# PRE-RECORDING LECTURES IN THE UNIVERSITY OF EXETER BUSINESS SCHOOL DURING THE 2010/11 ACADEMIC YEAR

1   Overview

The University of Exeter Business School's top 10 success and growing international reputation have resulted in dramatic growth in student numbers. Anticipated undergraduate expansion is from currently 1,600 students per year to over 2,500 by 2014, with approximately 40% of the undergraduate cohort being international students. This flagship School sees technology as mission critical to providing an excellent educational experience for all its students. Since 2008, the JISC funded Integrative Technologies project (INTEGRATE) sought to sustain excellent education for large numbers of diverse students by trialling a range of technologies, including lecture capture using the Echo360 recording system.
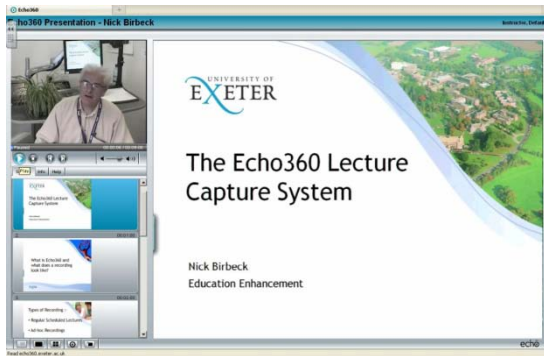
The Echo 360 Lecture Capture System offers the facility to record a lecture together with any visual aids, such as PowerPoint slides or information on a visualiser. Recorded lectures are processed and then accessed through the University VLE. When viewing lectures students can easily navigate around the recording. They can stop and start the recording and move to any particular point in the lecture in a way that suits them best.

The Business School, in conjunction with colleagues in Education Enhancement, has led the field in implementing lecture capture technology at Exeter with 34 scheduled week-by-week lecture series recorded between 2008 and 2010, the majority of these in the second term of 2010. This represents almost half of the lectures captured across the University over the same period. The ability to access recorded lectures 'anytime anywhere' has been well-received by students and the Business School is now well-placed to develop use of this technology.

2   The aims of this paper

Following the success of recording 'live' face to face lectures using Echo 360, this paper sets out a rationale for developing the use of 'pre-recorded' lectures, i.e. lectures which are not delivered face to face, but are designed and recorded specifically to be watched online as part of module delivery. The paper sets out:
- The advantages of recording lectures using Echo 360
- The specific advantages of pre-recording lectures for online delivery
- Potential limitations of using pre-recorded lectures
- Recommendations for future development.

3   The advantages of recording lectures using Echo 360

Evidence from both the INTEGRATE (Integrative Technologies Project, 2010) and Students as Agents of Change projects indicates that students like their lectures to be recorded. Many would like this for *all* their lectures: *'I have found your recorded lectures online really helpful for revision and I wish all the other lecturers would do the same!!'*

Similar experiences are emerging in other HE institutions. For example, the London School of Economics and Political Science used lecture capture for 140 courses last year; students attitudes were 'largely positive' (Secker, Bond and Grussendorf, 2010). Some of the benefits of recording lectures described by students in the Business School and in research elsewhere (Zue and Bergom, 2010) are:

- Lecture recordings allow students to review material at their own pace and location (Fernandez, Simo and Salan, 2009).
- Recorded lectures are especially useful for international students.
- Content can be reviewed flexibly - students may review in chunks, view entire lectures or skip to key concepts they need to clarify.
- Recordings are accessed in the VLE (Exeter Learning Environment – ELE) alongside other useful module content, so it can all be found in one place.
- The captured lecture may be viewed by other staff, such as graduate teaching assistants, to help them link the lecture more closely with tutorials and other activities.
- Students may spend up to 100% more time working on the captured lecture and learning from it than in a formal face-to-face lecture (Integrative Technologies project).

4   The specific advantages of pre-recording lectures for online delivery

Evidence from research and feedback from lecturers (Rose, in prep) who have recorded lectures specifically for online delivery indicates that there are unique benefits to using pre-recorded lectures as part of a structured learning process.

The benefits of pre-recording lectures include:
- Saving time giving face to face lectures; if one recorded lecture replaces repeat face to face lectures, this creates time for active learning in tutorials.
- Recording lectures provides an opportunity to re-organise teaching time, and to rethink content delivery.
- Students who watch an online lecture with slides may be better able to apply what they had learnt than students who attended the same lecture in person (Dey, Burn and Gerdes, 2009).
- Audio capture with PowerPoint slides may be particularly useful for 'equation heavy' disciplines (Dey et al, 2009)
- Some students rarely ask questions in lectures, particularly in large groups, and prefer to focus on the captured lecture.
- Students are more likely to interact in an online forum where they have more time to consider and compose their question carefully.
- Intellectual property rights issues require that student permissions are given if the recording includes images of and contributions by students. Pre-recording overcomes this issue.

**5	Potential limitations of using pre-recorded lectures**

Some potential limitations of using pre-recorded lectures are described here:

**5.1	The 'lecture experience' and the 'learning community'**

Student expectations of higher education are likely to include the traditional lecture and the sense of community this can engender. Arguments in favour of the lecture as a mode of learning describe the '*exciting, uplifting, even inspirational lectures which linger in the memory'* (Jones, 2007), and it has been argued that even a commonplace lecture carries with it a 'certain atmosphere'.   The immediacy and the engagement, as a community of learners, with a unique performance 'rooted in the oral tradition' (Jones, 2007) cannot be replicated with a recorded lecture.

**5.2	Interactivity, engagement and feedback about students' learning**

In an ideal lecture, students will interact with the lecturer and a variety of techniques may be used to engage students and help a lecturer to know whether students are learning anything, and how well. Even without structured feedback, body language tells a story: '*The puzzled look, the sudden switch of attention to the neighbouring student's notes, the silent nod, the rapt expression of sudden enlightenment, or the glazed expression of the bored and uninterested, all tell the lecturer something. The attentive lecturer responds accordingly to these cues, with repetition, a change of pace, a diversion or whatever'* (Hart, Waugh and Waugh, 2000). Likewise, students will sense this response from the lecturer forming a 'metacognitive exchange' (Jones, 2007) which can enhance meaning and understanding. However, there is evidence to show that '*the amount and intensity of interactions and exchanges between students and teachers generally reduce as class size increases and this can result in anonymity and passivity amongst students'* (Mulryan-Kane, 2010).

**6	Recommendations for future development**

Given student demand for recorded lectures, yet mindful of some of the potential limitations of this technology, the following recommendations should be taken into account:

**6.1	Curriculum design and delivery**

- Pre-recording content-rich lectures can save a lecturer's time, which can then be redeployed without losing overall student 'contact' time. This 'freed-up' time can be used for 'academic-led seminars based around the pre-recorded material' (McDonnell and Curran, 2010).
- A range of synchronous and asynchronous activities should provide a 'thoughtful fusion' (Dunne et al, in press) of face-to-face and online activities to support the learning processes around each lecture.
- Recorded lectures should be designed to fit within a module and the programme as a whole.
- Tasks and interventions can be situated in the pre-recording to provide feedback on specific topics. For example :
  a.	Take a 5-minute break from this recording to produce a 5 minute summary of Topic X; post this online by X date and time.
  b.	Stop at this point and think about the following question.
  c.	When watching this lecture focus on 'x snippet' of the captured lecture.
  d.	When you have watched the recording, please complete the assessment in the VLE which uses a range of question types to help you test your understanding.

e. 'Write a 5 minute essay (or presentation) on slides 12 to 16 to bring to our next tutorial.
   f. Work with group x to summarise this topic before coming to the tutorial.
- The addition of occasional keynote lectures at strategic points in the curriculum may enhance the experience of the lecture as 'performance art' (Brent, 2005).

6.2   Enhancing the student experience

- The sense of being both an individual, whose identity is known (Dunne et al, in press) and who has a voice, and also being part of a larger learning community, may be achieved by providing a variety of learning experiences.
- A 'bridge' between the pre-recorded lecture and its author may be created through access to individual lecturers during office hours, tutorials, 'Help' hours and email responses.
- The new VLE offers new opportunities for developing a motivated, engaged and purposeful community of learners through the structured design of online forums based around, for example, the 5-stage model outlined by Gilly Salmon (2003), which emphasises the socially based aspects of online learning.

6.3   Practical recommendations

- The careful selection of Business School modules and staff to pilot this development is important as this work will provide a testbed for curriculum redesign and effective use of the new VLE.
- Lectures can be recorded for online delivery in spaces such as the Teaching Studio in the Laver Building, on individual desktop computers or in a lecture theatre without an audience at a time when the room is available.
- Support and advice is available from the Education Enhancement Unit (Nick Birbeck, Marge Clarke, Karen Leslie).
- The Integrate project website will provide guidance and advice.
- An Echo 360 video is available for Staff to help them get started (Birbeck, 2010).
- Existing good practice can be drawn from colleagues who have used lecture capture and surrounding activities in the School. (Elizabeth Jones, Sarah Rose, and Gary Abrahams).

7   Conclusion

The Business School is well-placed to lead the development of pre-recorded lectures to inform a coherent approach to wider institutional practice and contribute to the growing body of educational research and discourse around lecture capture within higher education nationally and internationally. The challenge is to ensure that the individual elements of the rich range of resources already available (MyEconLab, seminars, readings and pre-recorded lectures) are designed to form a coherent student learning experience.

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