data-entry job in downtown Chicago. “I liked that it was free,” he says.

Notes on the Go: Offering Lectures and Class Notes via Podcasting

Students in Randall Dunham’s class in the Executive MBA Program at the University of Wisconsin–Madison have busy lives. Most work, many at full-time jobs. Some have children and spouses and have households to run. “The forty-hour work week is a thing of the past,” says Daun Maier, a student in Dunham’s course. “I’m in a position where I’m working fifty hours a week and trying to fit an education into a lifestyle.”

It might not be surprising, therefore, to learn that this class of podcasting newcomers quickly adopted and embraced the use of podcasting to transfer lectures and course material. For one section, the course material was provided entirely via podcast. For other units, class lectures were recorded and offered as downloads, and some supplementary material was provided through podcasts. (For examples, see <http://podcasts.bus.wisc.edu/rdunham/samples/>.)

Stephanie Orzechowski had never even picked up an iPod before enrolling in Dunham’s class. “It wasn’t really intuitive for me. I didn’t have one, so I wasn’t really adept at using the little handheld video iPod at first,” she says. “But it didn’t take long. I know how to charge it now and how to download.” She jokes about how her children and a younger classmate had to help her navigate the features. And despite a minor slipup that temporarily shared her son’s playlist with the entire university, she quickly picked up the technology and even grew to love the downloads. “The graphics were big enough that I could see them, and the screen was small enough that I could use it even as a passenger in the car,” she says. “I would listen to it as I was driving.”

Orzechowski, Maier, and their classmate Larry Clemen all appreciate the portability and the playback options of the iPod. Like Orzechowski, Clemen listens to his iPod in the car. “The good thing was that you could listen to a section over and over again if you wanted to review it,” Clemen says. “There were a few podcasts that I had to review a couple of times. I could write out what he was saying and listen to what he was saying again.” Reviewing came in handy, they all say, especially during project or exam times. “[With the podcasts], I’ve got more material to go back to if I wanted to review that module,” Clemen says. “Whereas with the rest of the material, I just have some PowerPoint and my own notes.”

In Richard Lucic’s class on information technology at Duke University, students receive both their primary class lectures and their supplemental lectures via podcasting. The course explores the infiltration of information technology in society, and each week guest speakers come to the classroom to discuss how technology is changing their workplace, their discipline, or their research. Besides capturing classroom speakers, Lucic listens to “bagillions” of podcasts on the Web throughout the semester to find additional speakers who might offer views in contrast to those of the speakers in class or who might come from the same industry or discipline but offer a different perspective. Each week, the students are asked to listen to both the in-class speakers and the additional downloads. Once a week, during class, they discuss connections between the speakers’ views. “I think it’s really generated a lot of enthusiasm,” Lucic says. “There is definitely a lot more interest in my course than before I started using podcasting. I think they’re more engaged.”

Sasha Stein took Lucic’s course last semester and “loved it.” The key, she says, was that the supplemental podcasts were relevant to the course and the course material. Since the digital material was discussed in class, the students placed value on the podcasts, which became an integral part of the course. “If you’re going to use [podcasting], make sure it’s practical. Don’t just give us busy work,” she says. “It’s annoying.” Not only that, the course material was accessible at any time, in any place. Students could listen to the guest lectures while on the bus, at the gym, or in their dorm rooms. Still, Stein never felt the urge to skip class. “It was nice to know that if you missed class, you could record the lectures,” she says. “But the iPod didn’t encourage you to miss class. There’s not a chalkboard that you can see or problems that you can see worked out. I think more people show up in a [podcasting] course because it encourages more interaction.”

The idea that students would stop showing up to class is “bogus,” Lucic says. “It’s been exactly the opposite,” he says. “I’ve seen attendance increase, mostly because the podcasting has generated interest and enthusiasm. We’re doing interesting, technology-based things in the course.”

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“In Their Hands: Students as Podcast Creators

Duke University Professor Daniel Foster jokes that, these days, he doesn’t hold much hope for student writing. Student podcasts, however, are another story. Two years ago, he introduced podcasting to his “Radio and the Theater of the Mind” class, a course centered on the exploration of old-time radio production (see <http://www.theaterofthemind.com/>). The class culminates when students produce their own piece of podcast radio theater.
“I think their [podcast] work is actually better than their writing is,” Foster says. “They do all the acting. They choose the music. They do the sound effects. Their work is very professional-sounding. There are a couple of pieces on the Web site for the class that are really quite good. They can certainly stand up to much of the podcasting that’s out there.” After the class concludes, Foster delivers the class podcasts to the public on a monthly basis. To date, the site has had more than 150,000 visitors.

John Vickery took Foster’s course during the first semester it was offered. If he took it again, he says, his only suggestion would be to weed out the rest of the class papers in favor of more podcasts. “It was much more creative. I would never compare [podcasting] to any paper,” says Vickery. “It’s much better than writing a paper. It’s more interesting, much more fun, and much more creative. You get a lot of time to work on it, and it’s more collaborative because you’re working with other people. You’re creating the performance as you go and then continuously working on it.” Creating a podcast didn’t mean less work, he says. There was editing, song selection, rehearsals, and scriptwriting. But it did mean interacting with the material on a much more intimate level.

Tiffany Chen also took Foster’s class. “I don’t hate writing papers,” she says, “but I really enjoyed putting time and effort into creating a work that could be given to the public. It puts it on a different level of importance and allows for more creativity since it is in word and sound.”

When it came to learning, the students say that the creation of the radio pieces provided a real and viable link to the course material. “We were able to study different methods used in old-time radio—we wrote papers discussing different uses of music, sound effects, and representation of characters—but it was especially useful to put these ideas into practice to truly understand the effort and thought that goes behind it,” Chen says.

Throughout the course, students also listened to examples of old-time radio using iPods in class. “Without creating one yourself, I don’t think you understand fully what it was to do a radio show,” Vickery says. “Podcasts were really just another chance for us to do radio theater. You definitely learn a lot more physically doing something and actually seeing what people might have gone through to create radio theater.”

Part of that “learning through doing” came from learning the technical skills necessary to capture, record, and transfer their broadcasts. The class used Audacity, a freeware application with “some bugs,” they say, and iPods provided by the university. Many students bought microphones or additional recorders to get better sound. “Even with an iPod, you could get pretty good sound quality,” Vickery says. His group did a rebroadcast of Yours Truly, Johnny Dollar, and he had problems figuring out how to muffle the audio to create a “phone voice.” “I had no idea how to do that, so I just messed around with the ways you could manipulate sound until I figured it out. It was really cool,” he says. So cool, in fact, that the rest of the class wanted in on the secret. He refused to tell them.

Mark Frydenberg, a professor of computer information systems at Bentley College in Massachusetts, says that watching his students experiment with the technology is one of the highlights of his “Introduction to Technology” course. Throughout the semester, he asks students to craft video podcasts, six to ten minutes long, that recap key lessons from the week. The first group, he says, started by simply reading a script to the class. As the weeks went on, the students discovered new features—screenshots, music editing, PowerPoint slides—and each subsequent podcast incorporated past elements and new ideas. By the end, the students were even tacking on “blooper” reels to get a few laughs.

“It was sort of a trial-and-error thing,” says Sean Finnegan, who created his podcast for the class using screenshots. “It wasn’t too difficult. We just recorded the video and edited it on the computer. We played around with it, and it all came out in the end. We could have talked about the information in a lecture, but that’s different from making a podcast because you really have to know the material to be able to explain it to the class.”

The students are asked to download their classmates’ work and then comment on the podcasts in a class blog. Jared Westfall, who is currently enrolled in Frydenberg’s class, downloads his peers’ videos when he’s bored and sitting around the dorm. “They are usually funny and reinforce what I have learned in class in a fun way,” he says. “It’s a better experience making it than having to sit in a lecture.”

In fact, Frydenberg first introduced the class to podcasting by offering downloads of his lectures online. When he asked the class how many students had been accessing the information, not many raised their hands. “They were just a recording of what he talked about in class,” says Finnegan. “They lasted for a whole hour. They were not as enjoyable as our five-minute segments.” Knowing that his
It’s about learning how to teach the material and how to make a narration out of it. You have this intimate knowledge of the material, and now you know how to show the different sides of an issue.

A Microphone and an Idea: Nonacademic Podcasting on Campus

Cassandra Romanelli is the first to admit that she doesn’t download podcasts on a regular basis. In fact, she doesn’t even own an MP3 player. “Believe it or not, I am pretty old-school. I prefer my CD player and sometimes even my cassette player,” she says. What she does have, however, is a passion for women’s extreme sports. A mud-wrestler in her spare time and a full-time anthropology student at DePaul University, she began podcasting this semester at the encouragement of her department head, Robert Rotenberg. Her first podcast, an interview with a fellow mud-wrestler, hit the Web in November.
2006. “I jumped on board in a heartbeat. I just thought it would be exciting to, first of all, do an independent project and also to meet these cool, tough women,” she says. “I was right!”

Romanelli thought her first interview would be a one-shot deal, a single interview with a group of girls. Then, Rotenberg asked her to stay on and do a series of individual interviews throughout the semester. “Leading up to the [first] interview, I was really very nervous. I just kept asking [Dr. Rotenberg] questions over and over. I’m sure he was pretty annoyed with me,” she says. Rotenberg told her that the interview should simply be a conversation and to just let the conversation evolve. Once the recorder was on, Romanelli found the process surprisingly easy. “It just flowed,” she says. “She answered most of the questions that I had. It was just natural.”

Romanelli’s podcasts aren’t attached to a particular anthropology course. Yet even though they aren’t for a class, Romanelli says that they connect to her studies. Before the interview, she does secondary research to prepare, and then she formulates her questions. “I’ve taken basic anthropology courses in methodology, and I’m basically doing ethnographic work,” she says. And in the process, she has quickly transformed from podcasting novice to podcasting enthusiast. “I graduate in June, so I said to [Dr. Rotenberg], ‘I can still keep doing this after June, right?’” she jokes.

Rotenberg posts Romanelli’s podcasts on the DePaul Podcast Network (http://feeds.feedburner.com/DePaulPodNet). The brainchild of Rotenberg, the network features a variety of student-produced podcasts. The idea was to create a database for students to share research in an audio format. It’s accessible to students and to the outside community.

Brian Shevenaugh, Travis Wheeler, and Parang Mehta post a program called Current Events 101, which features the three students talking about politics and hot topics in the news. For Wheeler, the experience has meant fine-tuning his communication skills and digging deep into the news they discuss. “When you know other people are going to be listening to your programs and those people are just as knowledgeable as you, it makes you really know your stuff and do all the research,” Wheeler says. “You can’t just throw stuff out there for fun.”

Even though the podcasts aren’t for class credit, Wheeler finds himself doing in-depth research to prepare each week. Even more, he’s had to consider the way the three students are presenting their information, from engaging their listeners to coming off sounding respectable. “It’s something that you learn when you go into politics,” he says. “You have to learn how to gather your thoughts properly, speak properly. We’re really focused now on trying to make the podcasts listenable.” For him, it’s been a learning experience all around. “My co-hosts and I typically have similar views, so I find myself having to play the role of representing the other side or different views,” he says. “It’s forced me to consider other views.”

Michael Martinez-Mann was one of the first students on the DePaul Podcast Network. When he came to the university, he already had experience podcasting
at his community college. He sat down with Rotenberg, who revealed the plan to launch a student podcast network. Since he was studying anthropology, he decided to start his own anthropology podcast. Since then, his role has evolved from podcasting his own shows to helping students capture and edit their creations. “I appreciate podcasting for what it is—the ability to narrowcast in such a free format,” Martinez-Mann says. “There aren’t any time constraints. Your podcast doesn’t have to be an exact amount of time. You have carte blanche to change the format and grow your show.” He also helps capture audio from guest speakers so that the programs can be broadcast to a wider audience. “It allows the rest of the department or the rest of campus to benefit from that,” he says.

The DePaul Podcast Network is student-produced for students. But colleges and universities across the nation are producing their own, nonacademic podcasts for students to download. At the University of Arizona, students can access financial aid information online in a podcast. At iTunes universities, students can access information from student groups, the athletics department, or even university speakers.

Wheeler sees even more possibilities in the future. “There are plenty of things that I think are promising,” he says. “Having students listening to podcasting is just another positive medium to expose them to news, politics, sports, or culture—whatever their interest is.” He says he likes to see students producing podcasts from their studies abroad. “It’s very hard to begin a conversation about your experience abroad,” he says. “I think it would be great if students could podcast from a country, or when they get back, to podcast about their experiences.” Wheeler adds, “The possibilities really are endless.”

**If I Were in Charge:**

**Tips for Faculty**

When you ask most students what they think of their iPods, they immediately mention the benefits of mobility and small size. But when you ask them how they might incorporate podcasting into a course, they draw a blank. The most common answer is the most obvious: offering course lectures or instructors’ notes as an audio or video download. The problem for most students is that downloading a course lecture is often their first foray into the technology.

The students who have taken courses with podcasting offer concrete advice to faculty who might consider adding the technology to the syllabus:

- **Don’t assume:** Just because a student totes an iPod on campus doesn’t mean that the student is podcast-savvy. “I don’t even think I knew what a podcast was,” says Sean Finnegan, a student in Mark Frydenberg’s computer information systems class at Bentley College. Even for frequent downloaders, creating content might not come easily. Faculty should offer simple guidelines for downloading, playing, and creating content, either as an in-class exercise or as an online simulation.
- **Keep it simple:** When Frydenberg asked his students how many had actually been downloading his podcast lectures, they complained that the podcasts were too long. Students stress the need to keep audio and video concise and engaging. Even time spent “on the go” is valuable time. Larry Clemen complained that the podcasts in his Executive MBA program took too long—fifteen to twenty minutes—to download.
- **Quality counts:** A novice podcast listener can tell the difference between poor sound and sound that reflects even a small amount of attention to detail and quality. For students to value a podcast, they need to believe that the professor values it as well. Part of that comes from demonstrating a commitment to quality in recording. Daun Maier compares her reaction to a bad podcast to her reaction when an earbud on her iPod isn’t working correctly. “It’s completely annoying, and you’re not hearing the music to the quality that you want,” she says. But she also says that she truly valued the emphasis that her professor, Randall Dunham, placed on quality in the video podcasts that he delivered to class. “They were clear, and there were no distractions because of the equipment,” she says. “Otherwise, I would have become frustrated, and I didn’t at all.”
- **Make it relevant:** Sasha Stein, from Duke University, has seen her share of podcasting flops at the iTunes U. The best implementation came in Richard Lucie’s class, where the students listened to guest speakers as well as to podcasts of outside lecturers. “I can’t stress enough,” she says, “that the material has to be relevant to the rest of the course. Otherwise, it’s just a cool technology to have.” Material should have a clear connection to the actual course, making a seamless transition between face time and the online realm.
- **Offer something more:** For the professors who have implemented podcasting technology, the most common concern they hear from their peers is that students will stop showing up to class if the material is downloadable. In reality, they say, the opposite is true. The trick, students say, is to make sure that there is something to gain by attending class and downloading the lecture. Podcasts should add a new perspective or offer supplemental material. If lectures are...
If lectures are podcast, faculty should use classroom time to facilitate discussion, demonstrate models, or simulate problems. “You're going to gain something out of the classroom experience—it's that personal lecture experience,” says Maier. “You get comments from other individuals, and examples are brought to the table by other parts of the class.”

- **Don't limit imagination:** When Frydenberg asked his students to create short recaps of classroom lessons, he gave them the basic framework for tooling a podcast. Other than that, he left the door wide open for interpretation. Finnegan, a student in the class, says that if he were giving advice to a professor, he would say: “Don't set up a lot of criteria about what to do and how long it needs to be. Don't limit the material and how to do it.” Finnegan, who crafted a podcast on HTML coding for Frydenberg’s class, says that the most important thing is to give students open license to create.

- **Encourage exploration:** When Lucic implemented podcasting in his course, he didn't limit iPods to the classroom. Instead, he encouraged his students to do something creative with the iPods in their spare time. Stein took his advice and carried her iPod to a campus lecture so that she could record the speaker for a friend. Professors should encourage their students to think outside the box, Stein says, and outside the classroom.

**Conclusions**

As more and more colleges and universities jump on board the podcasting bandwagon, it's vital that faculty and administrators keep revisiting podcasting, as a tool for teaching and learning, from the student's perspective. For the students at the University of Wisconsin–Madison, the University of British Columbia, Bentley College, Duke University, and DePaul University, a lack of familiarity with the content or the equipment was not a barrier to success.
All the students identified the same benefits to podcasting technology:

- The ability to access course content on a twenty-four-hour basis
- The chance to take their learning mobile so that listening can be done on the bus, at the gym, or on a walk between classes
- The creativity factor when making podcasts: they can present the content in a way that they choose
- The ease of access: podcasts can be easily downloaded from the Internet for free

For teaching and learning, the students saw concrete benefits to podcasting projects, especially when compared with standard modes of testing, such as writing a paper or doing a class demonstration:

- They were able to get “intimate” with course material, either by relistening to course lectures and supplements or by teaching the rest of the class.
- They could showcase their projects to the rest of the community, expanding the reach of the classroom to their friends or members of the community.
- They had the opportunity to review course material during pertinent moments in the semester, such as before exams or during course projects.
- They learned new technical skills, whether they were downloading files or creating new ones.

Finally, all the students reported that they enjoyed their classes more because of the inclusion of podcasting, and all hoped that more faculty members would use podcasting in the future. Michael Martinez-Mann said it best when he said of podcasting: “The possibilities are absolutely limitless. If there’s an idea, there’s a way to do it.”

Notes
3. Rainie and Madden, “Podcasting Catches On.”