

Technology for Remote Teaching: Three Practical Methods

Updated

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Post-TLI updates

Based on input from OpenEd and fresh experiments to confirm:

- The CourseLink limit on file uploads is now 1 GB after the recent upgrade, so the advice about using a separate audio file server can be disregarded.
- To make Capture recordings in a slow-upload residential setting, use the **standalone Capture software** (contact OpenEd) to record offline, then upload (e.g., 22 min. to upload a 50-min. lecture).



Outline

- Motivation
- Demonstrate 3 methods
- Compare/contrast strengths/weaknesses
- Summary



Motivation

- You need to be away from classroom
 - You can't, or don't wish to, give task to someone else
 - *Examples:* conference trip, convalescing
- Can be solved by ***remote teaching!***
- Two modes:
 - Pre-recorded
 - Live-streamed



Three methods

- Pre-recorded
 1. CourseLink “Capture”
 2. Audio recording
- Live-streamed
 3. Skype
- Demonstrate each one
 - How to run
 - How to prepare



CourseLink “Capture”

■ How to run

- *In class:* TA plays on laptop connected to LCD projector and audio system
 - TA was also pausing to run clicker questions
- *Out of class:* Students play on demand from course’s webpage
- F14 CIS*2750 Content > Lecture bank
 - Play “XML (end)”



+CourseLink “Capture” demo

- Student sees...
 - Talking head (sitting in my office)
 - Powerpoint slides
 - Choice of 6 (3 x 2) window configurations
- Can pause/rewind at will



+Making a “Capture” lesson

- Talk with OpenEd!
 - Complicated process of many steps
 - They will be happy to assist, have classroom equipped for recording
- You’ll get a **Capture Central** tool button
 - Create Live Event (even though not “live”)
 - Manage Live Event
 - Web capture ... Launch
 - Allow Adobe Flash to access camera and mic



+Recording the lesson

■ Add Media

- Uploads Powerpoint, Word, PDF
- These appear at bottom, clicking syncs

■ Start

- Records voice/video while you click on slides

■ Ignore “Chat” (used with live mode)

■ Saving/posting take more fussy steps

- Limited editing possible



Audio recording

■ How to run

- *In class*: TA plays on laptop connected to audio system, flipping slides on projector
- *Out of class*: Students play on demand or download for podcast (need slide PDFs)
- F14 CIS*2750 Content > Lecture bank
 - Audio Lectures (MP3s)
 - NOTE: hosted on my research server due to file upload limitations of CourseLink
 - Play “Defensive Programming”



Making an audio recording

- Free software: **Audacity**
 - Download from sourceforge.net
- Goals: decent quality, reduced file size
 - Mono recording; Project Rate: 32000 Hz
 - Typical 50 min. lecture 30-40 MB
- Export > Save as type: MP3 files
- Upload where students can reach it
 - Put URL of download site in CourseLink



Skype

- How to prepare

- Get your slides ready and make sure you and TA can phone each other on Skype

- How to run

- *In class only:*

- You are sitting with Powerpoint open and logged into Skype
- TA phones you on laptop connected to LCD projector and audio system
- You activate Call > Share Screens



Which method to choose?

- Understand pros/cons of each
- Depends on your constraints, objectives



CourseLink “Capture”

■ Main weaknesses:

- Requires high-bandwidth upload capability
 - Was designed for use on campus network, not at home with typical DSL/cable Internet
 - In low bandwidth scenario, gives cryptic or no error messages (fails silently → wasted effort)
- May fail to load some Powerpoint slides

■ Strengths:

- Well-integrated with CourseLink
- On-demand playback, in or out of class



Audio recording

■ Main weaknesses:

- Students or TA must have slides available separately, you must call out the numbers
- CourseLink upload limitations make it infeasible to store the MP3s on your course website → need another server

■ Strengths:

- “Lowest tech” method, fairly foolproof
- Can record other ways (smartphone?)



Skype with screen sharing

■ Main weakness:

- At mercy of Skype right at class time
 - Never a problem in practice, worked well!

■ Strengths:

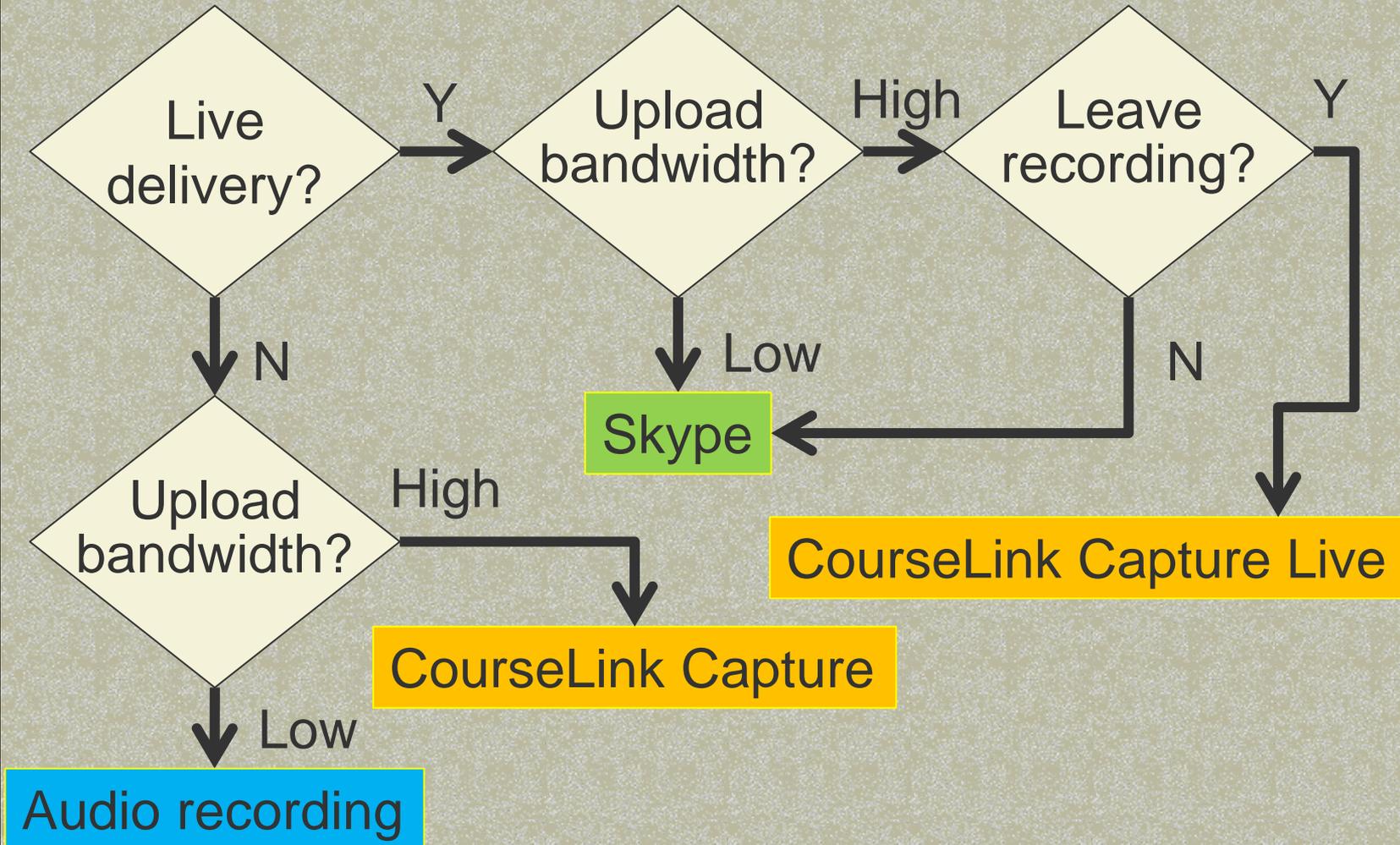
- You fully control slides, Powerpoint animations and annotations work
- Easy to switch display to other apps
- You can ask questions and TA can relay questions from class



Not covered: Live Capture

- “Remote” assumption is that you can’t come on campus, so this is no use
- Capture can be used in live-streaming mode to give “webinar”
 - Students see head/slides (not animations), hear voice
 - Can type in chat window if they join session; you can type replies
 - Leaves behind recording they can replay

Guidelines summarized





Conclusion

- Having a toolkit of remote teaching methods frees you to:
 - Go to conferences during teaching “high seasons”
 - Deal with emergencies without cancelling or rescheduling classes
 - Finish a lecture that ran overtime
- The methods are effective and little hassle is involved → give them a try!



Questions? Discussion?

- Find PDF of slides at my home page:
 - www.uoguelph.ca/~gardnerw
 - Research & Downloads
 - Publications
 - Teaching approaches