

PUTTING CLASSROOM LECTURES ONLINE: THE ATC'S "COURSE CAPTURING" PILOT

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What is Course Capturing?

- Automated capture of class lectures
- Audio/video of instructor and projector signal are integrated in convenient interface
- Lectures viewed on a webpage that can be linked within myWPI
- Students play back lectures as needed
- Lectures can be viewed straight through or thumbnails can be used to jump around



Player

Fullscreen Video



Event Information | Chapters

Event Title:

MA 1022 - Calculus 2

Event Date:

12/4/2007 3:02:19 PM

Event Speaker:

Jon Abraham

Event Description:

Lecture

Thumbnail View

Both "m" and "n" are positive even integers

$$\int \sin^2 \theta \cos^2 \theta d\theta$$

$$\int \frac{1}{2}(1 - \cos 2\theta) \frac{1}{2}(1 + \cos 2\theta) d\theta$$

$$\frac{1}{4} \int (1 - \cos^2 2\theta) d\theta$$

$$\frac{1}{4} \int 1 - \left[\frac{1}{2}(1 + \cos 4\theta) \right] d\theta$$

$$\frac{1}{4} \int \frac{1}{2} - \frac{1}{2}(\cos 4\theta) d\theta = \frac{1}{4} \left[\frac{1}{2}\theta - \frac{1}{8}\sin 4\theta \right] + C$$

Zoom Slide

Goals of the Pilot

- Enhance student learning
- Little impact on faculty time
- Little impact on staff time
- Meet students' interest in using more technology for learning

WPI Challenges

- 7 week terms
- Strengths and weaknesses of “Millennial” students
- Increasing student enrollment
 - ▣ Larger class sizes
 - ▣ Increased demands on faculty time
- Emphasis on projects

Research

- Faculty teach approximately 120 words per minute
 - ▣ Students record 20-30 words per minute
- Studies at other universities have shown:
 - ▣ Improved course retention rates
 - ▣ Improved grades, especially for students usually receiving C and D grades
 - ▣ No or very slight negative impact on classroom attendance
- Some universities mention lecture capturing as a recruiting point

Research Suggests That...

- Students who miss points during a lecture can review what they missed – saves faculty time by reducing questions outside of class
- Students feel they learn better by attending the live lecture – recorded lectures used as study aids
- Students are more engaged in lectures when they don't have to worry about taking perfect notes
- Recorded lectures provide students a sense of security and a reduction of anxiety
- Recorded lectures add to students' overall satisfaction with courses

How it Works



Classroom



Server

Webpage

Lectures on Video

Sort by

Descending date

Date: 12/11/2007 8:59 AM
MA1020 - Calculus w/ Preliminary Topics
John Goulet
Lecture
[View Lecture](#)

Date: 12/10/2007 8:59 AM
MA1020 - Calculus w/ Preliminary Topics
John Goulet
Lecture
[View Lecture](#)

INTRODUCTION TO BIOLOGY (BB1001-B07-W1) > COURSE DOCUMENTS

Course Documents

Lectures 1&2/Chapters 1&37
[Lec. 1&2_Ch. 1.37_1.ppt](#) (2.605 Mb)
.ppt file

Lectures 2&3/Chapters 2&3
[Lec. 2&3_Ch. 2.3_1.ppt](#) (3.87 Mb)
.ppt file

Recorded Lectures
Click the *Recorded Lectures* link above to access a page with links to all of the recorded lectures for the class. Each recording has the date and time indicated, so you can easily find the recording for a particular date. Once you are viewing a recording, you can jump around in it by selecting the link for *Thumbnail View*. If you encounter any problems viewing a recording, please send a message to atc-ttc@wpi.edu.

myWPI

Faculty Role

- Turn on projector
- Turn on wireless microphone
- Use Sympodium or Tablet PC instead of chalkboard
- Market the recorded lectures to students



Demo

- John Goulet's Calculus I class

Challenges

- Scheduling courses in lecture capturing classrooms
- Chalkboards cannot be captured
- Student audio is not captured
- Concerns about attendance

Technical Issues

- Not Mac compatible
- Not compatible with all Web browsers
- Downloadable versions not available
- Microphone batteries
- Not turning the microphone on

Results

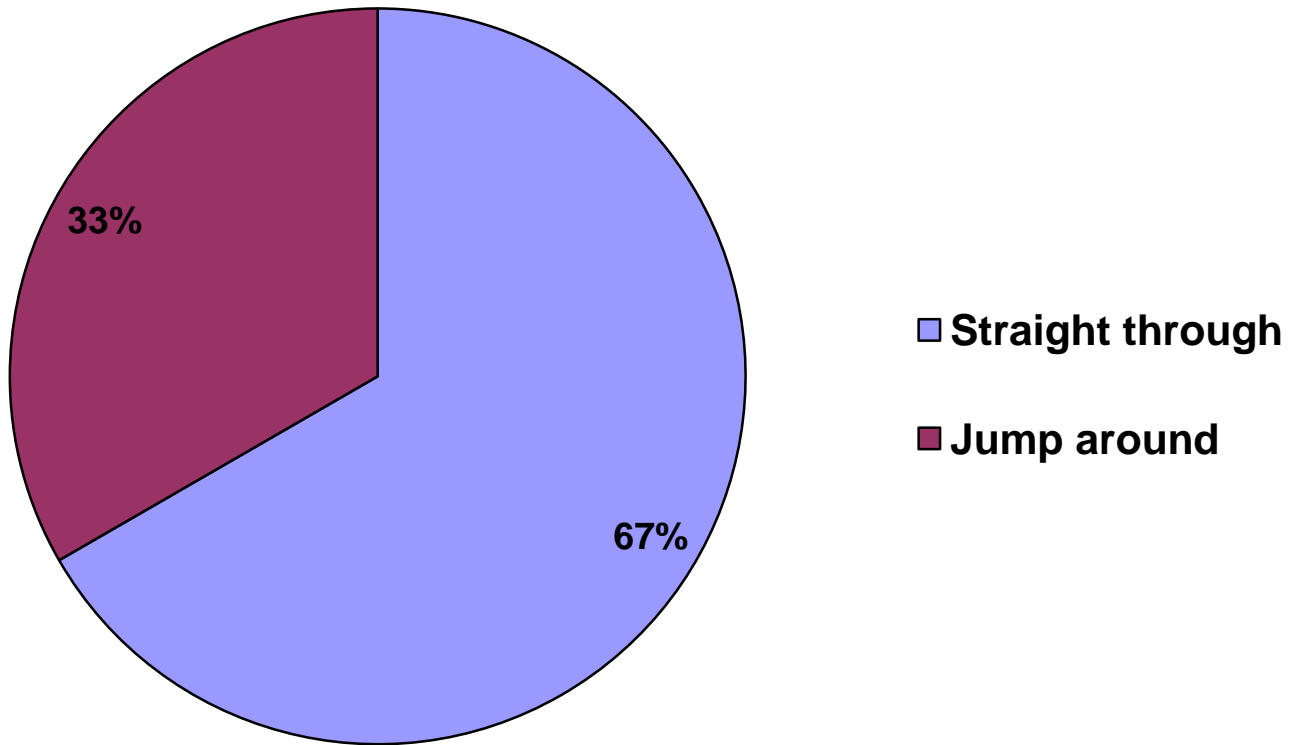
- Used by 3 Math classes and 7 Biology classes
- No data yet showing any impact on grades
- Good feedback from faculty and staff

Faculty Feedback

- All faculty who participated want to use it again
- Using the system in their class is no burden
- Adjusting to the Symposium takes a bit of time
- No faculty reported a drop in attendance
- Some hope to use the recordings to review their teaching

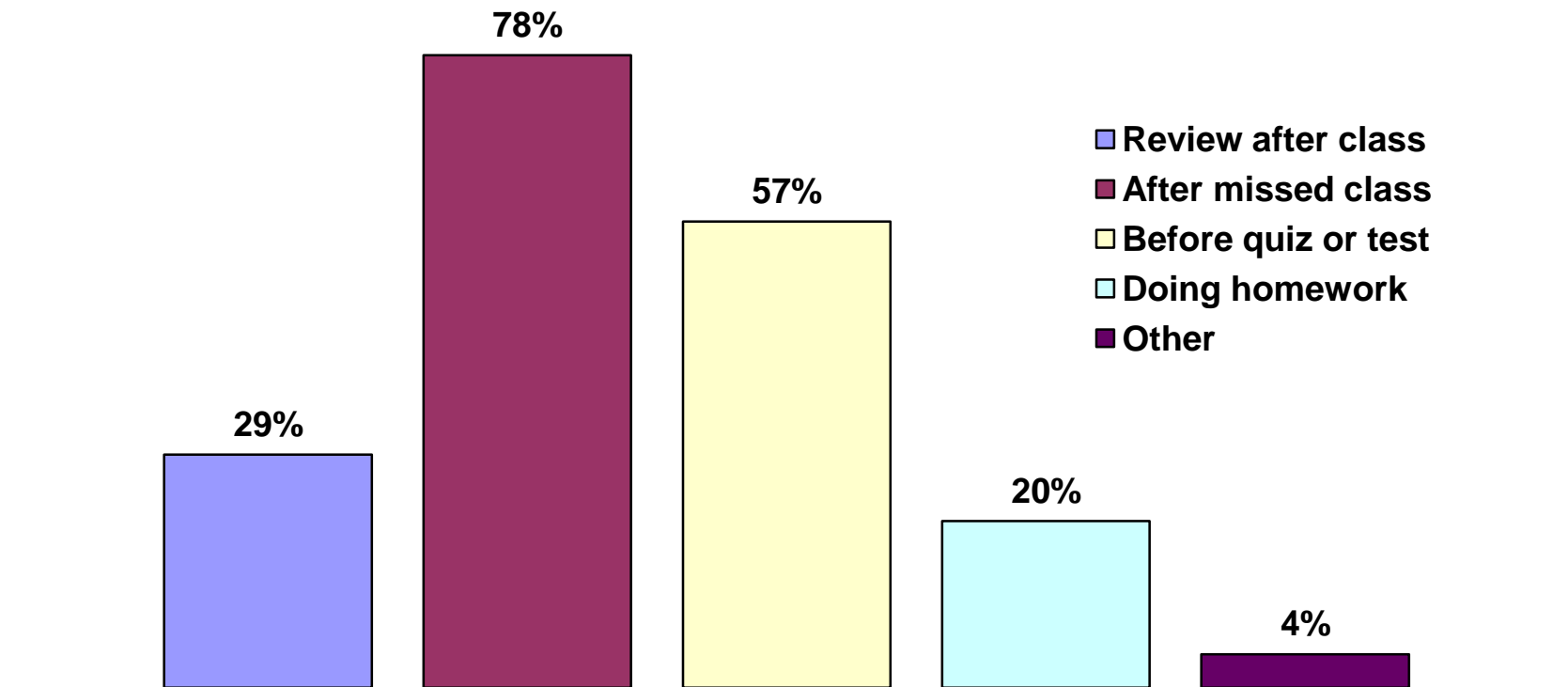
Student Surveys

Primary Method of Watching



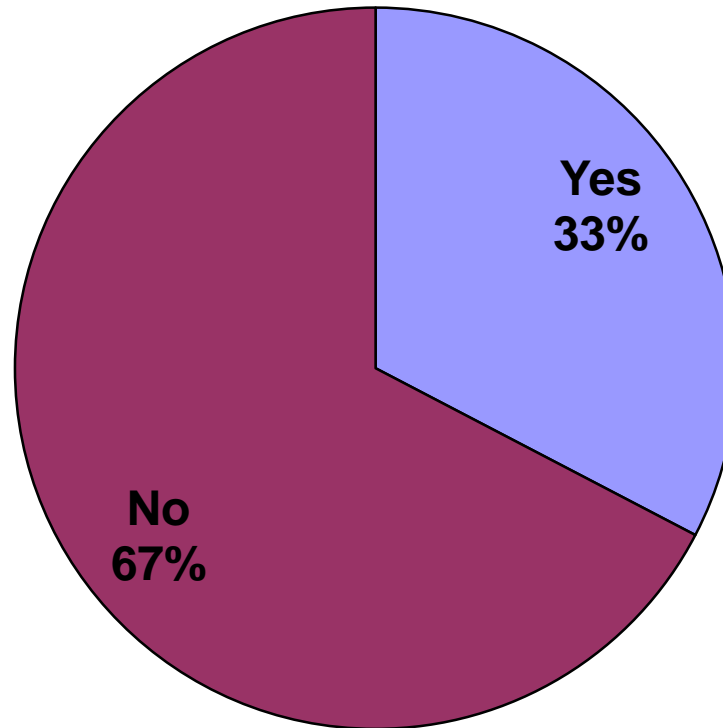
Student Surveys

When recordings were viewed



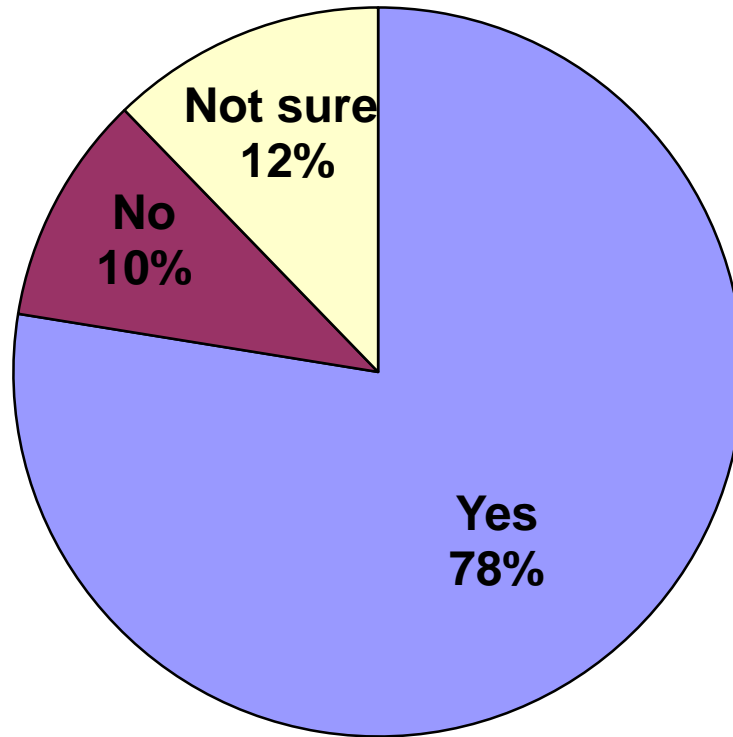
Student Surveys

Do the recorded lectures affect attendance?



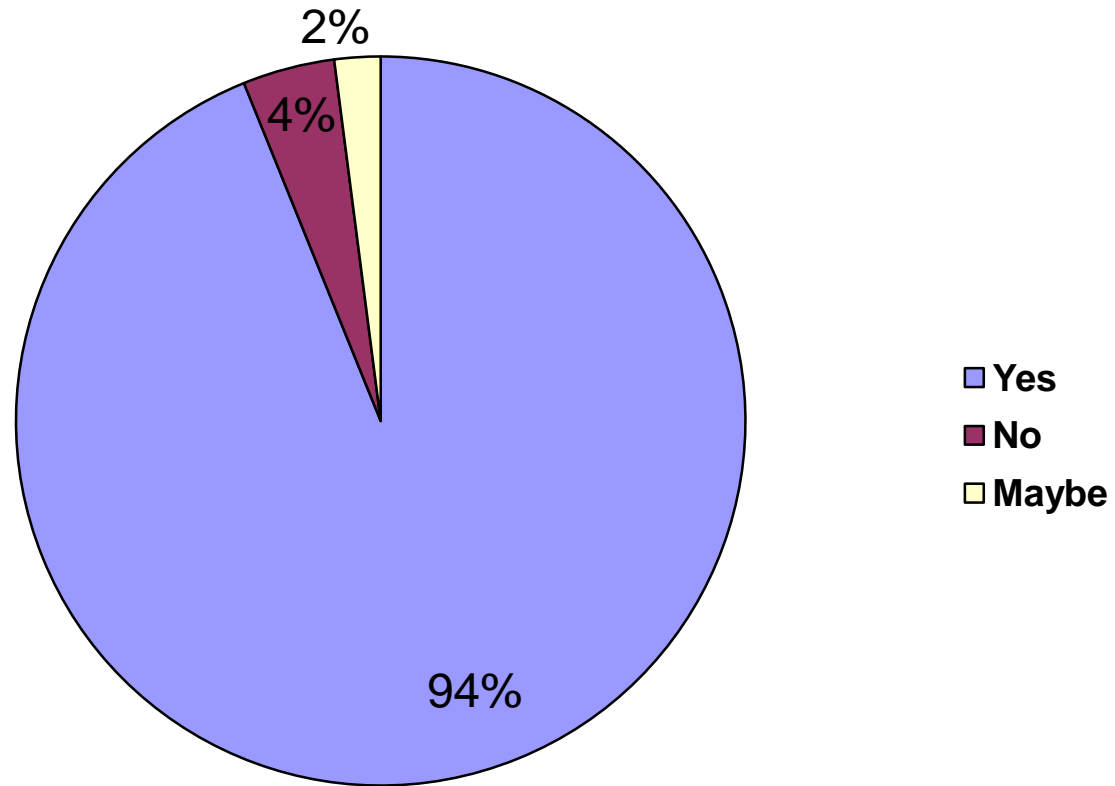
Student Surveys

Positive impact on performance?



Student Surveys

Should recorded lectures be used in more classes?



Student Surveys

- “They are great because you can always go back to see exactly what the professor said and it is less stressful taking notes.”
- “Sometimes in class the professor may be moving fast and if I need everything slower, I watch the recorded lecture after class and press play/pause whenever I am ready.”
- “I can go back and re-watch parts of the class I didn’t understand.”
- “I don’t feel like I can’t catch up if I do have to miss a lecture.”

Student Interview



Future Plans

- Expand it to more classes
- Market to TAs and PLAs
- Math Basic Skills Tests
- Conduct a grade analysis
- Investigate other lecture capturing solutions
- Market lecture capturing to prospective students?

Contact Us!

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- <http://www.wpi.edu/+Collaboratory/News/lecturecapturing.html>