

## Captured content – a short overview

This document provides a brief introduction to captured content and includes a variety of exemplars which illustrate some of the educational uses of audio-visual materials at Surrey along with comments from staff and students.

### 1. What is captured content

Captured content refers to:

- **Recording of live teaching events**, also known as lecture capture.
- **Audio-visual materials** often used as part of blended or flipped learning.

#### Creating audio-visual materials using Panopto

A variety of audio-visual materials can easily be created using Panopto such as mini-lectures, software tutorials, case studies, assignment briefings and even activities such as quizzes. Please see the following guides which summarise the current process for using Panopto in lecture capture enabled rooms ([Panopto Classroom](#)) and from your workstation ([Panopto Desktop](#)).

#### Creating audio-visual materials using other software

DTEL can provide guidance about other software available to create materials, such as *Explain Everything* or screen capture software such as *Captivate*. You can store these files on Panopto and share the link via SurreyLearn.

#### Repurposing audio-visual materials

There is a developing collection of educational videos and platforms available for you and your students. For example [Box of Broadcasts](#) offers a wealth of TV and radio programmes that can be used for education and the [Khan Academy](#) offer instructional videos for a variety of subjects. You can also watch Salman Kahn's TED talk, 'Let's use video to reinvent education' [here](#).

#### Useful approaches to consider when making use of captured content

- Developing procedural knowledge – create content demonstrating processes that students would benefit from seeing often, e.g. software demo, assignment process;
- Consider threshold concepts – identify the areas of a programme that students struggle with and develop content to support this learning;
- Develop shared resources – programme teams collaborate to identify and develop content that all their students, particularly level 4, would benefit from.

## 2. From lecture capture to captured content

This [video](#) is a captured excerpt of the presentation at DLT Forum on 7 March 2018 where Rhona Sharpe, Head of DTEL, explains how research has informed our practice and the progression at Surrey from 'lecture capture' to 'captured content'. Rhona refers to Gemma Witton's research which concluded that the purposeful use of capture technologies 'adds value to student learning and increases engagement' (2017:1010). Witton's model highlights that, while students find live teaching recordings helpful, they highly value other uses of captured content. The diagram below shows a sample of captured content created at the University of Surrey mapped against this model.

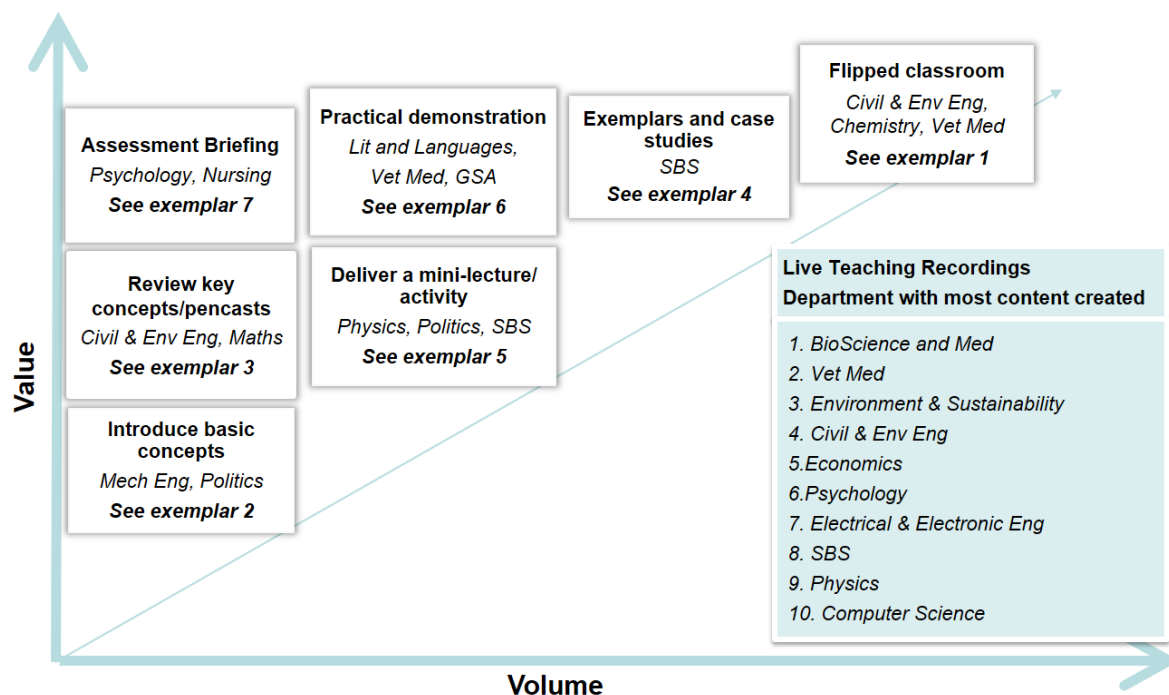


Figure 1. The capture value model: purposeful use of captured content at Surrey

Adapted from Witton, G. (2017). The value of capture: Taking an alternative approach to using lecture capture technologies for increased impact on student learning and engagement. *British Journal of Educational Technology*, 48(4), pp.1010-1019.

## 3. Exemplars from Surrey

- 1. Pre-lecture videos and activities** – Katerina Ridge (Chemistry)
- 2. Pre-tutorial videos** – Olaf Marxen (Mechanical Engineering)
- 3. Demonstration of key concepts – pencasts:** interactive video with synchronised notes and audio – Saber Fallah (Mechanical Engineering)
- 4. Case Studies** – Stephen Dale (Law)
- 5. Software tutorials and reviewing key concepts** – Mary Nolan (SBS)
- 6. Practical demonstrations** - Ilknur Aktan (Veterinary Medicine)
- 7. Assignment briefings** – Jane Leng (Nursing)

## 1. Pre-lecture videos and activities – Katerina Ridge (Chemistry)

The screenshot shows a Panopto video player interface. On the left is a table of contents with a search bar at the top. The main video area displays a slide titled "The Ideal Gas Equation". The slide content is as follows:

**The Ideal Gas Equation**

The four properties are not independent of each other

We cannot have a sample with arbitrary values for *all* four properties

$p = f(n, V, T)$

e.g. we cannot choose to have a sample of 0.555 mol of  $H_2O$  (g) in a volume of  $10 \text{ dm}^3$  at 100 kPa and 500 K

$pV = nRT$

The Ideal Gas Equation

Below the video player is a control bar with a progress slider at 10:05, a volume icon, and buttons for Speed, Quality, Slides, Screen, and Hide. A thumbnail strip at the bottom shows a sequence of slides from the video.

Contents	Time
p, V, n, T	7:44
Notes	
Bookmarks	
Discussion	
At a given temperature and pressure, equal volumes...	8:10
Watch the following animation...	8:12
p, V, n, T	8:32
p, V, n, T	8:39
At a given temperature and pressure, equal volumes...	8:48
The Molar Volume ( $V_m$ ) is the volume of one mol of...	8:58
The Ideal Gas Equation	9:10
The Ideal Gas Equation	9:33
The four properties are not independent of each...	9:38
We cannot have a sample with arbitrary values for...	9:56
e.g. we cannot choose to have a sample of 0.555 mol...	10:05
1 atm = 101325 Pa	10:32
1 dm <sup>3</sup> = 10 <sup>-3</sup> m <sup>3</sup>	10:46
R = the Gas Constant (R = 8.314 J mol <sup>-1</sup> K <sup>-1</sup> )	11:04
Solved Problem	11:26
Solved Problem	11:28
Straight Connector 5	11:38
Straight Connector 7	11:41
Straight Connector 9	11:44

### Aims

- to present a key concept, to prime students in readiness for a teaching session;
- to facilitate research around a topic of discussion in advance of a lecture or seminar;
- to maximise the value of contact time between lecturer and students and tackle questions/problems.

### Comments

**Katerina Ridge:** 'This year, I am also aware of features in Panopto such as bookmarking and note taking which will be very useful to our students; also, of course, the ability to ask a question at any point in the video. This will facilitate group discussions and I am certain that it will increase learning and enjoyment of the module.'

**Students:** 97% of her students who have received a pre-lecture video expect video resources to help them develop their understanding and their problem solving skills

## 2. Pre-tutorial videos – Olaf Marxen (Mechanical Engineering)

The screenshot shows a video recording interface. On the left, there is a table of contents for a recording titled 'NUMERICAL METHODS & CFD (ENG3165)'. The table lists various topics and their corresponding time markers. The main content area displays a slide titled 'Learning Outcomes' for the course 'Numerical Methods & CFD (ENG 3165) – CFD (Olaf Marxen)'. The slide text states: 'After this video, you should be able to perform all steps required to generate the geometry. Specifically, you will be able to use ANSYS ICEM CFD to ... create points and curves of a geometry to form the integration domain; ... assign part names to geometrical entities.' The interface also includes a search bar, a progress bar, and a taskbar at the bottom.

Item	Time
NUMERICAL METHODS & CFD (ENG3165)	0:00
Conceptual Model	0:13
Learning Outcomes	0:32
ANSYS ICEM CFD	0:51
ANSYS ICEM CFD: GUI	3:34
ANSYS ICEM CFD: GUI 2	3:41
ANSYS ICEM CFD: GUI 3	2:08
Geometry 1	2:39
Geometry 2	4:28
Parts 1	5:56
Parts 2	6:58
Save Project and Exit	7:45

### Aims

- to make the most out of contact time during tutorial or lab sessions;
- to scaffold independent learning;
- to demonstrate how to complete a procedure before students carry it out, eg. in a lab session.

### Comments

**Students:** 'Recordings provided by Dr. Marxen were highly useful and were used as such valuable revision material which had a direct effect on the learning experience.'

'The recorded lectures in CFD are useful along with clear solutions to the tutorial problems (which are pre-tutorials for the following week). This made it easier to understand.'

### 3. Demonstration of key concepts - pencasts: interactive video with synchronised notes and audio – Saber Fallah (Mechanical Engineering)

Tutorial 2 - Question 1 - Part (a)

Search

Notes  
Bookmarks  
Discussion

Block Diagram:

Forward Path:  $D(s) = k_s + \frac{k_f}{s}$  (circled in red)

Block:  $G(s) = \frac{1}{(s+1)(s+2)}$  (circled in red)

Transfer Function Derivation:

$$T = \frac{GD}{1+GD} = \frac{\frac{1}{(s+1)(s+2)} \cdot \left( \frac{k_s + k_f}{s} \right)}{1 + \frac{1}{(s+1)(s+2)} \cdot \frac{k_s + k_f}{s}}$$

(The denominator in the above equation is circled in red)

$$1 + \frac{1}{(s+1)(s+2)} \cdot k_s + k_f$$

Video Player: 2:34 / 8:02

#### Aims

- to demonstrate step-by-step solutions with rich audio explanations;
- to provide scaffolding for different levels of understanding and self-directed learning.

#### Comments

**Students:** 'The videos uploaded by Dr Fallah were very helpful to understand how to approach problems.'

'Dr Fallah in particular goes above and beyond to make sure we have every advantage when revising as long as we put the work in. Just look at all the stuff Dr Fallah puts on SurreyLearn, recordings, selected tutorial worked examples, code, all sorts.'

## 4. Case Studies – Stephen Dale (Law)

Search

Notes  
Bookmarks

### Case Law to Support Question 1B

Case Law To Support Problem Question 1B

Carol

Godley v Perry [1960]

Grant v Australian Knitting Mills Ltd [1936]

Gerry's Showrooms

Ward v MGM Marine Ltd [2012]

1:50

7:10

1X Speed Quality

### Aims

- to facilitate thinking and problem solving;
- to present authentic activities which develop professional skills;
- to combine complex areas of knowledge.

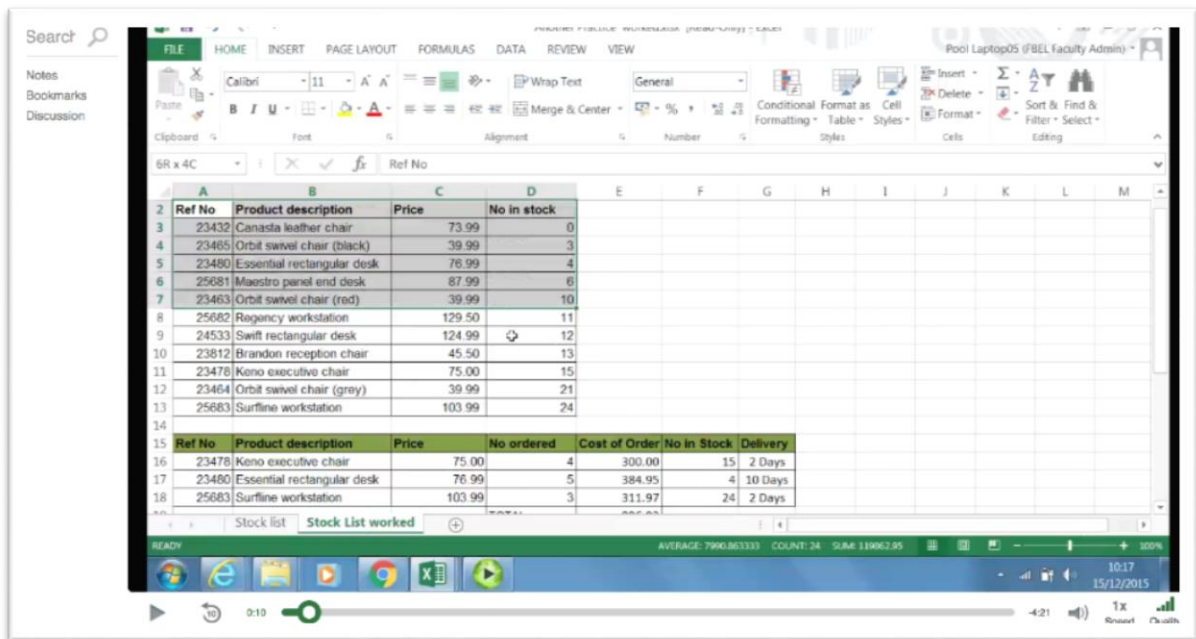
### Comments

**Stephen Dale:** 'MEQ feedback and feedback by course student representatives overwhelmingly evidenced the enhancement to the modules by the use of external interactive video aids to support and underpin the student learning (...) and to enable students to achieve their aspirational academic targets.'

**Students:** 'The SurreyLearn resources were really great, especially the accompanying lecture notes and supportive videos.'

'Please more video support sessions! They are amazing.'

## 5. Software tutorials: reviewing key concepts – Mary Nolan (SBS)



Ref No	Product description	Price	No in stock			
23432	Canasta leather chair	73.99	0			
23465	Orbit swivel chair (black)	39.99	3			
23480	Essential rectangular desk	76.99	4			
25681	Maestro panel end desk	87.99	6			
23463	Orbit swivel chair (rod)	39.99	10			
25682	Regency workstation	129.50	11			
24533	Swift rectangular desk	124.99	12			
23812	Brandon reception chair	45.50	13			
23478	Keno executive chair	75.00	15			
23464	Orbit swivel chair (grey)	39.99	21			
25683	Surfline workstation	103.99	24			

Ref No	Product description	Price	No ordered	Cost of Order	No in Stock	Delivery
23478	Keno executive chair	75.00	4	300.00	15	2 Days
23480	Essential rectangular desk	76.99	5	384.95	4	10 Days
25683	Surfline workstation	103.99	3	311.97	24	2 Days

### Aims

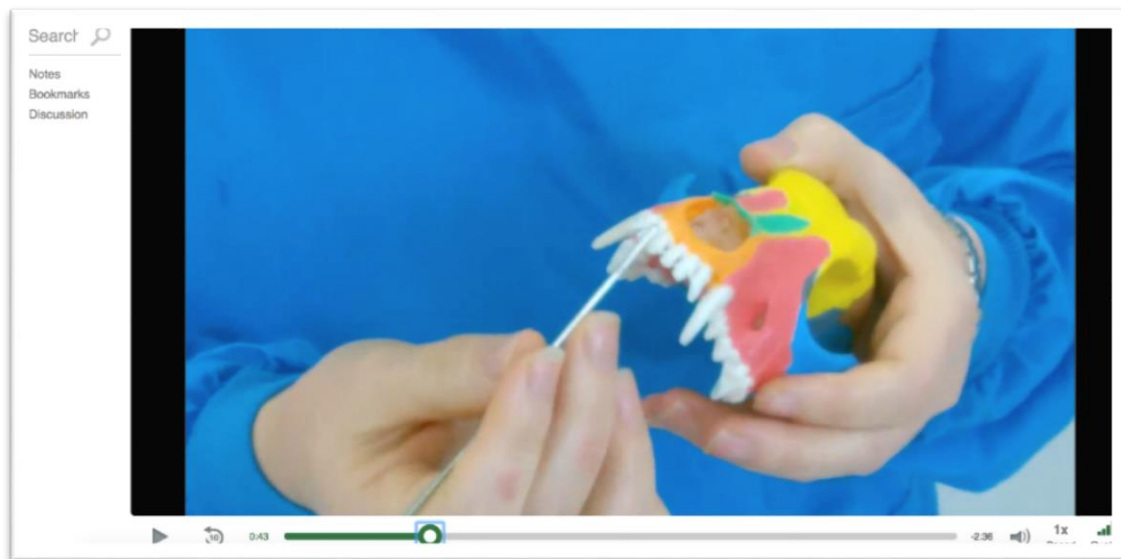
- to review and emphasise key skills and concepts;
- to work through exemplars/common mistakes;
- to offer group support.

### Comments

**Mary Nolan:** 'Preparation of the material does take time but saves time in the end. Topics work best for me when they are "byte size" pieces of information - less than 5 minutes.'

**Students:** 'My students say the videos are helpful. The Excel exam results were very good this year, many of the students said they used Panopto as part of their review material.'

## 6. Practical demonstrations - Ilknur Aktan (Veterinary Medicine)



### Aims

- to prepare students for practical sessions;
- to capture key concepts/methods in a video and avoid repeating the same basic knowledge during class;
- to enable in-depth/structured explanations which scaffold independent learning.

### Comments

**Ilknur Aktan:** '98% of my students engage with the videos. There is definitely a noticeable difference when students watch the videos before coming to the practicals. They love it! Feedback is so positive that I am doing this for all my practicals from now on.'



## 7. Assignment briefings – Jane Leng (Nursing)

The screenshot shows a Panopto recording of a presentation slide titled "Use of Relevant Literature" from the University of Surrey. The slide content is as follows:

- Expectation that work is referenced in the text in addition to use of a reference list
- Whenever someone could ask "How do you know this to be correct? Who says so?" use a reference to support your argument
- Use reading list for module/ references referred to in lectures as starting point and indication of standard of literature you should be using; do not rely on google!
- Use databases to support search for literature

The slide also features an image of several open books. On the left side of the screenshot, a table of contents is visible, listing various topics and their corresponding time markers. The bottom of the screenshot shows the Panopto video player interface with a progress bar and several thumbnail previews of other slides.

### Aims

- to provide clarity on an area that students often struggle with;
- to save time reiterating points;
- to unpack important areas such as assessment criteria.

### Comments

**Jane Leng:** 'I had never used this technology (Panopto) before and am at the extreme end of technophobia but found it relatively straightforward to use and soon needed no assistance.'

**Students:** 'The verbal feedback from students on their use of Panopto has been very positive and was reflected in the free text comments on MEQs. It has also been commended by colleagues. We are now planning to extend the use of Panopto to provide group feedback on assessment.'