CAPTURING SCIENCE
Doing Lecture Capture Differently

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www.wlv.ac.uk/capture
About University of Wolverhampton

- ~ 21,000 Students
- ~ 2,500 Staff
- Widening Participation
- 4 UK Campuses

82% of UG students from within 25 miles
Dipping Our Toes - “The Experiment”

- Past Experiences
  - The Trolley
  - Effort vs Reward (ROI)
  - Record, Edit, Distribute

- Leads to
  - Cameras Everywhere

- And that’s ok…
But What If…?

• The challenge: Teaching science without teaching spaces

• The Rosalind Franklin Science Centre
  • New Building
  • New Pedagogy
  • New Challenge
The Traditional Approach

• A radical change
• The old laboratories
• Traditional video production techniques
The Journey – Old to New (1)

• Workstreams

  • SYSTEMS
    • Authentication, Grouping, Cloud Provision, etc.

  • DEVICES
    • Hardware & Software, Configuration, Management

  • CONTENT
    • Compliance, Copyright, IPR
The Journey – Old to New (2)

• Workstreams
  • STAFF DEVELOPMENT / TRAINING / COMMS
    • Identifying Champions, Briefings, Training, User Groups
  • SUPPORT
    • Sustainable model (next slide)
  • EVALUATION
    • More later…
Sustainable Support Model

college of learning and teaching (CoLT)

local technicians

3rd line

2nd line

Service Desk
A Laboratory in Rosalind Franklin

- Opened in 2014/15

- State-of-the-art technologies – Panopto one of many

- Small-scale, closed pilot during Sem 2 14/15 in Rosalind Franklin and Millennium City Lecture Theatre
Science-Proof Recording and Playback

- 3 recording locations
- Touch-screen interfaces
- Multi-camera capture
- High Definition audio and video capture devices
- Live stream to other teaching laboratories and other locations
Autonomous Capture & Flexible Playback

• Recording spaces are “easy to use”

• Record what they need when they need it

• Stream live or make available via the VLE

• (almost) Instant availability

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System Usage Data

• “You guys are a bit weird!” (D. Garretson, 2015)

<table>
<thead>
<tr>
<th>School / Department</th>
<th>Sessions Recorded</th>
<th>Hours Recorded</th>
<th>Number of Views</th>
<th>Hours Viewed</th>
<th>Recording: Viewing Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Science &amp; Physiology</td>
<td>40</td>
<td>28.39</td>
<td>11,269</td>
<td>2,287</td>
<td>1:80</td>
</tr>
<tr>
<td>Biology, Chemistry &amp; Forensics</td>
<td>3</td>
<td>0.34</td>
<td>2294</td>
<td>168.96</td>
<td>1:497</td>
</tr>
<tr>
<td>Mathematics and Computing</td>
<td>22</td>
<td>18.62</td>
<td>821</td>
<td>48.8</td>
<td>1:2.6</td>
</tr>
<tr>
<td>Business</td>
<td>12</td>
<td>14</td>
<td>71</td>
<td>0.62</td>
<td>1:0.04</td>
</tr>
</tbody>
</table>

• Typical recording: viewing ratio for captured lectures 1:2 to 1:4

• Average ratio for WLV 1:29 – science subjects significantly higher!
Evaluating the WLV Capture Pilot

• What did the consumption data mean for WLV?
• Do our Student and Staff experiences match yours?
• How we evaluated – draw from published literature

• Staff and Student Surveys with parallel questions to compare perceptions
What Our Students Say

- Students found all types of captured materials useful.
- Students are adapting the way they use materials depending on their learning need.
- Students say they value the flexibility and playback control provided by captured materials.
- Students are claiming better concentration, improved understanding, and increased confidence in their own learning.
- 100% of students want to see the university continue with capture technologies.
What Our Academics Say

- Staff tell us that the capture system is easy to use.

- Staff would like to make more use of the technology in the future.

- Staff say that time was the main barrier to greater engagement – but that it would ultimately save time.

- Staff felt being able to have capture software available for their own computers and devices would be most important to their future academic practice.

- Staff reported greater levels of engagement from students who were more prepared for practical sessions.
## What did we learn?

<table>
<thead>
<tr>
<th>Published Literature</th>
<th>WLV Evaluation</th>
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<tbody>
<tr>
<td>Captured Lectures lead to increased Student Satisfaction (Franklin et al, 2011;</td>
<td>Students found all types of captured materials helpful to their learning with</td>
</tr>
<tr>
<td>Missildine et al. 2013)</td>
<td>the highest preference for pre-recorded science demonstrations</td>
</tr>
<tr>
<td>Capturing lectures have little to no impact on student attainment (Leadbetter et</td>
<td>More engaged and prepared students in sessions means academic staff are able to</td>
</tr>
<tr>
<td>al. 2013; Franklin et al. 2011;)</td>
<td>facilitate deeper learning experiences in Rosalind Franklin</td>
</tr>
<tr>
<td>Captured materials have the most positive impact on students when they are</td>
<td>Higher levels of student engagement with captured materials that have a specific</td>
</tr>
<tr>
<td>deliberately incorporated into the educational approach. (Marchand et al, 2014)</td>
<td>purpose and/or are associated with other learning tasks</td>
</tr>
</tbody>
</table>
Development Ideas

• Focus on adding value in discipline-specific learning spaces
  • Performance
  • Engineering
  • Sport
  • Health
Q&A