



PODCASTING

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Practical Podcasting: Lecture Recordings Delivered to the Desktop

Introduction

Podcasting is a powerful new form of audio broadcasting that has changed the way audio files are produced, delivered and experienced online. Recent technological advances have made recording professional quality audio easy and affordable. The ability to automatically subscribe and download audio files and listen to them on various portable devices has increased their usefulness and usability. As a result of these factors, podcasting is emerging as an accessible and effective way to deliver educational content to learners.

The School of Medicine at Queen's University initiated a pilot project in January 2007 in order to evaluate the effectiveness of producing and delivering podcasts of lectures to undergraduate medical students. The goal of the project was to determine an affordable and manageable way to record and deliver podcasts that supports flexible learning.

Objectives

1. Determine the most effective way to record the audio of a lecture from a logistical point of view (equipment, human resources, etc.).
2. Determine the most effective way to deliver the podcasts to the students.
3. Understand how students are using the podcasts and how they contribute to their comprehension of the material.

Methods

The pilot project was initiated by recording selected didactic lectures in the first and second year of the undergraduate medical curriculum. Several recording options were explored, including capturing video and PowerPoint, before deciding to record the audio portion of the lecture only. Audio was chosen for its high impact and relatively low recording costs compared to video and the PowerPoint was not recorded because students have access to these files before, during, and after the lectures. By recording the audio only, some of the legal and copyright issues associated with recording video could also be avoided.

Process and Delivery

Pre-recording (prior to the lecture event)

- Written permission to record the lecture is obtained from each instructor prior to the event.
- Student volunteers from each year are equipped with an iPod and an attached microphone and trained on how to record lectures with the device.

Recording (during the lecture event)

- Students place the iPod and attached microphone on the podium during the lecture to record the speaker and are responsible for starting, pausing, and stopping the recording.

Publishing (after the lecture event)

- After the lecture, the students convert the recording from the default WAV format to an MP3 file using the freely available iTunes music player and then upload the recording to a designated FTP server.
- A MEdTech staff member logs in on a daily basis and uploads the MP3 recording to the corresponding lecture event in Online Course Resources, which is an in-house course management application. The next version of Online Course Resources will allow the designated students to upload recordings directly to the lecture event, eliminating the need for this step.
- A podcasting RSS feed was created using open standards that provides authenticated subscribers with an up-to-date list of podcasts available based on content posted to Online Course Resources.

Subscribing and Downloading

Once authenticated, users who wish to listen to the podcasts have the following two options:

1. Subscribe to the podcasting RSS feed using iTunes or any other standards based podcast subscription tool. This method allows the podcasts to be delivered directly to the subscriber as they become available.
2. Visit Online Course Resources and download the individual MP3.

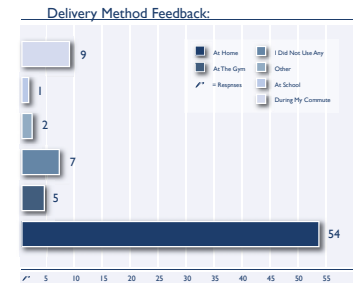
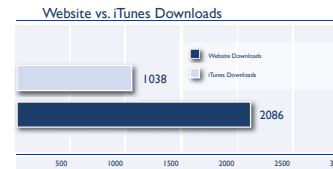


Results & Discussion

Access Statistics

Since the subscription functionality was launched on February 1st 2007, 41 users have subscribed to podcasting RSS feed and an additional 145 users have downloaded the podcasts as MP3 files from Online Course Resources.

3124 audio files have been downloaded either through the feed via iTunes or individually as MP3 files as of May 1st, 2007.

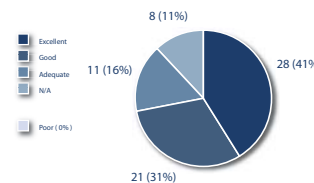


Survey Results

An optional online survey was created and made available to the students through Online Course Resources to obtain feedback about the quality, accessibility and usefulness of the recordings. 68 responses were collected and the results can be grouped into the following categories:

a) Audio Quality

Students reported various levels of satisfaction with the audio quality. Complaints about audio quality were about specific lectures and were often the result of the lecturer moving around while the microphone remained stationary at the podium.



b) Delivery Method & Access Format

Overall, students were happy with the way that the podcasts were delivered and 87% of respondents said that the system for accessing the podcasts was easy to use.

Students were also asked where they used the podcasts. The majority of the students reported that they listened to the podcasts at home and several students reported listening to the podcasts at the gym and during their commute.

c) Impact on learning

When asked if the students thought that the podcasts were beneficial to their learning, 83% of the students agreed with this statement. Several of the students provided additional comments that provided insight into the different ways in which the podcasts were beneficial to their learning.

Supports Review:

"These podcasts are fantastic! I have a much deeper understanding of the material having been able to review with the podcast and it is very nice to be able to rewind and listen to a section again if I didn't understand a concept or if I missed it because I was busy taking notes in class."

Flexibility:

"Greatly improved my understanding to be able to repeat audio lectures. Increases my flexibility in scheduling observations and making up the lectures on weekends"

Accommodates Different Learning Styles:

"Please continue the podcasts! For visual learners like me, who remember the written and diagrammed material but sometimes lose some of the parts that are just spoken (you can only write so fast, sometimes), it really helps to be able to go back and review exactly how the prof presented it in class."

Conclusion

Creating podcasts using student volunteers and iPods equipped with a microphone is an effective and affordable way to produce quality audio recordings of lectures. Publishing these recordings online using a podcasting feed that can be subscribed to through iTunes or other standard podcast readers was relatively simple to achieve and provides users with a seamless and efficient method for accessing the recordings which are stored on local servers. Podcasting supports flexible learning and caters to different learning styles by allowing students to review content as needed leading to a deeper understanding of the presented materials.