Campus wide implementation of integrated lecture capture: Impact on student learning

Neil Morris
Director of Digital Learning
Professor of Educational Technology, Innovation and Change
University of Leeds
National Teaching Fellow

Email: n.p.morris@leeds.ac.uk
Twitter: @neilmorrisleeds, @unileedsonline

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Digital learning channel portfolio

Available to registered students

The VLE
- Uni Leeds
- Mobile Learn

Available to all learners

Future Learn
- iTunes U
- Jorum - Learning to share VideoLeeds
- YouTube
- iBooks

Individual learning objects

Online courses

Learning Objects complementing face-to-face provision (Blended Learning)
By 2017, students and staff at the University of Leeds will make use of a consistent suite of digital technologies and services, which support learning, inspire students to reach their full potential and enhance the student experience.

(Digital Strategy for Student Education)
LC system requirements

Seamless integration
Minimal staff intervention
Control (before, during and after)
Automated workflows
High quality ‘at desk’ capability
Exceptional video management
LCMM design vision

Channels
- External Channels
  - iTunes U
  - YouTube
  - MOOC's
  - Web Sites

- Internal Channels
  - Blockboard
  - Web Sites
  - Campus LU Tube

Outputs
- Deliver
- Process
- Encode
- Store

Inputs
- Lecture Capture
  - Screen / Audio / Video
- Personal Capture Staff
- Personal Capture Students
- Interactive Classroom

Current Capability

Devices
- Mobiles
- Desktops
- Tablets
- Projection Screens
Capturing and creating content
One simple interface
Intuitive editing tools
Seamless integration

Scheduled session in Central Teaching Space
Recording starts and stops automatically*.
Button on the lectern can be used to pause / stop.
Screen, audio and video† captured.
Automatic upload to system for review, edit and approve.

At-desk recording
Open desktop software and press record.
Screen, audio and video† captured.
Automatic upload to system for review, edit and approve.
Make available to colleague, VLE or public.

Create and upload content from a mobile device
Upload video to MyMediasite from mobile devices.
Available for review, edit and approve.
Make available to colleague, VLE or public.

Review, Edit, Approve
One simple interface
VLE or ‘MyMediaSite’
Secure access control

Review, edit and approve
One simple interface for review, edit and approve. In VLE or via ‘MyMediaSite’.
Remove video, add content, edit material.

VLE learning resources
Approved content automatically displayed in VLE
Content can be made available from your collection

Students can upload module video assignments directly to VLE modules via their ‘MyMediaSite’

Other digital content
Select and make your content available via web browser on ‘MyMediaSite’

Publish and view
Simple publishing to VLE, Campus YouTube, iTunesU, YouTube and websites

Multi-platform player
Simple yet powerful multi-layer player works on all common platforms.

YouTube style platform
Bespoke University video channel for all learning, teaching, research and marketing content

iTunes U and YouTube
One simple workflow to review, edit and approve content for iTunes U and YouTube channels

* If lecturer has not opted-out of recording.
† If video camera available, and a video recording has been scheduled.
Project delivery

Academic case developed over 12 months with University wide working group
Academic case accepted by University Education Board and University Executive
Recording policy consultation and agreement by University Senate.

Full business case developed with support from two dedicated project managers
Business case accepted by University Executive and all Faculty Deans

Project Delivery Group chaired by Project Executive (also Project Sponsor) with all stakeholders represented
Staff perceptions of lecture capture

49% of respondents had between 1-6 years experience of lecture capture.

56% of participants believed that lecture capture had a high or very high impact on student learning.

Participants from medicine and health were most likely to believe lecture capture had a high impact on student learning.

Main concerns:

Student experience:
- evidence of pedagogic value of lecture capture;
- benefits of video capture versus audio and slide capture;
- impact of recording on student interaction in lectures;
- Impact on attendance.

Copyright
Data quality
Workload
Student recording
Guest lecturers

(n=226 academic staff surveyed in June 2013; Morris et al., In Preparation)
Audio and Video Recording policy

Staff and students **consent** to recording

Only **pedagogically appropriate** events selected for recording

Staff and students **opt-out** from recording if required

**Recording notifications** in advance; opt-in for personal data

In class **pause** functionality, **right to edit** and **control** over publication channel
Communications

- All staff briefings
- Staff website resources
- Staff Development training and online materials
- Faculty level roadshow
- Faculty Taught Student Education Committees
- Staff meetings
- Student Education Bulletin
- Staff magazine pull-out
- Student animation
- Copyright training
In-room equipment

- 250 centrally managed teaching rooms equipped during first phase.
- All rooms equipped with audio and Mediasite recorder.
- 12 rooms equipped with Vaddio tracking camera.
- 30 rooms equipped with fixed camera.
- All rooms equipped with recording light and pause / stop button.
Lecture capture in operation
Lecture capture usage
First year outcomes

- Over 2/3 of students viewing content
- Over 60% of all lectures recorded
- Between 100 – 300 recordings per day
- No significant reduction in lecture attendance
- Over 30,000 hours of recording
- Lots of examples of innovative practice

Over 550,000 views
Lecture capture usage

Views by Month

- Oct 2014
- Nov 2014
- Dec 2014
- Jan 2015
- Feb 2015
- Mar 2015
- Apr 2015
- May 2015

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Student and staff reflections

“The @UniversityLeeds lecture capture tool is great - my lectures have been watched 100s of times already!” Staff member

“The new Lecture-Capture system @UniversityLeeds is BRILLIANT. Cheers, guys.” Student

“With the exception of a few minor glitches, everything has gone very well and the students are very pleased with the results.” Staff member

“The lecture capture software is great, easy to use” Staff member
Project reflections

**Positives**
- Sector leading installation
- Delivered the promised capability
- No challenges to recording policy
- Huge student use and positive feedback
- Well received by staff
- Very effective project delivery group

**Challenges**
- Stressful summer 2014!
- Timetable data accuracy
- Some staff resistance
- Capturing document camera input
- Tracking cameras
- Capturing whiteboard writing
Resource production

- In-room capture
  - Scheduled
  - Ad-hoc

- At-desk media creation (Audio, video, screen capture)

- Mobile capture (Audio, video)

- Video conferencing

- E-learning support

- Online collaborative learning spaces
Learning object re-use strategy
Next steps: campus wide shift to flipped learning

An increasing number of our staff are producing and releasing digital learning materials on external channels. An excellent example is James Pickering (right) from the School of Medicine, who recently won the Association for Learning Technology Learning Technologist of the Year award. James has produced digital learning materials for use by the University’s medical students and he releases these on iTunes U as screencasts for use both by our own students and by students of anatomy all around the world. Leading on from this, James has recently published an eBook on the iTunes store and delivered a highly successful Massive Open Online Course on the FutureLearn platform. For more information on James’ work and that of other colleagues, go to www.sduonline.leeds.ac.uk/changinglandscape/activities/share-with-an-external-audience/

On the feedback side, the use of digital-learning approaches has a number of benefits for staff and students, including timeliness, readability and personalisation. For example, there have been a number of studies illustrating the value of providing students with rapid generic video feedback, as used by Timothy Baker (right) in Geography, who gives students video feedback on presentations. In particular, students appreciate the ability to interpret tone of voice and body language in video feedback, plus it eliminates any risk of students not being able to read handwritten comments. The desktop capture tool available on staff computers makes this approach easy for all staff. For more information, and references to primary sources, see www.sduonline.leeds.ac.uk/changinglandscape/activities/assess-and-give-feedback/

There are already a large number of staff and students using innovative approaches with digital learning materials all around the campus. These approaches are echoed in the educational literature and in universities around the world. For example, Eric Mazur from Harvard University has pioneered the concept of peer instruction and the flipped classroom, which is growing in use at Leeds. In essence, the approach is to free-up class time for interaction and discussion by providing students with digital learning materials in advance of class time. Innovators at Leeds who are using the flipped approach include Sarah Underwood (left) in the Enterprise Centre, who provides students with recordings from external international academics before her classes, and Barbara Evans (right) from Civil Engineering who provides pre-recorded materials in order to allow students to contribute to discussion during class time. The digital capture tools now available at Leeds make this approach accessible and easy for all staff. For more information and for other examples see www.sduonline.leeds.ac.uk/changinglandscape/activities/make-the-most-of-class-time/
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