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Blogs, Wikis, Podcasts,

3 THIRD EDITION

and Other Powerful **Web Tools** for Classrooms

On My Mind 07 Aug 07:08 am

If Every Student Had a Computer

So Sheryl and I have spent the last week here in Melbourne kicking off a four-month PLP project with 120 or so teachers from Victoria who are part of a pilot where all of their students will have netbooks in hand in the next few months. There seems to be a growing commitment here to put technology in the hands of kids (instead of spending huge sums on stuff that students can't use outside of the classroom) and to thinking about how practice and pedagogy changes when that happens. There are a number of other initiatives that are attempting to reframe the way Victorian teachers think about teaching, namely something called E5 (pdf) that I'll be giving some more attention to on the plane ride home but that at first blush has some interesting language that focuses more on learning than teaching. And that's really what our work here has been about—trying to create opportunities for teachers to be learners first in both face to face and online

Will Richardson

8 Podcasting, Video and Screencasting, and Live Streaming

Multimedia Publishing for the Masses

If there is one thing for certain it's that the explosion in the last few years of multimedia publishing on the Web is going to continue, and that more and more of what we consume online is going to be self-produced, home-made entertainment. The incredible growth of YouTube.com, Google Video, and other audio and video sites online is rattling the very foundations of television and radio, and it's no doubt going to be very interesting to see how all of it plays out in the next few years. Today we have podcasters creating their own Internet radio, videobloggers producing their own Web television, and screencasters who are capturing what happens on a computer screen, adding a bit of audio narrative, and publishing it as multimedia Web tours or stories. And, more recently, we have students and teachers who are broadcasting live to large and global audiences using live streaming tools. What's next?

This expansion of the Web into multimedia has come about quickly and is fast evolving, due primarily to the sudden explosion of broadband connectivity and cheap memory on computers. These days, it doesn't take hours to download a feature-length film, a fact that Netflix and Blockbuster are capitalizing on.

Similarly, it doesn't take an expensive computer to be able to store and play those files, as hard-drive disk space and RAM have become incredibly cheap compared to what they were just a few years ago. Those two advances have created another change in the way we consume multimedia. Whereas our computers used to play the media file as it streamed through the connection, now it simply downloads it and plays it once completely saved. It's made viewing these types of files more efficient and enjoyable, and it has pushed streaming of content further into the realm of live performance.

But whatever the technology, the simple fact is that it has become much easier to create and consume multimedia as well as text and digital images. The almost ubiquitous presence of photo-video-audio upload-it-as-you-go cell phones, and free, as-much-space-as-you-want hosting online have begun to blur many of the cultural definitions of privacy and communication that we've lived under for generations. And the upshot is that all of it has created even more in terms of the potential uses of this new Read/Write Web that we are dealing with.

PODCASTING

One of the first podcasts I ever remember listening to was by Matthew Bischoff, a teenager who had a real passion for technology and a real understanding of audience. It was obvious from the first few seconds of his regular Internet radio show that he was a young man who was not speaking to just his friends or family. He was speaking to the unknown thousands of people who started downloading and listening to Matthew's shows in late 2004 when podcasting was born. "This *is* Escape From the World" he would half-shout into the microphone, "and I'm your host Matthew Bischoff, a 13-year-old from New Jersey, podcasting from his bedroom." It was great stuff (Bischoff, 2005).

Matthew was one of the first of what has turned into tens of thousands of people who have taken the easy-publishing meme of the Read/Write Web into the world of Web radio. Podcasting is the creation and distribution of amateur radio, plain and simple. And it's the distribution piece of this that's important, because although we've been able to do digital audio for some time now, getting a lot of people to listen to it hasn't been very easy. Now it is. Many podcasts are presented by normal, everyday people just talking about things that interest them—with a bit of music mixed in. Others are more serious and focused in content, offering up the latest interesting news on a particular topic, interviews with interesting people, or recordings of interesting keynotes and presentations. And these days, most news programs, like *Meet the Press* and *60 Minutes,* and many radio shows like *Fresh Air* from NPR are also offered up as podcasts so you can take them with you and listen to them whenever you like.

In just a few short years, podcasting has become all the rage, and one of the reasons is that the barrier to entry is pretty low. Like the other technologies that I've talked about in this book, you do not need a lot of technical expertise to make it work.

Here's what you need to create a basic podcast: a digital audio recorder that can create an MP3 file, some space on a server to host the file, a blog, and something to say. That's it. That's part of why the number of new podcasts out there continues to explode. The other part of the quick success of podcasting comes from the fact that not only are they easy to create, they are easy to consume as well. And that's because of RSS.

Just like it allows people to subscribe to your Weblog, RSS allows people to subscribe to your podcast. And just like new blog content shows up in your aggregator whenever it's posted, new podcasts show up in your MP3 player whenever they are created. Say, for instance, you are subscribed to Ben Grey's "The Ed Revolution" podcast (Theedrevolution .com). Whenever you program it to do so, the free podcast aggregator software that sits on your computer will go out and check to see if Ben has a new show for you to listen to and, if so, will download it to your computer. Even better, if your MP3 player is connected to your computer at the time, the software will send it over automatically. So, conceivably, you could wake up every morning, disconnect your player from the computer and go out for that early morning run or drive with a whole list of new content to listen to.

Apple loves this, of course, because it's suddenly made the iPod (or iPhone) into a mobile radio station that can hold personalized, time-shifted content for your consumption whenever you feel like. And they also love it because of the name, even though none of this requires an iPod. It could just as easily be "audiocasting" or "blogcasting" or something else, but podcasting has stuck.

So who is podcasting? Mostly, it's people from all different walks of life with all sorts of interests. Politicians are definitely in the podcasting groove, as every candidate for the presidency in 2008 started pumping them out well before the primaries. Rightly so, they see the genre as way of getting out their respective messages. Businesses, churches, governments, and, you guessed it, schools are getting into the act as well.

The best place to start your podcasting indoctrination is to take some time to listen to a few shows. But be prepared: This is not the highly polished, professional radio you might be used to. Cracks and pops, obscure music, and "ums" and "ahs" are all a part of the podcast genre. Remember, most podcasters are just average Jills and Joes, with day jobs and kids and responsibilities, and ideas that they want to share. Try not to let production value overwhelm what might be really interesting content.

It's no surprise that Apple has incorporated support for listening and sub-scribing to podcasts into iTunes, its software for managing music on the iPod (see Figure 8.1). In case you're not using an iPod (and there are a lot of great alternatives out there), iTunes is free for download from the Apple site (www.apple.com/itunes/). Once you have it up and running, just go to the iTunes store homepage and click on the podcasts link in the top left section. Under the categories that come up, select "Education," and in the "More Education" box, click on K–12. There you'll see all of the top podcasts of the day as well as links to those that are featured. Click on any of the icons and you'll come to a list of the most recent episodes, which you can preview through your computer if you like. If you find it worthwhile, just click the "Subscribe" button to add it to your iTunes list. The next time you fire up iTunes, it will automatically go and check for any new episodes, download them to your computer, and synch them with your iPod when you plug it in. (For more on the complete uses of iTunes, see tinyurl.com/3y3zub.) If you find some other podcasts out there on the Web that aren't listed in iTunes, you'll need to subscribe to them manually. Just find the address of the RSS feed for the show and paste it into iTunes under the "Advanced=Subscribe to Podcast" function in the menu bar.

Figure 8.1 iTunes is Apple's free software to help you find podcasts to listen to and to list the shows you create.

Once you have some subscriptions set up, you need one more step to get your podcasts loaded directly to your MP3 player. If you leave your iPod docked and plugged into the computer at night, JuiceReceiver (tinyurl.com/fuzyg) and iTunes will do everything you need to make any new podcasts available for listening in the morning. If you don't have an iPod, you might need to use Windows Media Player to move your files around. Open Media Player and click on "Tools" then "Options," and then select the "Library" tab. From there, click the "Monitor Folders" button and "Add" the folder where JuiceReceiver stores the podcasts you are subscribed to, usually C:\Documents and Settings\your username\Application Data\iPodder\down loads (for a more detailed description of how to do this, see Jake Luddington's post on "Podcasting with Windows Media Player," at tinyurl.com/q8xksq). Then, plug in your MP3 player and use the "Sync" tab to drag and drop the files you want.

PODCASTS AND SCHOOLS

As with most of these other technologies, it's not hard to see why podcasts are making inroads in schools. One way to get into the flow of education-related podcasting is to visit the Education Podcast Network (tinyurl .com/66grdx), which lists nearly 1,000 different education-related shows. Not only is there a growing directory of educators who are doing personal podcasts, there are links to suggested classroom uses broken down both by grade level and subject.

And remember, the underlying technology here is digital recording and the idea that it is now *very easy* to create and publish these recordings. You and your students may not have iPods or MP3 players, and the good news is you don't need them to start using audio in this way. As long as you have a way to make the recording, and as long as your students have access to the Internet, you can make this work. More about that in a minute.

In general, radio broadcasting is now a reality for the vast majority of schools that can't afford radio stations. About $100 and an Internet connection is all you need to start doing regular radio shows with your students. And once again, the motivating factor, to me at least, is that the content of these shows does not have to be limited to a school or community audience. Podcasting is yet another way for them to be creating and contributing ideas to a larger conversation, and it's a way of archiving that contribution for future audiences to use.

One of my favorite examples is Radio Willow Web from the Willowdale Elementary School in Omaha, Nebraska (tinyurl.com/2z2ujz). As the Web site says, these Willowcasts are "online radio shows for kids by kids" (site

shown in Figure 8.2). Each show has its own host, theme, and unique segments, which can include things such as "Bad Joke, Good Joke," "Holiday Spotlight," "Poetry Corner," and much more. It's a great example of what you can do with podcasts.

Figure 8.2 Students at Willowdale Elementary in Nebraska are podcasting about their school on a regular basis.

And then there are "Coleycasts" by the students of Brent Coley in Murrieta, California. They produced 18 "enhanced" podcasts with audio and accompanying slides on everything from the solar system to Spanish explorers during the 2008–09 school year (tinyurl.com/oj6f39). These are some great examples of kids making their learning transparent for others. Or how about "Students Teaching Students," which is a regular podcast that fifth graders at the International School of Thailand in Bangkok produce around the idea of "helping other students learn and use quality strategies for reading." On the class Gcast page (another hosting service for podcasts) you can find dozens of recordings specific to Reader's Workshop topics that third graders at the school (and others) are using to think about how to better understand the reading process and the themes, plots, and characters for the books they are reading (tinyurl.com/lgd3cr). Real work for real audiences.

But podcasting doesn't just have to be edu-radio. There are many other ways that teachers can bring the genre into the classroom. World language teachers could record and publish daily practice lessons that students could listen to at home or, if they are fortunate enough, could download to their own MP3 players. Like the Madrid Young Learners Podcasts site (tinyurl.com/5qbqze), where an English speaker tells a story via a podcast and non-English-speaking listeners answer questions in English via comments. How hard would it be to make your own site like this (now that you know how to blog), with teachers enlisting native speakers from around the world to tell stories that their own students respond to?

Social studies teachers could have their students do oral histories, interviews, or reenactments of historical events. Science teachers could have students narrate labs or dissections or experiments to record their processes. Music teachers could record weekly recitals or special events as podcasts. All teachers could record important parts of what they do in the classroom that can then be archived to the class Weblog and used by students who may have missed the class or just want a refresher on what happened.

Steve Brooks over at EduGadget.com has some suggestions that schools and districts might want to think about, including guided "pod tours" of the campus on back-to-school night (perhaps created by students), or tours of art displays narrated by the artists. You could record assemblies, do new teacher orientations, have supervisors record descriptions of their departments, and record board meetings for students, teachers, and parents who are unable to attend. Principals could record weekly or monthly messages to the community, teachers, or even students. As with blogs, the possibilities are only limited by your imagination (Brooks, 2005a).

Remember, all of these ideas can be put into practice simply by recording digital audio, but the key to turning your or your students' recordings into podcasts is to publish them. That's what the Read/Write Web is all about: being able to share what you create with others. As I've said before, keep thinking about ways to add these student contributions to the larger database of learning that's out there.

GETTING STARTED WITH PODCASTING

Before you get your students podcasting, I would urge you to try it out first. Again, I think you need to experience what you are asking your students to do—not only so you can support their technical use, but also so you understand what Web publishing really feels like. Although the following may seem a bit high end, technically, podcasting is one of those technologies that can be as simple or as complex as you want it to be. And like all of these technologies, once you've done it a couple of times, it should come pretty easily.

First, you need a way to record digital audio. If you don't have a computer that has a microphone built into the monitor (like most laptops these days) you can do this by plugging a microphone into your computer to record, or by recording directly onto some MP3 players. (Some handheld devices and mobile phones also make this possible.) For instance, iPods have microphone attachments that allow you to record directly to your iPod in MP3 format (the Griffin iTalk, for one). If you have a second generation iTouch, you can use the QuickVoice Recorder app from the iTunes app store (which also works on an iPhone if you have one of those). These are great for doing mobile recordings, like on field trips or while driving (not recommended). Take some time to experiment, record, and listen to see what kind of quality you can get and whether or not it suits your needs. And you'll also need to learn how to get the recordings off of your player and onto your computer. Depending on what type of portable recorder you use, you can use iTunes or Windows Media Player to do this when you attach your player.

Making MP3 recordings on your computer is pretty easy and inexpensive as well, and generally the quality is better. In addition, you save the step of having to transfer your recording over from your handheld device. You'll need some software to capture what you record in MP3 format, and I would recommend the open-source program Audacity (tinyurl.com/4gx3j), which is free, easy to use, and is a good audio-editing program as well. (You'll also need to download Audacity's MP3 encoder at tinyurl.com/bka3e separately to translate your files into MP3s.) Remember that if you use Audacity, you need to choose "Export as MP3" under the file menu when you've finished recording and editing. And remember, too, that you can use Audacity to clean up the recordings you create on your MP3 players (see Figure 8.3 for an image of Audacity).

Figure 8.3 Audacity is a free, open-source program that makes it easy to edit and mix your audio files.
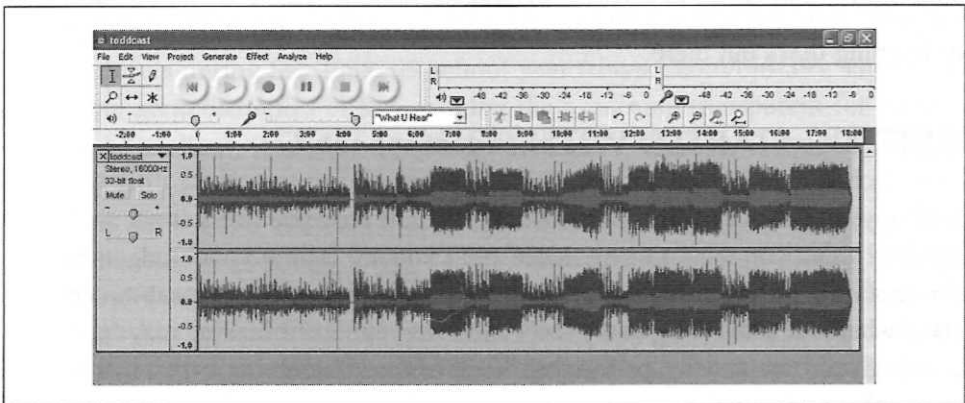
One other way to capture audio content for podcast is to use the free Internet telephone service Skype (Skype.com) to record interviews with people from around the world. (They can either have a Skype account as well, or they can use their regular telephones.) In fact, you can hold and record conference calls of up to five people. There are lots of recording programs out there, but I would suggest Call Recorder for a Mac ($14.95 at this writing at tinyurl.com/euc2f) and Skype Call Recorder (free at tinyurl.com/d3zlpy) for a Windows machine. And a headset microphone would really improve the quality. Just download the software, set up your Skype account, get the Skype names of the other people you want to talk to (I'm willrich45), record the phone call, and use Audacity to export it as an MP3. Personally, I think there is a huge potential for using Skype in this way in the classroom.

Once you have your "studio" ready, you need to figure out what you want to do or say for your test run. Maybe you can begin by creating short responses to things you read in the news or in the blogosphere. Or perhaps you want to create an audio tour of your classroom, interview some other teachers, recite poetry, or even sing a little bit (in my case, a very little bit). Whatever you decide to do, think about your audience, because you'll be asking your students to do the same. (You may even want to write out your first few podcasts beforehand, but I would urge you to try not to read from a prepared script.)

If you're using Audacity to record onto your computer, just plug your microphone in and click on the "Record" button. Don't worry too much about fooling around with the levels and the settings to start. Just make some short recordings and play them back to see how they sound. If you have a microphone attachment and are using your MP3 player as a recorder, you'll need to go through the synching-up process for whatever player you have to get the recorded files onto your hard drive.

When you've finished the talking part of your podcast, you might want to do a little editing and production. Using Audacity, you can easily edit out all of the "ums" and "ahs," unless of course you find they add charm to your show. (Not to jump ahead, but there is a great video/audio screencast by Matt Pasiewicz on using Audacity at tinyurl.com/bjrmo.) Even better, you can use Audacity to add intro or transition music to your work (see Figure 8.3). If you have the means to create your own digital music—GarageBand for instance—you don't have to worry about the copyright issues of using other people's work. If you can't make your own, you might surf on over to CCMixter.org to find some free-use music that's legal to add.

Here's how: After you have saved the music files to your computer, use the "Import Audio" feature under the Project section in Audacity to start editing and mixing. Start with your own recording. Press the play button to start listening, and then use the "Selection Tool" (the icon that looks like an *I* in

the upper left-hand corner) to drag over the parts of the file that you want to edit out, and hit delete. When you've finished with that, import your music track the same way and then line up the timing between the tracks by using the "Time Shift Tool" (the one that looks like a two-headed arrow). You can fade one track in by using the Selection Tool and then choosing "Fade In" from the Effects section. It may look daunting, but if you play just a little, you should be able to do some editing and production in no time. Or not: Remember, one of the charms of podcasting is its unfinished quality. So don't get worn down by production if it doesn't suit you. When you're done, just "Export as MP" from the File section, and you're ready to publish.

The first step to sharing your podcast is to transfer the MP3 file you made from your computer to a server that's on the Internet. If you have a Web server at your school, that's probably your best bet. (In this case, maybe your first podcast should be one that highlights the fine work of your school's Webmaster.) But even if you don't, or even if you for some reason can't use that server, there are alternatives. The first is archive.org, which "provides free storage and free bandwidth for your videos, audio files, photos, text or software. Forever. No catches." Just sign up for a free account and upload your MP3 using their easy process. Wherever you put it, you use the unique URL that is assigned to the file to create a direct link to it in your blog or Web site. When people click the link, they'll hear your creation.

The other way to get your file on the Internet is through the blog software that you use. Most popular blog software such as WordPress now have automatic support for "enclosures" like MP3s (or any other type of file for that matter). When you create the post that describes your podcast, you'll be able to add the MP3 file to the post automatically by attaching it. (This process varies depending on your software—search for "enclosures" in the "Help" section.) This step gets the file onto a server and automatically links it in your post. And, in this case, it means that people (students) who want to listen to the audiocasts you've created can do so by simply subscribing to the RSS feed of your blog. With Blogger, this is a bit more complicated, but there is a great video on YouTube from the Blogger Help group that should get you up and running (tinyurl.com/qgokg6).

If the podcasting bug bites hard and you start creating regular "shows," don't forget to go to the various directories to get yourself listed. Start with iTunes by clicking on the Podcast link on the iTunes homepage and then clicking on the "Submit a Podcast" icon that appears on the next page. Podcastalley.com and EPNweb.org are a couple others you might want to register with as well.

Now, if all of this still seems like too much work, you might want to check out a couple of Web-based podcasting services that make things even easier. The aptly named Podomatic.com is my favorite, but Odeo.com does pretty much the same thing. Create an account at Podomatic, and once you are

logged in, click on the "My Podcast" link. Then click on "Post an Episode," and on the next page, fill out the basic information in the form and then click "Record" at the bottom. Podomatic will find your microphone, and once it does, you can record your podcast directly onto its server. (Remember, however, you can't edit what you record, so you might need to redo it a few times until you get it right.) It will even set you up with your own iTunes subscribe-able blog where you can send people to listen to your work.

And with that, you and your students should be well on your way to fame and, well, fame in amateur radio.

Video Publishing

While elementary school kids seem to love podcasting, older kids have started gravitating to video in a big way. And the biggest reason for that without question is YouTube.com. Bought by Google back in 2006 for over a billion dollars, YouTube is already having an enormous disruptive effect on our society, and it's also becoming a place where more and more of our students go to publish the artifacts of their lives. As of this writing, over 20 hours of videos are being uploaded to YouTube every minute, which translates to almost four years' worth of video uploaded each day (tinyurl.com/p464gl). Staggering numbers, if you ask me.

Not surprisingly, it's also a site that most schools have chosen to block. While, as with the other sites we've discussed here, the vast majority of YouTube content is appropriate, the "anyone can publish anything" aspect can be unsettling. (Still, wouldn't it be better to teach students how to deal with less-than-salient content that they see when they get home?) The same goes for Google Video and a number of the other popular uploading sites. So, a number of alternatives for educators are already springing up, the most notable of which is TeacherTube.com. TeacherTube has thousands of student-and-teacher-produced videos and wants yours as well.

The great part about these online services is that they're free, number one, and they are unlimited in terms of their use. And, in the case of YouTube, you can even record video right from your computer onto their server. Very cool. But as with podcasting, there is a certain amount of writing and preparation that goes into great movie making. It's digital storytelling in its most complex form, and it requires a significant amount of thinking and work to do it well. And, of course, the process is a bit more complex, making it difficult to cover in this small amount of space. My goal here is to point you in the right direction to get started.

If you want some ideas of what can be done, one of the masters of student video is Marco Torres, a social studies teacher at San Fernando High School in California. Over the past seven years, he's had hundreds of students producing and publishing video both online and at the local "ICan

Festival de Cine" (tinyurl.com/6aalqr). I would definitely urge you to spend a little time watching some of their efforts because they represent some of the best examples of student cinema video I've seen. And if you do take the time, you'll notice that every one of the videos that Marco's kids produces has a meaning beyond the classroom. These are done for real purposes, for real audiences, and are a great reminder as to the potential of the Read/Write Web. (My personal favorite is "Parents" at tinyurl.com/qqg4kg.)

Getting started with video requires a bit more of an investment than with podcasting, but you can still produce some great movies on a shoestring budget. And remember, while quality is important, what's critical are the writing, producing, and publishing skills that students learn in the process. In that regard, the time investment is also much greater.

Digital video cameras can run into the thousands of dollars these days, but you should be able to find a decent one for $300 or less. (A good starting point for your search is at cNet.com.) If there is one requirement for whatever you choose, make sure the camera has an external input for a microphone. That way, if you are shooting video from across the room, you can buy an extra long (like 30 feet) mic extension cord and drape it over a broomstick to create a makeshift boom mic for better audio quality.

Before filming, remember to take the time to have students plan their movies using storyboards that frame out the story, and to do some basic instruction on how to hold and use the camera. One of the best resources for this that I've found is the video podcast at IzzyVideo.com. Just check out the list along the right hand side of the page and you'll see a list of the dozens of short tutorials that can really help you understand the nuances of digital video production.

Once you have a camera, and you've shot some video, you'll need to do some editing and production. Luckily, both Windows and Mac platforms have good basic video editors in MovieMaker and iMovie, respectively. Both allow you to import video and audio, and you can record audio voiceovers right onto your movie as well. You can create title screens, add text, run credits, and much more. In fact, the capabilities of these two free programs will most likely far outpace your and your students' needs. Both come with pretty good "Getting Started" tutorials that I urge you to check out, or, of course, there are entire books out there dedicated to the subject.

And, no surprise, there are also online video recording and editing alternatives. (Have I mentioned that the Web is becoming an app?) One to look at from an easy recording standpoint is JayCut.com, where you can upload your raw video from your computer, mix files together, add music and audio, and publish to your favorite video site. There are already many alternatives out there, so you may want to dig around your network for some suggestions when you read this.

Once again, the part about all of this that I love the most is that whatever you and your students create can be shared widely. And to me, that just changes the whole equation. To quote Marco Torres, these videos "should have wings" and be created for real audiences outside the classroom. Again, if you can't use YouTube as a video repository, try TeacherTube. Just create a free account and use the very easy upload process to get your videos online. And once they are there, take the equally handy-dandy embed code provided and add your video right to your blog by copying and pasting the HTML code into your blog's post-editing form. (Remember, you need to be in HTML editing mode to make it work.)

And one last thing you can do in terms of distributing what you create—make it a video podcast. With iTunes, it is pretty painless to take your creation and turn it into an MP4 file that can then be put on an iPod for viewing wherever you may be. First, click on the "Movies" section under your library in iTunes. Then, from the "File" menu, select "Import" and browse to whatever file you want to bring into your library. Once it's in there, just click on it once to highlight it and then go to the "Advanced" menu and select "Convert Selection for iPod." In a few minutes, depending on the size of your movie, you'll have a mini version that will synch right up with your iPod, or can be posted somewhere else for your students to download to their own devices or for others to subscribe to as they would any other podcast (see above).

SCREENCASTING

One step up from podcasting is screencasting, which is a relatively new medium that I think has a lot of promise in the classroom. Simply put, screencasting involves capturing what you or your students do on the computer with an audio narration to go with it. The easiest way to understand screencasting is to watch one. So, right now, go watch one of my all-time favorite screencasts about Wikipedia that was done by John Udell at tinyurl.com/ydp2sfg. I'll wait until you come back.

Okay, get the picture? (And "get" Wikipedia a bit more?) The potential is pretty obvious, I think. From a teaching standpoint, you could create screencasts as support materials when teaching complex skills on the computer. If you had a Tablet PC, you could capture the ink annotations or written solutions that you share with your students. You could create training videos for peers, narrate PowerPoint-created tours for parents, or make video collections of exemplary student work. Once again, the possibilities are enormous.

With your students, you could ask them to annotate their work in voice as they show it on screen. Or, you could have them create their own Internet tours. Or, have them read stories or poetry they write with accompanying

visuals they have either created or found. They can even take some of those podcast ideas and attach visual images to go along with it. It's limited only by your and their creativity.

The best part? It's so easy to do. If you can podcast, you can screencast. But, obviously, screencasting takes a bit more preparation. You're combining audio with video, which means you need to think more carefully about what you want to do and how best to do it. You'll need to prepare what it is you want to show on the computer and you'll probably want to create at least an outline of a script. You might even want to create a storyboard that sketches out the visual and the audio together. No matter how you plan, it's not a bad idea to run through it a couple of times before actually starting to create the screencast.

There are a lot of different screencasting tools to choose from these days, but from an ease-of-use standpoint, I love Jing (Jingproject.com, see Figure 8.4). At this writing, it's a free download that works on either a Mac or a Windows machine, and it's one of the easiest pieces of software to use that I've found in a long time.

Figure 8.4 When you click the video button in Jing, you get a three-second countdown to when the recording function begins.
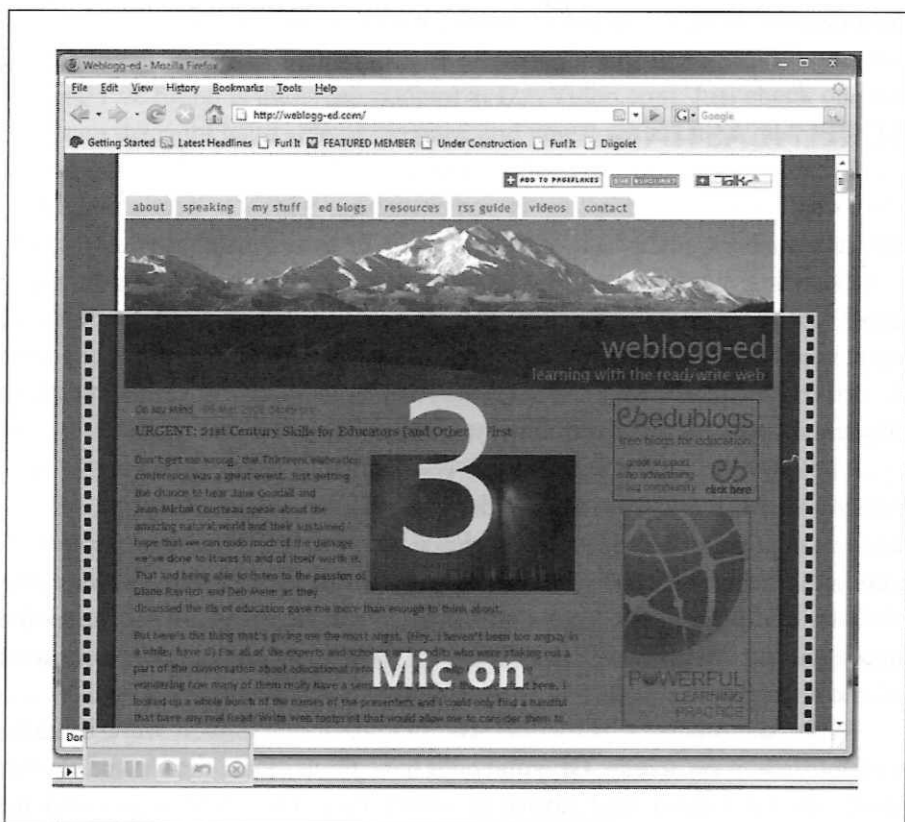
Once you have Jing up and running, it sits in the upper right-hand corner of your screen like a small sun, waiting and ready. Any time you want to make a quick capture, you just mouse over it and three rays of sunlight shoot out—a plus-sign icon that let's you start the capture process, a disk icon that lets you look at the history of what you have captured, and a gear icon where you can configure things. Click on the plus sign and you get crosshairs that you can drag over any portion of the screen that you want to capture. If you want the entire window, just drag the crosshairs onto it and click once. When you are done selecting, just click on the "video" tab at the bottom left, and you'll get a 3 . . . 2 . . . 1 countdown to begin your recording. (You can also use Jing as a screen-capture tool by clicking on the "Image" tab instead.)

At this point, start talking and working on your desktop to capture whatever process you're demonstrating. Remember that most screencasts should be shorter rather than longer, and, in fact, Jing limits you to five minutes. When you're done, click "Stop." (You can also click "Pause" if you need to stop just for a moment.) Immediately, Jing will pop up a playback window where you can preview what you just captured. Take a look, and if you don't like it, just cancel it and do it again.

If you do like the end result, here is where Jing makes things really, really easy. To save it, just click on the word "File" below the preview and then click the "Share" icon. Follow the instructions to let Jing know where you want your screencasts saved on your hard drive. (It saves as an .swf file, by the way.) If you want your video to be saved directly to the Web, click on "Screencast.com" instead of file, and your screencast will automatically be uploaded to your account, which you'll set up during the registration process. (Right now, you get 200 MB of free space at Screencast.com to play with, and an annual unlimited account is about $40.00.) If you want to share directly to YouTube, you can configure Jing to do that as well. (And remember, Jing works with Flickr, too.) When it's finished, all you need to do to share your screencast with the world is to distribute the URL, which, by the way, automatically gets pasted to your clipboard when the upload is finished. It's almost too easy.

Last but certainly not least, you can embed your screencast on your blog or wiki by going to your Screencast.com account page and copying the code provided there. Just paste it into the HTML editor for whatever page you want to add it to (like your class or school homepage, perhaps?) and anyone who visits will be able to play it right there and then.

LIVE STREAMING—WEB TV FOR THE CLASSROOMS

The most recent entry into the multimedia publishing discussion is live-streaming video to the Web. In a nutshell, we're talking the ability of teachers

and students to create their own TV shows online in just a few clicks. And, if you have a personal learning network at your disposal, you also have a potential audience at your fingertips.

While this is still pretty unexplored territory in education circles, and while the tools are evolving rapidly, a surprisingly large number of teachers are already experimenting with the idea of creating live "television" with their students in their classrooms and schools. And because of how incredibly easy it is to do this, that number is increasing greatly every day.

The examples run the gamut: school plays and musicals being broadcast to relatives far and wide, student science presentations for parents to watch, live student-run daily news broadcasts, live teacher professional development that anyone can tune into, conference workshops and presentations free to those who couldn't make the trip, and all sorts of other possibilities. Basically, we're close to the point where every school, every classroom, every person, in fact, can own a television station.

Don't believe me? Here's a quick story. On the night of the New Hampshire primary in 2008, I got a Skypechat asking me to come watch and participate in a live review of the election returns on the "Newly Ancient" streaming TV channel at Ustream.tv. So I clicked on the link, and who should I find conducting a careful analysis of the voting while talking live via Skype with people around the world and interacting with about 15 "viewers" in the show's chat room but Arthus Erea, that 14-year old blogger I mentioned a couple of chapters back. That was a "sit up and take notice" moment for me, no doubt.

How do you do it? See Figure 8.5—the requirements are a fast (or pretty fast) and stable Internet connection, a computer with a microphone and either an external Webcam or built-in video camera, a free account at an online video streaming site, and an idea. If you have those ingredients, you can be streaming live to the net in under five minutes. Really.

Right now, the online video streaming site of choice among those in my network is at Ustream.tv, a free site that not only makes streaming easy but offers a chat room for viewers to interact with while watching, archives your shows for later viewing, and, among other features appealing to educators, allows you to password protect your show so only those who you share the login with can view the live stream. You can sign up for a free UStream account by simply clicking through the "Sign Up" process at the top right of the page. Once finished, click on the "MyShows" tab, give your show a name, and then, if you are set up and ready to go, click "Start Broadcasting" (see Figure 8.6, page 128). (If you're not ready, just save your show until you are.) You can also come back and work your way through the various configuration tabs to create a unique look for your show, to get code to embed the show into your school homepage, for instance, and to determine who can view

Figure 8.5 The UStream broadcast page shows the live stream on the left and has a chat area for viewers' comments and reactions on the right. It also lists thumbnails for all of the archived shows.

your show and play in the chat room. (The password option is under the "Advanced" tab, by the way.)

When you click "Broadcast Now," a "Local Broadcasting Widget" box will pop up and load the production tools. You will be asked to approve the use of your microphone and webcam, and, once you do, you will see what will be broadcast and you'll be able to adjust the levels of your microphone as well. Once everything is adjusted, click "Start Broadcast" a final time, and, if you want to archive the session, click "Start Recording" as well. (Recording allows you to save any show under an hour to your computer and to use the embed code on the show page to make it play on your blog or wiki or whatever. Note, however, that the chat conversation does not record—you have to copy and paste that into a document at regular intervals if you want to save it.)

Figure 8.6 When you click "Start Broadcast" on your UStream page, you will be asked to "allow" the use of your Webcam and microphone.
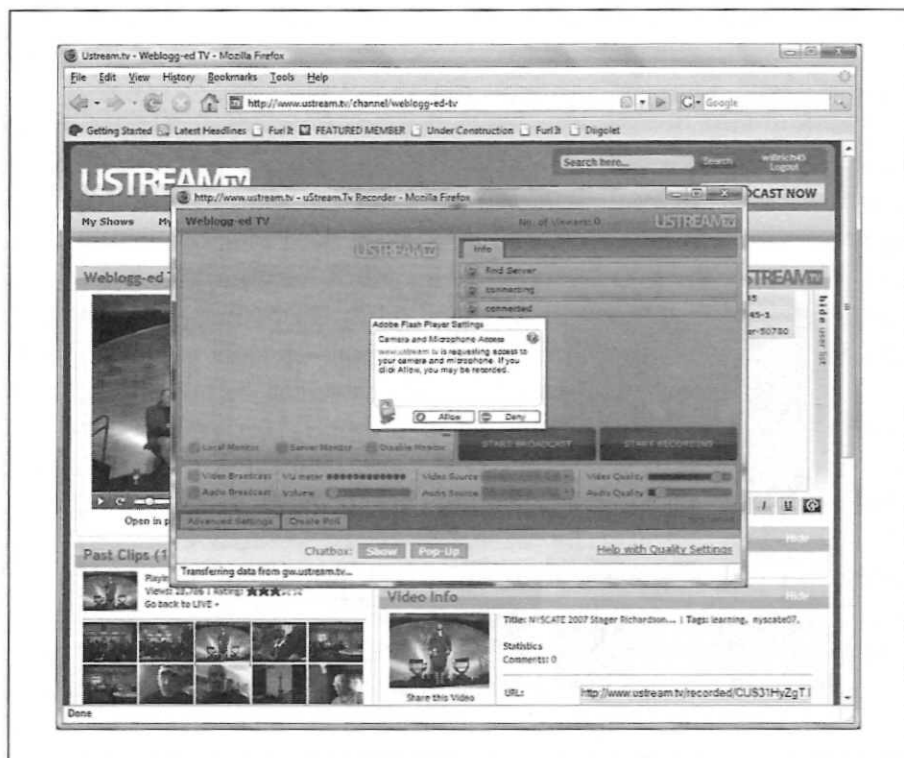
Now, you need to let your audience know that you're "on air." Obviously, you should plan ahead by communicating the Web address of your show and the time you will be broadcasting. Your Web address can be found under the "Share" tab after you click on "My Shows" once you are logged in. (It will look something like "ustream.tv/channel/weblogg-ed-tv.") But the other way to get an instant audience is to use your network. (Hopefully, you're well on your way to creating that by now.) And the easiest way to shout out your show to the network is by using Twitter. Just send a "tweet" with the show address, and folks will be showing up in droves before you know it.

A lot of presenters (myself included) stream many of their presentations and take advantage of the chat feature that Ustream provides. The "backchannel" conversation can be a great way of interacting with the online audience and broadening the scope of the dialogue. And some classrooms are really starting to take advantage of live streaming. On fifth-grade teacher Bill Chamberlain's class

blog (tinyurl.com/clby52) from Noel, Missouri, you can see a live stream of his classroom whenever it's in session, and on his Ustream page (tinyurl.com/69aesr) you can find archives of presentations, projects, and all sorts of other stuff. It's a great repository of student work and learning.

On last note for Mac users. If you are going to play with streaming video, you need to get CamTwist (tinyurl.com/33ckvz), a free download that creates all sorts of production possibilities including adding slide shows, videos, music, multiple cameras, text scrolls, and more. As of this writing, there is nothing like it for Windows machines—sorry.

And just when you thought live streaming couldn't get any easier, guess what? You can now do on-the-spot, live, interactive video reporting using your phone. That's right. Your phone. Let's take a moment, shall we, to consider the implications of that little development when in comes to our kids. Done shuddering yet? While the prospect may seem a bit unsettling, to put in mildly, to me it's just another reason why we have to get our brains around these shifts and be able to teach our kids the ethics and sensibilities to make good choices regarding these powerful technologies they are carrying in their pockets.

No question, the live streaming from the phone option is not as high quality as from the computer, but, in all honesty, it isn't bad. At this moment, Ustream Mobile works with just about any Nokia phone that has a camera, and with a jail-broken iPhone 3G. (I never told you that, by the way.) You simply download the application to your phone, find something worthwhile to stream (like my daughter's basketball games), and press whatever button means "Start" on your phone. Anyone who has the address of your Ustream.tv "show" can just tune in and watch. Like the computer version, you can save the recordings to your show page, and, whenever anyone watching your show types in a chat comment or question, you see it on the video screen on your phone so you can just talk back a reply. Pretty amazing.

Also going down this road is Qik.com, which, at this moment at least, supports even more phones. And if you do have a jail-broken iPhone 3G (shhhh!), both services now have apps in the App Store on iTunes. (Ustream also has an app that allows you to watch live streams on your iPhone, regardless of whether you've hacked it or not.)

All of that being said, our ability to create and share multimedia in more and more transparent ways is only going to continue to expand. The potentials are huge, and the pitfalls challenging. But publishing to an audience can be a great motivator for students. Podcasting, videocasting, screencasting, and now live-streaming TV are all great ways to get student content online.