2012

Lecture Capture Project
Evaluation Results

This report details the findings from student and staff evaluations of the lecture capture pilot project in the Schools of Arts and Social Sciences in the Spring Term 2012 at City University London.

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Executive Summary

The lecture capture pilot was a small scale trial of a variety of lecture capture technologies across the School of Arts and Social Sciences at City University in the Spring Term 2012. Approximately 148 hours of lecture material was recorded and published to students on 19 modules in Arts and Social Sciences, Informatics, Health Sciences and the Learning Development Centre, in the Spring Term 2012. Over 1000 students had access to lecture capture recordings during this period.

There were 4,195 separate views of the recordings by City students in the period 23 January to 27 May 2012 (excluding iTunes U) and the statistics pulled from the Echo360 system and moodle illustrate that the majority of use was around the exam revision period. Staff and student surveys were also carried out in order to evaluate the effectiveness and demand for lecture capture at City University London. This report contains the full results of these evaluations as well as some examples of how lecture capture is being used around the University.

The student evaluation showed that 91% of students reported that they used the lecture capture recordings. The most popular uses for students were exam revision (74%) and to go over areas they did not understand the first time (72%). A large majority reported that the recordings had helped their learning (93%). The most common times for accessing the recordings were for exam revision (60%) and when doing assignments (24%), and the most common place for students to access the recordings was from home (92%). A small minority of students stated that they did not find the recordings necessary because they had made their own notes in the lectures (3%).

The staff evaluation showed that staff feel that lecture capture has potential and the results of the survey were positive. All staff that took part stated that they would like to use lecture capture again in the future and that they would recommend lecture capture to their colleagues. Some staff encountered difficulties with the set-up and reliability of portable equipment and most staff felt that the system would need improvements if it were to be expanded. Automated equipment in the rooms emerged as a popular solution and the majority of staff were interested in lecture capture being integrated with central timetabling. The majority of staff felt that lecture capture did not affect attendance. However, a minority felt that lecture capture may have contributed to decreased attendance and that students' expectations need to be carefully managed.

The results of the pilot, case studies collected from across the Schools, and the survey conducted in SHS demonstrate a need for lecture capture on a wider scale at City University London. However as illustrated by the comments in the staff evaluation in order to introduce lecture capture as a scalable solution, without creating a large demand for technical support an investment needs to be made in a fixed/pre-installed solution in teaching rooms, and possibilities for integrating with our central timetabling system should be investigated.

Introduction

Lecture capture allows academic staff to record their teaching, capturing audio, the computer screen and (optionally) video. The recordings are processed and published automatically and are then accessed via the VLE. A number of different proprietary systems are available.

Lecture capture is increasing in popularity in universities worldwide. In London, for example, it is in widespread use at the LSE, UCL, Queen Mary and Imperial College. Students value lecture capture because it gives them the ability to go back and review lecture materials in their own time at their own pace. It is particularly useful for revision, as well as offering extra support for students with learning difficulties or who have English as a second language. Lecture capture systems can also be used to create additional multimedia teaching resources.

The Schools of Arts and Social Sciences ran a small-scale opt-in lecture capture pilot project in the Spring Term of 2011-12. We used the Echo360 system, which is installed directly into the teaching pod, to automatically record some lectures, and extended the pilot by using Personal Capture software installed on laptops which could be set up in any room. A mixture of different technologies, such as iTunes U and MediaSite, another portable lecture capture system, were already being used by a small number of staff to record and publish lectures to their students and in some cases to the public. Since these systems provide students with very similar results, albeit with much more set-up and administration time, they were considered as part of the pilot project. In addition, a small number of lecturers on modules outside the Schools participated in the pilot, using MediaSite or Echo360 to record their lectures.

Student Evaluation Results

An anonymous web survey was sent out to students on modules which had regularly used lecture capture. Over 1,000 students had access to lecture capture recordings during the pilot project in the Spring Term 2012. The survey was sent via Moodle to the 903 students on all modules in which there was significant access to the recordings. 132 responses were received, giving a response rate of 15%.

Key findings

91% of students reported that they used the lecture capture recordings.

Students reported using the recordings in the following ways:

74%	For revision
72%	To go back to parts I did not understand
58%	To go back to parts I did not remember
48%	To catch up on classes I had missed
38%	To watch the whole recording again
11%	To listen again, because English is not my first language

Of these students, a large majority (93%) reported that the recordings had helped their learning.

The most common times for accessing the recordings were for exam revision (60%) and when doing assignments (24%).

The most common place for students to access the recordings was from home (92%).

A small minority of students (3%) stated that they did not find the recordings necessary because they had made their own notes in the lectures.
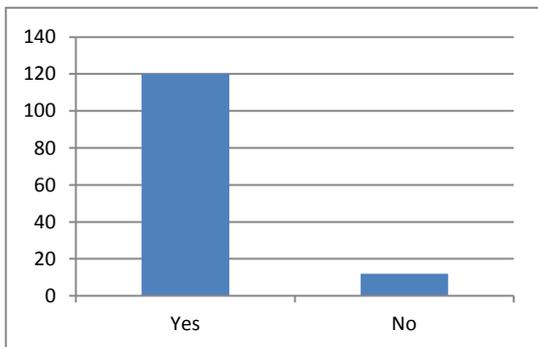
Survey Questions

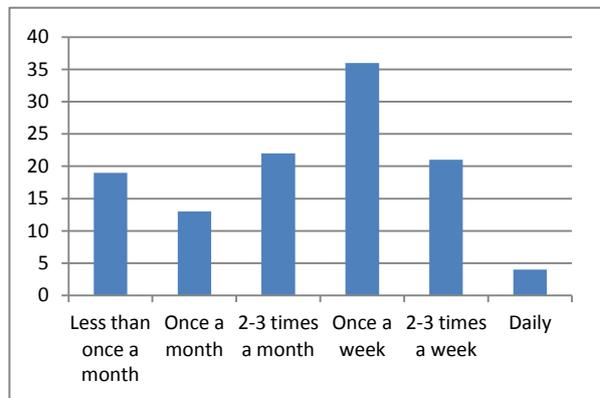|	
1.	Have you watched or listened to any of the lecture capture recordings for this module?
2.	If yes, how often did you watch or listen to the recordings?
3.	On average, how often did you watch or listen to the recordings?
4.	When did you watch the recordings most?
5.	Have the recordings helped your learning for this module?
6.	(If yes) how were they useful?
7.	(If no) why did you not find them useful?
8.	Where have you watched or listened to the recordings?
9.	What kind of devices (e.g. computer, tablet, phone) have you used to watch or listen to the recordings and how would you rate this experience?

The questions were multiple choice, apart from question 7 which invited a text response. This approach was used to encourage maximum participation in the survey and to allow for ease of collation of the results. Students were offered a very small incentive to participate in the survey.

Full results of the student survey

Have you watched or listened to any of the lecture capture recordings for this module?
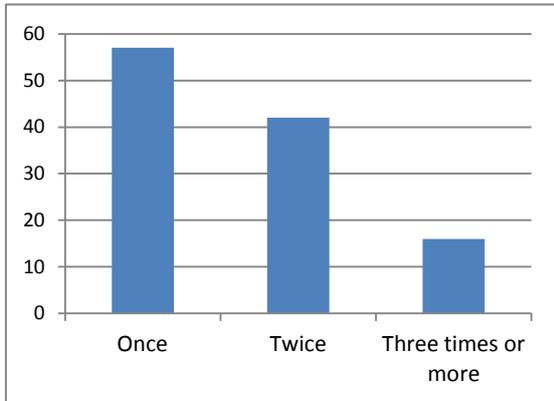

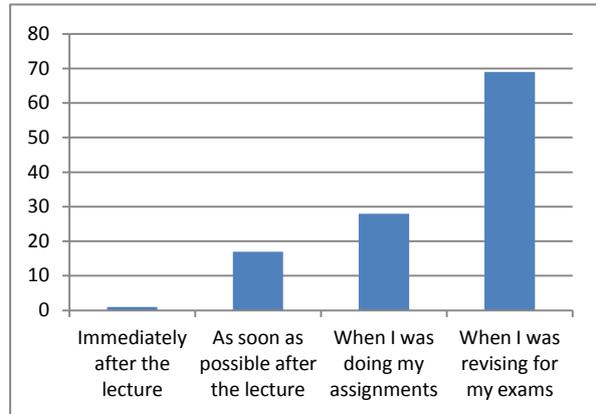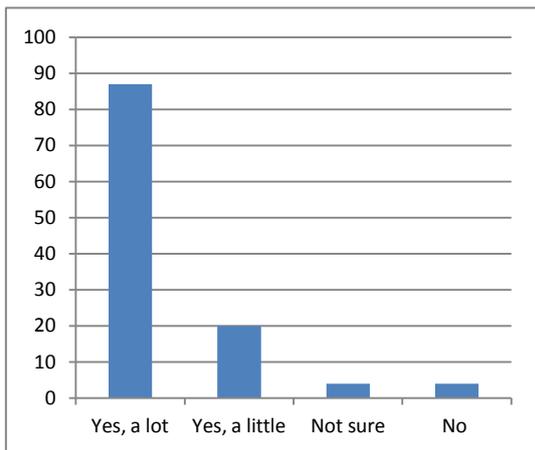**How often did you watch or listen to the recordings?**

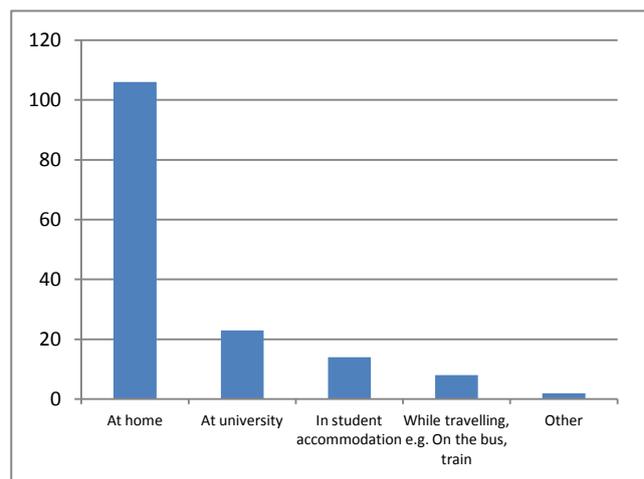**On average, how often did you watch or listen to each recording?**

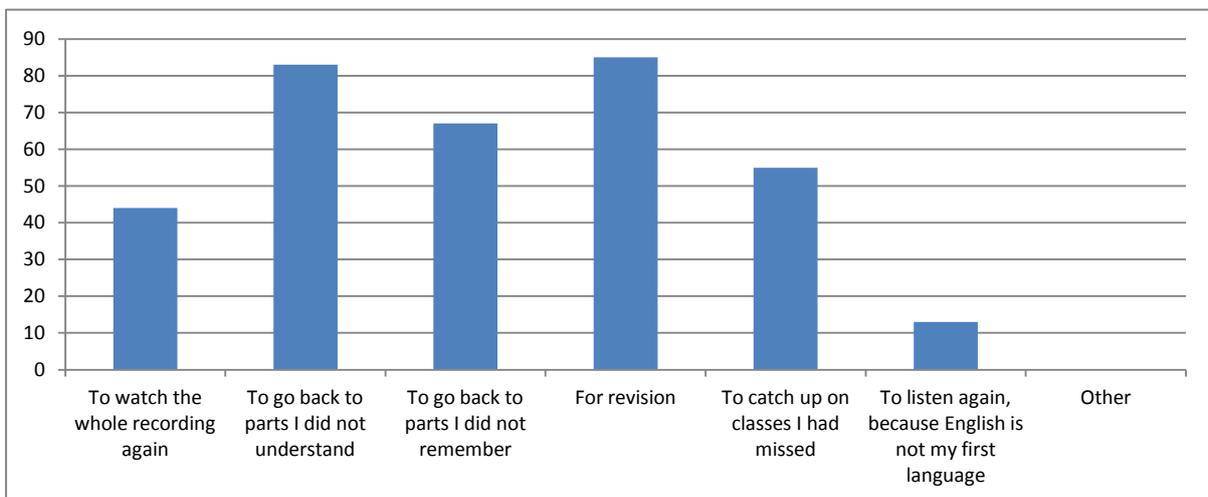**When did you watch the recordings most?**

Have the recordings helped your learning for this module?

Where have you watched or listened to the recordings?

How were they useful?

Why did you not find them useful? (open text response)

If you were not present for the lecture all you got was an audio recording with any of the visuals done outside of the computer missing.

because i have been to the lectures and i have made my own notes. in general i believe that these videos are very bad for the module because the attendance will be extremely small

Because the lecture's ego is so big that he felt that he had to be only thing in them, should have been filming the presentation with the sound of the lecturer only.

In some of the topics, It was quite confused and not clear when the Professor said in the lecture

I had already taken the material from attending the lecture. The recording didn't add anything to my learning.

Attending the lectures was sufficient, so reviewing the material in a recorded format did not add to my learning, particularly as the recordings are a diminished experience.

It was good to listen through some of the lecture slides and refresh my memory. Also I used the recordings in order to make sense of some of the experiments mentioned in the lectures.

What kind of device have you used to watch or listen to the recordings?
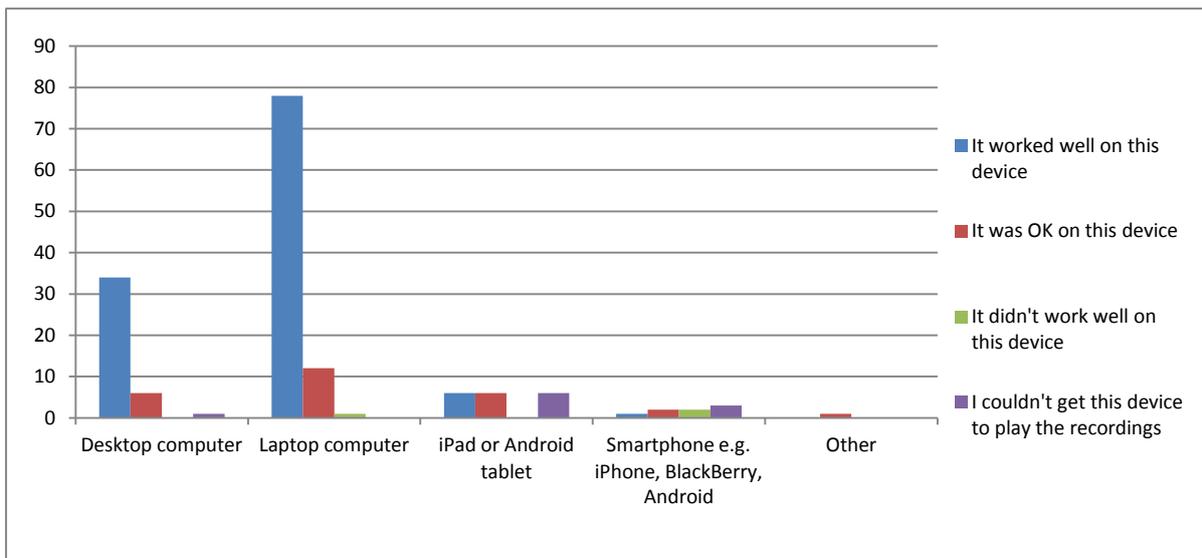
Staff Evaluation Results

A small-scale web survey was sent out to academic staff in the Schools of Arts and Social Sciences who regularly used lecture capture during the pilot project. This did not include staff who had simply trialled lecture capture equipment or used it as a one-off, but focussed on those who had used it to regularly record their teaching sessions during the term.

Key findings

Staff thought that lecture capture has potential and the results of the survey were positive. All staff that took part stated that they would like to use lecture capture again in the future and that they would recommend lecture capture to their colleagues.

Some staff encountered difficulties with the set-up and reliability of portable equipment and most staff felt that the system would need improvements if it were to be expanded. Automated equipment in the rooms emerged as a popular solution and the majority of staff were interested in lecture capture being integrated with central timetabling.

The majority of staff felt that lecture capture did not affect attendance. However, a minority of staff felt that lecture capture may have impacted on attendance and that students' expectations needed to be carefully managed.

Survey Questions

1.	Why did you opt for lecture capture in your class?
2.	Did lecture capture meet your expectations?
3.	If lecture capture did not meet your expectations, why is this?
4.	Do you feel that student attendance was affected by lecture capture?
5.	Have you had any feedback from your students about lecture capture?
6.	What benefits do you think lecture capture brought to your students?
7.	Would you use lecture capture to record your teaching again?
8.	Which lecture capture systems have you used?
9.	If you used two or more lecture capture systems, which do you prefer and why?
10.	Would you approve of lecture capture equipment being installed in more teaching rooms?
11.	Would you like lecture capture booking to be integrated with central timetabling?
12.	If you could change one thing about the lecture capture system you used, what would it be?
13.	Do you have any other comments or feedback you would like to give about lecture capture?

Most questions invited a text response, with questions 7, 8, 10 and 11 using multiple choice.

Full results of the staff survey

Responses are summarised below and similar answers are grouped together. Where comments refer to issues with specific technologies, the system used by the individual lecturer is added in square brackets.

Why did you opt for lecture capture in your class? (open text response)

Students seemed to like it	3 responses
I was asked if I would like to participate	2 responses
As an experiment	2 responses
To learn something about my lecturing style	2 responses
So that students could review the material later	2 responses
As a way to make lectures publicly available	2 responses
Because some students could not attend the lectures for religious reasons	2 response
As a back-up in case of last minute visiting lecturers' cancellations/travel problems in the future	1 response

Did lecture capture meet your expectations?

Yes	4 responses
No	4 responses

If lecture capture did not meet your expectations, why is this? (open text response)

Set up was fiddly [using Personal Capture or MediaSite]	3 responses
Technical problems meant that some sessions were not recorded [using Personal Capture]	2 responses
Technical problems meant that the recording process was not reliable [using MediaSite]	
Lecturers felt the system restricted their movement around the room	
The RSS feeds were initially intermittent	
The screen capture does not record in full video, therefore does not capture fast-moving activities such as typing and mouse movement [using MediaSite]	
The editing process was more difficult than I expected	

Did you feel that student attendance was affected by lecture capture?

No, attendance was not affected	4 responses
Not sure	3 responses
Yes, attendance went down	1 response

Have you had any feedback from your students about lecture capture? (open text response)

Feedback has been positive	5 responses
Students use the recordings to go over things they missed or misunderstood in the lecture	3 responses
Students use the recordings as a revision tool	2 responses
The recordings probably contributed to lower attendance in the lectures	2 responses
There were some comments about the audio quality on some of the recordings	2 responses
Students enjoyed being part of an experiment	
Students were generally happy to have their group discussions and presentations recorded	
Not yet	

What benefits do you think lecture capture brought to your students? (open text response)

A way to catch up on missed lectures	3 responses
It is useful for revision	2 responses
To help them grasp difficult concepts	2 responses
Helps them to review the content of the lectures	2 responses
Lecture capture allows me to give more information than I would be	2 responses

able to give out in notes or handouts	
Not sure yet	2 responses
Listening to my own recordings helps me to improve my teaching style	
Helps those who have English as a second language	
Allows students to listen again at their own pace	
Gives students time to listen and think without having to scribble notes	

Would you use lecture capture to record your teaching again?

Yes	6 responses
Yes, with changes	2 responses

Which of the following lecture capture systems have you used?

Echo360 Personal Capture	5 responses
Audio/video recording of lectures and publication through iTunes U	3 responses
MediaSite	2 responses
Echo360 installed in the teaching pod	1 response

If you have used two or more of the lecture capture systems listed above, which do you prefer and why? (open text response)

I prefer Personal Capture to iTunes U because lecture recordings are only available to my students
I did not want to use the system that came with a laptop to deliver my lectures, as it would have meant having to always look down at the small laptop screen for the slides instead of facing the audience and seeing the slides on the big monitor in front of me [personal capture].
I prefer the mediasite capture because it captures all the outputs, not just my laptop.
The system was not ideal as it restricted lecturer movement
I would like to put stuff on iTunes U but I've no idea how to do that

Would you approve of lecture capture equipment being installed in more teaching rooms?

Yes	7 responses
No	1 response

Would you like lecture capture booking to be integrated with central timetabling?

Yes	7 responses
No	1 response

If you could change one thing about the lecture capture system which you used, what would it be? (open text response)

There were a couple of glitches but these were only minor, one lecture didn't record properly, but I didn't see this as a major issue [using Personal Capture]

I think it is fine as it is [using iTunes U]
It should be more widely available/publicised
Have it centrally installed on the classroom pod so it can be easily operated by the lecturer and is not something they are aware of when they are lecturing once it is up and running [using Personal Capture]
Make it more reliable and less dependent on (very efficient and friendly) tech-support! [using MediaSite]
Make the setup on the laptop much quicker and more efficient ... setting this up with a hundred people waiting for the lecture to begin is not the best way for me to start a lecture [using Personal Capture]
Create a simple interface for selective access to lecture capture feeds on moodle. That would give me the option of only providing the lecture capture to students who can't make it to the lecture for religious reasons. Or, if we end up using some kind of register, to make captures automatically available to those students who attend, whereas those who don't have to contact the teaching assistant to get access
True video capture rather than a series of jpegs [using MediaSite]
Sort out the security certificate/browser compatibility issues so that I could edit the echoes from home from the start without needing to mess around with browser settings

Do you have any other comments or feedback you would like to give about lecture capture? (open text response)

I think lecture capture is good and I have had no problem integrating it with my teaching but I think its use is up to individual lecturers and thus do not think it my place to 'approve' of it being installed in teaching rooms or integrated with timetabling.
I think it is a useful teaching tool. It needs to be clearly explained to students that it is not a substitute for attending the lectures themselves.
The IT & teaching support team were especially helpful and did an excellent job.
I would recommend it in principle, but I definitely think is needs changing and refining.
The [editing] interface is not particularly ergonomic, and I've lost my edits several times.
Generally, we need to look into the effect of lecture capture on attendance ... I suspect that student satisfaction will take a hit if students decide to do most of their studying online and don't come along to the lectures themselves. But overall, lecture capture has a lot of potential - I think there's just some fine tuning of implementation that needs to be done, and a more serious consideration of how we as an institution want to use the resource.
In terms of pedagogy, I felt it was important to act within lectures as though the lecture capture system wasn't there - in other words not to be deterred from moving around the room or from carrying out participative exercises just because the area at the front of the room was being videoed.
In terms of editing, a few changes would improve the editing interface considerably but I would particularly like to see a way to switch between looking at the presentation and looking at the video without losing one's place in the lecture.

Would you recommend lecture capture to your colleagues?

Yes	8 responses
No	0 responses

Case Studies of Practice

This is a collection of case studies of practice from across the institution, and a survey in SHS, detailing the different ways in which academic staff are already engaging with lecture capture to support teaching and demonstrating possible demand outside the Schools of Arts and Social Sciences.

Schools of Arts and Social Sciences:

PS2004 Biological Psychology

The lecturer for this module won a University Prize 2010-11 for his work on the Biological Psychology module. As part of the Moodle resources for this module he created a series of revision presentations using Adobe Presenter which records the screen and audio. The presentations reviewed content which had been covered during lectures, but allowed for complex topics to be explained in more detail. In addition, students could watch the recordings at their own pace, and navigate to specific slides to find the sections they needed.

ECM008 e-Commerce

The postgraduate module in e-Commerce in the Department of Economics has utilised a number of learning technologies in some innovative ways, including using lecture capture as part of the School's lecture capture pilot. Students give presentations as part of the module's assessment, and these were recorded using lecture capture to encourage peer review and self-assessment.

SG1004 Understanding the Modern World

Video conferencing has been used to record a revision session for this core first year undergraduate Sociology module. This allowed students who had returned home during holidays to watch a live stream of the lecture remotely and type questions using the chat feature, alongside students who were able to attend the lecture in person. Students were impressed that this option was made available to them. In addition the online lecture was recorded for all students to review again before the exam.

Legal Translation

The Legal Translation postgraduate degree is taught in a small number of intensive blocks rather than on a weekly basis. This year the team decided to use lecture capture to record some of their teaching sessions and additionally they recorded a number of revision sessions which students had access to before their exams. Some lectures are delivered in foreign languages so the ability to go back and review the sessions is especially useful for students who spend little or no time on campus.

CASS Business School:

Actuarial Science and Insurance

At Cass, some lecturers have developed their own systems to record the screen and their voice while lecturing. A tablet PC allows live annotations to be made on the screen while recording using Camtasia. The lecturer writes, "The production values of this are not spectacular but students don't seem to mind; their reaction to the videos has been ecstatic, which rather surprised me. Some students listen to the whole video of each lecture, but most prefer just to listen again to sections they find difficult when revising their notes. I have not noticed a significant impact on attendance. Maybe the few students who would be asleep in class in any case, are now in their beds instead, which seems better both for themselves and everybody else."

School of Informatics

The use of "lecture capture" by staff in SoI has been occasional but varied in type (& process). Audio &/or Video recordings have been made of:

• Single lectures in an empty classroom to replace missing classes, for example during adverse weather conditions.
• Occasional live sessions when a significant number of student absences were known about in advance
• Project presentations for second marking.
• Short mini-lectures as supplementary learning resources.
• Mock interviews as part of the learning activities (this was done at the MILL studio)
• Staff meetings and presentations

Two lecture series were recorded as a pilot following requests from students but overall there is currently little demand in the School for the mass capture of live lecture or tutorial series.

School of Health Sciences:

SHS ran a quick one question survey to explore the demand for lecture capture in the School, which had a 48% response rate. The results are below, demonstrating that less than 30% of staff would not like their lectures captured in some way.

If we had a lecture recording system in place in the SHS would you like to have your lectures recorded?			Response Percent
1	Yes, I would like my lectures to be recorded in full in the classroom		7.22%
2	I would like to select some of my lectures to be recorded in the classroom		25.77%
3	I would prefer to record summaries of my lectures or explanations of challenging concepts in my own time		9.28%
4	I would like to do both (my lectures to be recorded in the classroom and to record summaries and short explanatory videos in my own time)		20.62%
5	No, I would not like my lectures to be recorded in any way		28.87%
6	Other, please specify:		8.25%

Usage statistics

Key figures

Approximately 148 hours of lecture material was recorded and published to students on 19 modules in Arts and Social Sciences, Informatics, Health Sciences and the Learning Development Centre, in the Spring Term 2012. Over 1000 students had access to lecture capture recordings during this period.

There were 4,195 separate views of the recordings by City students in the period 23 January to 27 May 2012. This figure does not include views of lecture recordings published via iTunes U, because these figures also include views by the public. Due to the limitations of the reporting tools, the length of time students spent viewing each recording cannot be measured.

The most popular recording (PS2006 week 4) has been viewed 385 times.

In the week with the highest usage (w/c 30 April 2012) there were 556 views.

Week by week usage

The graphs below were generated by the reporting tools available in Echo360 and Moodle. They show the number of views week by week on some of the modules in which lecture capture has been used regularly throughout the term.

Diamond points on the graphs represent assessment deadlines, and help to show how students have used lecture capture recordings over the term. In most cases, assessment deadlines coincide with or immediately follow pronounced spikes in usage, showing that students have made greatest use of lecture capture in the run-up to exams and other assessments.
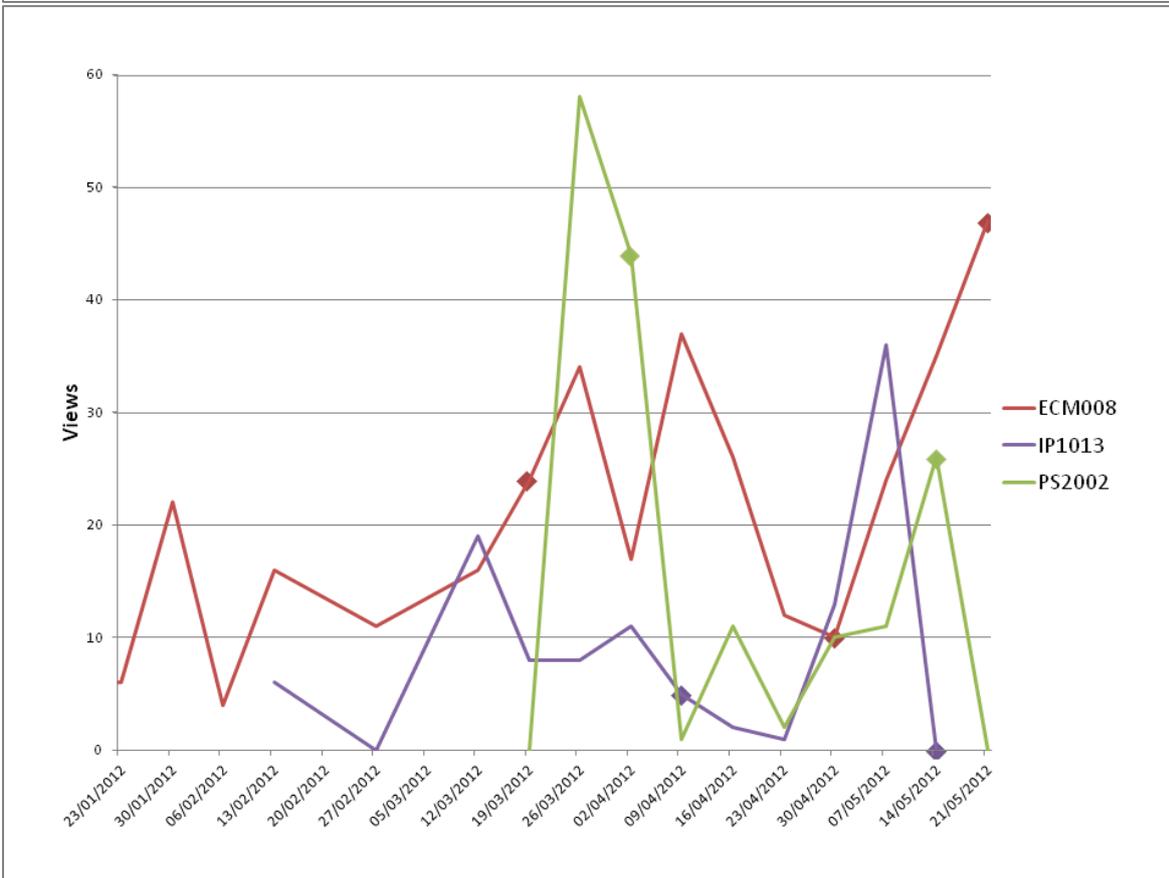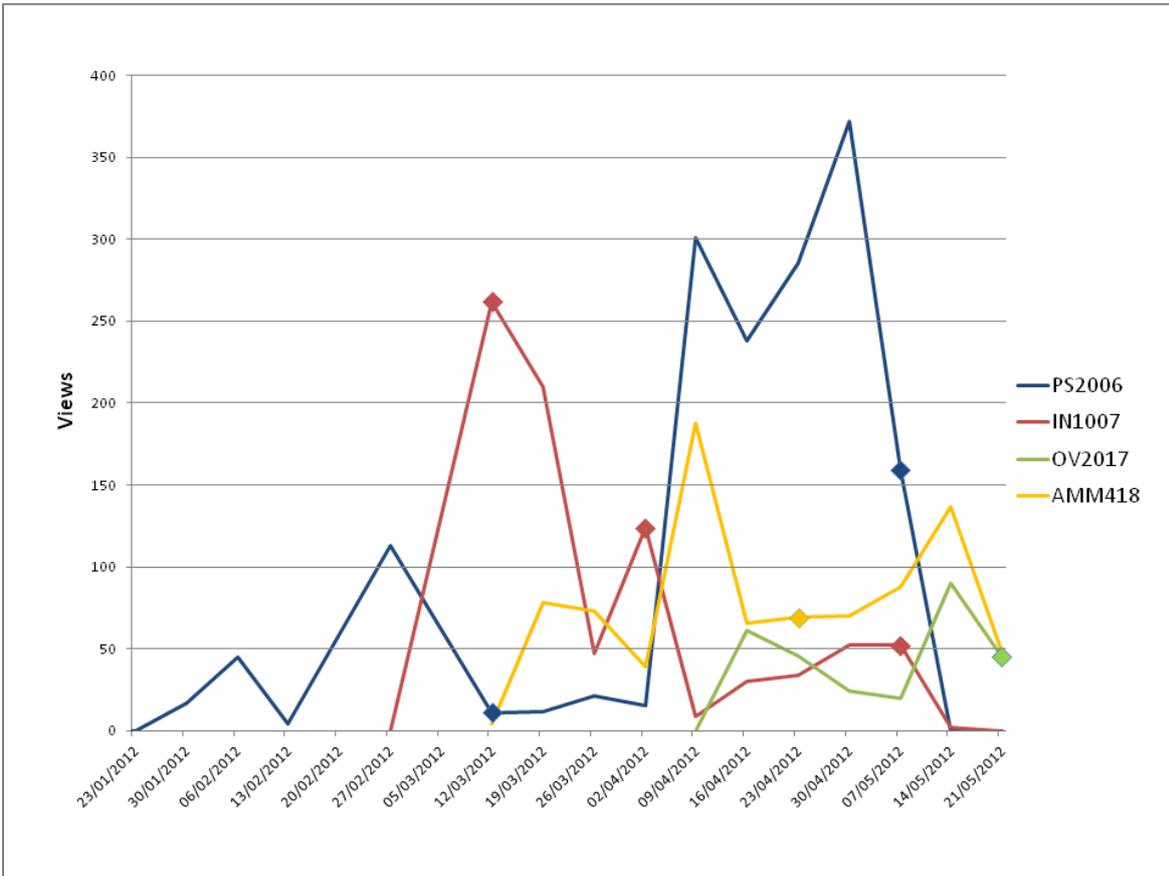
Conclusions and Recommendations

The results of the pilot, case studies collected from across the Schools, and the survey conducted in SHS demonstrate a need for lecture capture on a wider scale at City University London. However as illustrated by the comments in the staff evaluation in order to introduce lecture capture as a scalable solution, without creating a large demand for technical support an investment needs to be made in a fixed/pre-installed solution in teaching rooms, and possibilities for integrating with our central timetabling system should be investigated.