
The Impact of Supplemental Recorded Lectures on Student Satisfaction, Attendance, and Performance

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Traditional Classroom Environment



Course Accessibility



Traditional
face-to-face

Face-to-face in
addition to
online course
management
system

Face-to-face
with audio/
visual recorded
lectures

Live
videoconferencing/
videostreaming

Pure distance
learning

Recorded Lectures

- Use has increased significantly over the past several years
- Allows for flexibility for students Williams et al., 2012
- Provides a better “fit” for generation Y (Skene et al., 2007)



Perceptions

Students

- Positively impacts learning (Williams & Fardon, 2005)
- Enhances the course (McElroy & Blount, 2006)
- Makes it easier to learn
- Helps achieve better results
- Appreciate additional study tool
- Still appreciate face-to-face lectures (Preston et al., 2010)

Instructors

- Encourages students to give preference to other commitments (Preston et al., 2010)
- Decreases attendance (Preston et al., 2010)
- Lack of immediate feedback to students (Preston et al., 2010)

Effects of Using Recorded Lectures

- Makes learning uninteresting (Bennett and Maniar, 2007)
- Decreases the development of independent learners (Bennett and Maniar, 2007)
- Performed in a microeconomics course (Williams et al., 2012)
 - Attendance determined benefit
 - Complete substitution – disadvantage
 - Attended most lectures – added benefit
 - Recorded lectures work better as a complement to face-to-face lectures

Rationale and Significance: Current Study

- To evaluate the impact of recorded lectures on student satisfaction, attendance, and performance in a senior level nutrition science course.
- Not previously performed in field.
- Results may elicit a change in practice based on performance, satisfaction, and attendance.

Participant Description

- Junior and senior students in nutritional biochemistry course
- N = 47
- Fall 2013
- Class performance based on:
 - 3 Exams
 - 9 Quizzes
 - Group project

Methods

- Professor recorded every lecture using Camtasia software.
- Lectures were uploaded immediately after class.
- Anonymous surveys were collected at mid-point and semester end to measure satisfaction.

Methods

- UF Video Services provided all usage data from students.
- Performance was assessed using individual exam scores and total points (excluding project).
- Usage divided into tertiles for each exam and total points.
- Attendance was calculated based on seven randomly selected days during fall 2013 and compared to fall 2012.

Performance Results

Performance Point	Grade Highest Users	Grade Lowest Users	Significance
Exam 1	86.9±8.6	83.2±10.4	$p = 0.032^*$
Exam 2	85.8±11	83.3±13.1	$p > 0.05$
Exam 3	76.7±11.3	72.9±14.8	$p > 0.05$
Total points	328.9±34.7	322.5±32.8	$p > 0.05$

- Significant difference in performance on exam 1 between highest and lowest tertile of video users ($p=0.032$).
- No significant differences between highest and lowest users for exams 2, 3, or total points.

Student Survey

Have you used the video tools? Yes No

If you have used the video tools, please answer the following questions:

How helpful have you found the video tools? (please indicate below)

It was a hindrance	Not helpful	Neutral	Somewhat helpful	Very helpful	I don't know what I would have done without them

To study for quizzes

To study for tests

To review for difficult material

To review material I missed in class

So that I can take notes in class and actively listen to videos

So that I can actively listen in class and take notes using the videos

If I miss class because I am sick

If I miss class for a professional school interview

So that I don't have to come to class

Other (please specify)

Should we do this again next year? Yes No

Survey Results

Reasons for utilizing recorded lectures	Mid-point (%) n = 44	Semester end (%) n = 39
To review material missed in class	100	68
To review difficult material	91	68
To study for quizzes	73	79
To study for tests	64	79
To actively listen in class and take notes using videos	64	37

- Only one student reported using the videos to skip class.
- No difference in attendance between fall 2012 and 2013 (82% and 84.5%).

Student Responses

“I didn’t use the videos, but you should do it again. Other people really used them.”

Used videos because “I missed class to have a baby.”

“...really helps ESE students!”

“Make sure that the microphone and other technical things are working before you record...”

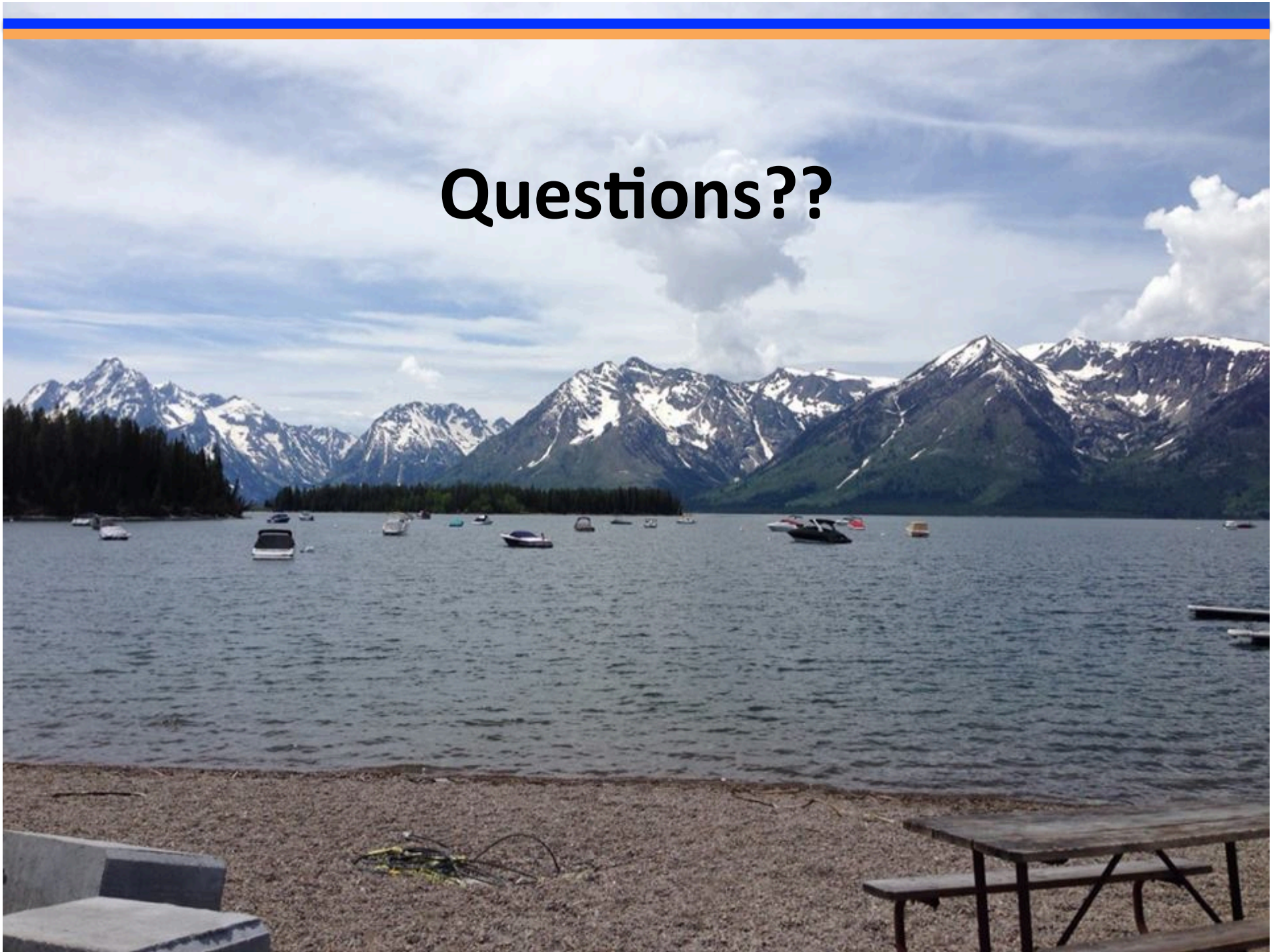
Conclusions

- Recorded lectures were very well received.
- High satisfaction with recorded lectures.
- Students developed a sense of reliance on videos.
- Performance was improved on one exam.
- Attendance was not affected.

Other Observations...

- Results dependent on several factors:
 - Size of class
 - Type of students
 - Instructor immediacy

Questions??



References

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