What the flip: from blended learning to lecture flipping and peer instruction

#NTUFlip

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A journey to flipping and beyond

* Screencasts
* Vignettes
* Lecture Flipping
* Peer Instruction
Do you flip?

A. Yes
B. No
What is flipping?

* Removing the didactic information delivery aspect from the live contact session, freeing up time for facilitated active learning.
* Huge variation possible in both the means of delivery of the information and the in-class activities.
What do you regard as the most significant barrier to lecture flipping?

A. Suitable preparative resources
B. Means of engagement
C. Student attitudes

33% 33% 33%
Do you Screencast?

A. Do I what?
B. No and no interest
C. No
D. No choice, institutional policy
E. I’d like to but it’s too technically difficult
F. Yes
‘Screencast’?

* A screencast is a recording of the evolving image on the screen during a presentation synchronised with the speaker’s audio narration.
* We record using Camtasia Studio but other solutions are available.
‘tis easy
Strengths and Weaknesses

- Learning aid
- Assistance for students with disabilities and learning difficulties
- Revision aid
- Illness contingency
- Self observation
- Recording ‘quality control’

- Logistics and resources
- Time Consuming
  - Preparation
  - Editing
  - File creation and maintenance
- Discourages lecture attendance?
- Discourages note taking?
- Lazy revision?
What is the most significant absence in a screencast versus a live session?

A. Charisma
B. Claustrophobia
C. Agoraphobia
D. Intimacy
E. Interaction
F. None, they are equally good
Vignettes

- We use the term ‘vignette’ to refer to a short segment of a screencast covering a critical concept which may be augmented by an interactive component introduced during the editing process.
Student comments on Faculty Authored Vignettes

* “Staff vignettes are great revision tools because they are recorded well and the information is clear and concise!”

* “Good revision tool because if you haven't completely understood something in the lecture or when revising then you can go to that place in the vignette and listen to the explanation again!”

* “All lecturers should do it”

* “Would be more effective if lectures were recorded as vignettes that are only 5 minutes long”
Do you have the resources for faculty to produce lots of blended learning objects?

A. Yes
B. No
Do you ask your students to prepare and present presentations?

A. Yes
B. No

[Bar chart showing 0% for Yes and 0% for No]
Flipping the role: Student Authored Vignettes

- Synoptic final examination questions.
- Formative revision peer presentations and handouts.
- Require students to produce vignettes.
- Interactive revision tools available at time of examination.
Implementation

1. The students are paired and allocated a revision topic.
2. Each student pair prepares a presentation to be critiqued by their peers and instructors.
3. Each pair delivers a presentation to their peers and the session is captured using Camtasia Studio.
4. Each student pair creates a vignette from their screencast or a subsequent recording.
5. The student authored vignettes are published online to be used as a revision tool.
Support

- Drop-in workshops
- Teaching associate authored instructional screencasts
An example

Chemistry Vignettes

Student authored vignettes

As part of a Higher Education Academy Individual Teaching Development Grant funded project students on a fourth year MChem module have been authoring vignettes in preparation for a synoptic final examination.

View Vignette  Download SCORM  .mp4 only version*

Intermolecular Forces  Intermolecular Forces  Intermolecular Forces

* = not interactive

Leave a Reply
Uptake

When was the exam?
Evaluation quotes

* “Thought about information in a different way when preparing interactive questions”
* “You can add more to existing presentation which is good”
* “Made you go over material you might have forgotten”
* “Had lecture notes and additional material (narration)”
* “Highlights key areas”

* “No experience made preparation difficult”
* “Students don’t have a lot of time to do it. Takes longer than actual powerpoint”
* “Need more Camtasia experience/easier software”
* “Very good revision tool if a lot of effort is put into producing it”
* “Quality may differ and affect revision – can’t rely on them”
Prezi is an alternative presentation tool that allows students to follow a non-linear route; in this case between vignettes on aspects of the course.
The case for flipping

- When and why might we need to flip?
- If it’s not broken then don’t fix it.
Do you feel obliged to deliver a certain minimum amount of content?

1. Yes
2. No
Do wish you had time for more interaction?

1. Yes
2. No
Are there parts of the course students “Don’t get”?

1. Yes
2. No
Are you ever frustrated by persistent misconceptions?

1. Yes
2. No
What would you like to do to improve learning?

1. Encourage attendance
2. Increase engagement
3. Incentivise private study
4. Facilitate thought
Our model of lecture flipping

- Students are strongly encouraged to watch a screencast recording of the (previous year’s) lecture the flipped lecture is replacing.
- They attend the timetabled teaching slot and are engaged in as interactive and as ‘challenging’ a session as the ‘lecturer’ can muster using every audience participation device at their disposal.
Which are genuine student evaluation comments?

1. A lot of the descriptive chemistry was very dry and essentially boring. It is hard to teach this kind of material but the 'flipped lectures' seemed to combat this.
2. I think the 'flipped' lectures run by Dr. Lancaster were a really good idea and I felt more engaged in the module.
3. I appreciated Dr Lancaster's efforts to make the lectures interesting and engaging in a modern way. The 'flipped' lectures were very successful.
4. I really enjoyed the flipped lectures and find that revising that material is much easier.
5. The flipped-lectures are a definite step in the right direction, away from archaic lectures with little or no mental stimulus, towards a more interactive learning experience that maximises learning outcome!
6. They were good fun as it was nice to have interaction with the lecture as opposed to just being talked at, it was also nice having knowledge of what you were talking about as we had already gone through the material!
7. I think the flipped lectures were a really good idea because it was a more interactive way to engage students into learning, rather than the repetitive routine of having to listen to the lecturer work through a PowerPoint presentation for an hour.
How should you react if you get a spread of answers?

1. Move on.
2. Shrug, look disapproving and move on.
3. Refer them to the notes and move on.
4. Repeat your original explanation and move on.
5. Repeat your original explanation and poll again.
6. Invite the students to find someone who disagrees with them, discuss it and then poll again.
The importance of the question

Higher Order Thinking Skills

- Creating
- Evaluating
- Analysing
- Applying
- Understanding
- Remembering

Lower Order Thinking Skills

‘Bloom’s Taxonomy’ source: http://edorigami.wikispaces.com/
Where does most of the substance of an oak tree come from? A) The acorn B) Soil C) Rain D) Air.

1. The acorn
2. Soil
3. Rain
4. Air
Turn to your neighbour
Where does most of an oak tree come from? A) The acorn B) Soil C) Rain D) Air.

1. The acorn
2. Soil
3. Rain
4. Air
A ball initially at rest in the hand, is thrown upwards, comes back down and is caught. Which of the following represents a plausible graph of vertical acceleration against time?

1. Graph 1
2. Graph 2
3. Graph 3
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What would it take to make your school adopt new teaching practices?

A. An act of God
B. Positive student evaluations
C. An independent qualitative study
D. Quantitative evidence of improved learning outcomes
E. None of the above

0% 0% 0% 0% 0%
Conclusions

* Mix it up
* Record it
* Interact
* Flip
* Let the students do the instruction
Acknowledgements

* Dr Ross Galloway
* Dr Natalie Rowley
* Dr Samantha Pugh
* Prof Tina Overton
* Dr Katherine Haxton
* Dr David Read
* Helena Gillespie
* Dr Adam Longcroft
* Alicia McConnell