Can You Hear Me *Now?*

Pilot Study of Classroom Recording Technologies

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Background / Motivation

- Interest in podcasting at Penn and in Higher Education in general
- Instructors often concerned about impact on attendance
- Some research on effects of podcasting exists, indicating:
  - Perceived as positive learning tool by students
  - No significant effect on attendance

Research Questions

1. Are cost-effective technologies available to make classroom recordings?
2. Are the technologies and procedures to make recordings reliable?
3. Is the outcome worth the cost and effort?

Methods

Piloted 3 low-cost means of making classroom recordings:

- Audio-only automated recording
  - Just the instructor's voice in a large lecture hall with permanently installed hardware
- Audio-only recording using a portable device
  - Instructor's and students' voices around a seminar table in a small room
- Audio plus screen capture using Sympodium hardware
  - Created a movie of screen activity, including PowerPoint, with a synchronized audio track of the instructor's voice

Tracked costs and labor

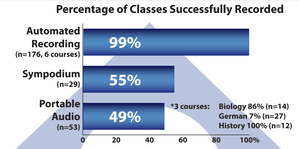
Surveyed students before and after semester

Results

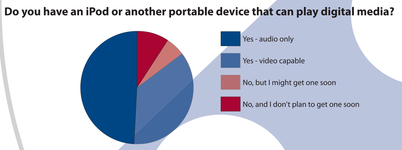
Costs

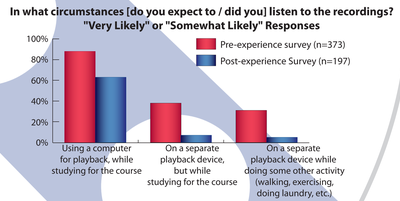
		Expenses		Staff Time	
Auto audio recording (assumes existing mic system in room)	**Initial Costs**	Mac Mini with 3-year AppleCare WireTap software Audio interface	$668 $19 $30 to $400	Devise system for automated file transfer Prep and deploy computer, per room	35 hours 5 hours
	Recurring Costs	--		Set recording schedule and server paths, per course	1.5 hours
Portable audio recorder (one recorder kit per instructor per term)	**Initial Costs**	Recorder kit (incl. memory card, case)	$365	--	
	Recurring Costs	Batteries, per recorder per term	$15	Review recording / uploading procedures, per instructor	1 hour
Sympodium (assumes exsiting mic system in room)	**Initial Costs**	Sympodium display, per room Audio interface to room mic system	$2900 $400	Devise system for auto file transfer / recompression Prep and deploy Sympodium, per room	35 hours 8 hours
	Recurring Costs	--		Set recording schedule and server paths, per course Faculty support, per instructor	1.5 hours 5 hours

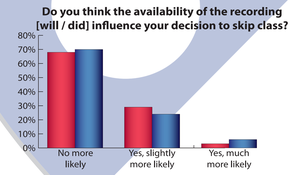
Reliability

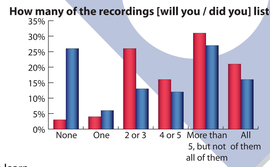


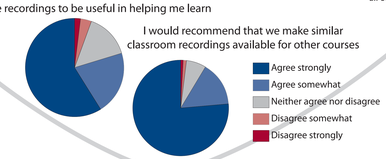
Outcomes











Conclusions

- Costs for all 3 technologies were very reasonable
- Technologies that require the instructor to remember to bring hardware or do something were less reliable than automated installations
- Although the "buzz" is that students want to listen to lectures on iPods, relatively few do
- Using video formats not suitable for portable devices is acceptable.

Next Steps

- Continue the pilot test in Fall 2007
  - Change setup of Sympodium to improve reliability
  - Install a second Sympodium system in another room
- Deploy portable audio recorders with different faculty
- Repeat surveys, seeking ways to get higher response rates

Acknowledgments

This project was funded by an Instructional Technology Grant in the School of Arts and Sciences at the University of Pennsylvania in the Spring of 2007.

This project was deemed exempt from oversight in its use of human subjects by the Institutional Review Board of the Office of Regulatory Affairs at Penn.

For additional details, see http://www.sas.upenn.edu/computing/instructional/recordings/

Traphagan, T. (2005). *Class Lecture Webcasting, Fall 2004 and Spring 2005: A Case Study*. http://www.utexas.edu/academic/diia/research/reports/