

EDUCATIONAL PODCASTING

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ABSTRACT

Podcasting is the creation of audio shows, or feeds, making them available for subscription over the Internet. People can subscribe to the feeds by using iTunes, or aggregator programs. The advantage is that an idle computer can download podcasts, making them available to a person later when the listener is ready. Podcasts can be heard on the computer or downloaded to an MP3 player. Already there are thousands of educational podcasts for many different disciplines. Incorporating podcasting into a course can provide lectures, interviews, current events and student produced content to use in the classroom. This paper describes podcasting and how to publish a podcast. Strategies for integrating podcasting into teaching and the future of podcasting are also discussed.

Introduction

In 2000, Adam Curry and Dave Winer were working on ways to create automated media distribution over the Internet with the intent of supporting large video downloads. However, in 2000, many people still had dial-up connections to the internet, and downloading video was very slow. Curry had the idea that through subscriptions, people could capitalize on their idle internet connections, downloading content when their computers were not in use. The internet was increasingly successful for downloading music for use in MP3 players. Applying this idea to audio files, they could download content for use later in an MP3 player. Dave Winer's invention of Real Simple Syndication (RSS) made it possible to download shows (like talk radio shows) through subscriptions. Upon subscribing to particular shows, new shows would be downloaded and stored on your hard drive until a person wanted to use them. Not only could the user play them on the computer, they could download shows to their MP3 player and listen when they chose. The phrase 'podcasting' was introduced by Ben Hammersley in 2004 [3], in the *Guardian*, using the idea that your iPod is capturing broadcast shows. A person could use 'podcatcher' software to subscribe to several shows, or feeds, that would download when they were away. The shows are stored until the user deletes them or has them scheduled to delete. Today, predictions say that podcasting will grow to over 56 million listeners by the year 2010 [1]. The number of shows a listener can subscribe to is growing as well. Radio stations, news agencies, television shows, and educators are regular podcasters.

There are 21 categories, such as business, education, sports and science, with thousands of podcasts available in each category. As with the pages of the Internet, there can be something for everyone. Some podcasts may seem frivolous and pointless while others provide stimulating perspectives and information. There is everything from NPR's Story of the Day to Sachscast ("The world's first and only podcast completely dedicated to everything Marshall Sachs."). Most radio stations and news agencies publish podcasts regularly. There are many independent producer/publishers too.

To find podcasts on the Internet, there are several podcast directories, including Podcast Alley (<http://www.podcastalley.com>), Podcast.net and iPodder.org. To give an idea of typical podcast shows, the top 10 most popular podcasts from Podcast Alley, 10/10/05 are listed in Table 1.

Table 1. Top 10 Podcasts from Podcast Alley, 10/10/05

Podcast	Description
Keith and The Girl	Keith and his girlfriend talk about lots of different things. Shows include bashing computer stores and their technical help and change your homepage Tuesday, where you go to computer stores and change the default Web page to KeithandtheGirl.com.
Free Talk Live	Free talk about everything.
The MacCast	Macintosh Technology Show.
Ancestor Podiobook	Sci Fi story by Scott Sigler. Violence and strong language. Scientist on a Lake Superior island, release an evil species, when working on animal/human, organ transplants.
The Dawn and Drew Show	Ex-punks living on a farm in Wisconsin talk about various topics.
Socccergirl Incorporated	Sexually toned ramblings about drug use, the lottery, dating ..etc.
PotterCast	Everything Harry Potter. 'discussions, theories, interviews and more.' Three fans discuss topics.
Nobody Likes Onions	Comedy. Different topics.
The WEEK in TECH	Roundtable discussion of weekly events in technology.
Distorted View	Comedy show reviewing weird news stories from the Internet.

Educational Podcasting

Educational Podcasting covers many topics and age groups. Obvious topics that seem advantageous are foreign language and music, disciplines that require hearing to acquire that particular skill. But, topics such as history, archeology, biology and marketing can be found too. Several professors, offer podcasts in association with courses they are teaching. Some are lectures captured to audio while others are lectures that correspond to Web sites, photos, exercises and exams. Capturing a lecture and making it available for students to download seems to fit easily into conventional teaching methods. It can be done quickly and at very low cost. There is also very little learning curve on the part of the professor to produce a show. Some professors reason that they are giving the lecture anyway, so why not record it and make it available to students?

Figure 1 shows the Time, Place Matrix developed by Englebart in 1990 [2]. The matrix divides different technologies into quadrants depending upon time (synchronous and asynchronous) and space (located together or dispersed). For example, a traditional lecture is same time/same place. It requires students and the faculty member to be in one place at one time. Instant Messenger is an example of same time/different place. People talk in a text chat-room from distantly located computers. Podcasting can be added to the matrix as a different time, different place technology. That is to say, the content can be recorded at one time and each student acquiring the content can do so from anywhere (with a computer) and at any time. Consuming the educational content can be at the convenience of the listener. Further, the learner can re-wind, re-listen and reflect when it is optimal for them. However, podcasting is distinctly different from other technologies listed in the matrix. The other technologies are technical systems, requiring training and specialized equipment to use. Podcasting takes advantage of already existing devices that people enjoy using and feel an affinity towards. Since undergraduate students are the right demographic for consuming popular music, they are ideally suited to podcasting.

Figure 1. Time Place Matrix (adapted from Englebart, 1990)

	One Meeting Site (same places)	Multiple meeting sites (different places)
Synchronous communication (same time)	Face to Face Interactions Electronic meeting rooms Group decision support systems	Desktop conferencing Video conferencing Instant Messenger
Asynchronous communication (different time)	Ongoing Tasks Team rooms Group displays	Email Bulletin boards Workflow management Podcasting

How to Create a Podcast

To create a podcast, see you need to digitally record your content, convert it to MP3 format, develop an XML file to house the link and then upload the MP3 file and the XML file to a Web server. Making a digital recording of your content is easily done with a \$20 microphone and your laptop computer. There are several free and moderately priced products available that can help you create a podcast. Audacity is the one most frequently mentioned sound recording and editing applications mentioned in articles about affordable podcasting. Using a product called LAME with Audacity allows you to export your audio file in MP3 format. To create the XML file to create your RSS feed, you can either edit the file yourself or you can use a podcast producing application like FeedForAll. Table 3 lists several applications useful in producing and subscribing to podcasts. The XML file that contains the URL where your podcast MP3 file is located is a simple file of about 20 lines of code. XML is like HTML with customizable tags. To subscribe to the feed, podcatcher software can be used to past in the URL of the XML file.

Table 3 Podcasting Software for Windows Podcasting for the Classroom

Recording and Editing	
Audacity with LAME (free)	http://audacity.sourceforge.net/ http://lame.sourceforge.net/
Replay Radio (\$50)	http://www.replay-video.com/replay-radio/index.php
MixCraft (\$40)	http://www.acoustica.com/mixcraft/
Publishing	
RSS Channel Editor (online) – generates downloadable XML	http://www.webreference.com/cgi-bin/perl/rssedit.pl
Feed For All (\$40) – editing too	http://www.feedforall.com/
Orange Box (\$40) – video too	http://www.globalsyndication.com/orangebox-forwindows
Feed Validation – Test your uploaded files to make sure they are correct.	
Feed Validator	http://feedvalidator.org/
RSS Validator	http://rss.scripting.com/
Podcatching	
Doppler Radio	http://www.dopplerradio.net/
iPodder	http://www.ipodder.org/
jPodder	http://www.jpodder.com/
iTunes	http://www.apple.com/itunes/

There are several ways to incorporate podcasting into a college course:

Lecture: Recording a lecture and making it available for download, turns your lecture into ‘walk away’ content. This could be useful for a student who misses class or who wishes to re-listen to a lecture. This could have great potential for distance education courses. It might be problematic in that if a student is listening from their computer, other distractions could prevent them from listening to the lecture.

Web enhanced lecture: In a podcast, enclosures are possible. That is, if you were giving a lecture about eCommerce, you could enclose links to other content (a case study, an exam, a diagram) related to your lecture.

Interviews and Roundtables: These are a very common format for podcasting. It can be more engaging to listen to a host asking an expert about their specific discipline, than listening to a traditional lecture. This can include an interview that the faculty member has done or could be an interview with an industry expert that is already available. Conference round tables and distinguished speakers can be found in podcast directories.

Student Generated Content: Blogs are already in use in higher education. Advocates of student blogging see it as a way to increase student writing ability and as a way to document their growth. Audio blogging, or plogging (podcast blogging) gives a student a way to record their thoughts and experiences. Pedagogies like service learning might be well documented and reflected by a student padcast. Podcasting can give students a chance to explore, create and be experts in areas of study. It also lets other students listen to the student generated content, learning from and critiquing each other.

Conclusion

As faculty become more familiar with podcasting and MP3 players continue to be popular, it is likely that podcasting will continue to grow. The value of podcasting in the classroom, just as the value of the Internet, will depend upon the quality of the content. In a world of blogging, podcasting and emedia, students need to become critical of sources they consume and of content they themselves create. In a recent survey, students expressed their mistrust of television and newspapers for information, preferring Internet sources. This is ironic considering ten years ago we were teaching them not to believe everything they saw online. It is odd to think that a novice could be placed in the same category as an experienced expert. That is the beauty and bane of podcasting. There are thousands of podcasts and most are uninteresting. Perhaps the multitude of podcasts will level off, and only the well produced and smartly marketed ones will survive.

REFERENCES

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