How to flip your class online, when the world is flipping out

A hands/brains-on demo

30 April 2020
75-student team & project based class!
information transfer

sense-making
information transfer

instructor-paced synchronous lecture

campus

sense-making

self-paced asynchronous home work/study

home
Information transfer: instructor-paced synchronous lecture
Sense-making: self-paced asynchronous home work/study
instructor-paced synchronous online lecture

instructor-paced synchronous online lecture

self-paced asynchronous home work/study
campus

- instructor-paced
- synchronous
- lecture

home

- instructor-paced
- asynchronous
- recorded lecture

home

- self-paced
- asynchronous
- home work/study
instructor-paced synchronous lecture

instructor-paced asynchronous recorded lecture

self-paced asynchronous home work/study

ALONE!
online
information transfer
self-paced asynchronous

online
sense-making
instructor-led synchronous
interactive

two evidence-based approaches
let's explore these two steps

- **Online**
  - Information transfer
    - Self-paced
    - Asynchronous
  - Sense-making
    - Instructor-led
    - Synchronous
Let's explore these two steps

(Using two free tools)

**Online**
- Information transfer
- Self-paced asynchronous

**Online**
- Sense-making
- Instructor-led synchronous
asynchronous information transfer

Perusall
asynchronous information transfer

Perusall...

• is a text-based social learning platform

• takes information transfer out of classroom
asynchronous information transfer

You will…
1. create a (dummy) course (while I create mine)
2. join my course to get the student experience
asynchronous information transfer

1. in your browser go to: app.perusall.com

2. if you have an account, log in, then wait
asynchronous information transfer

1. in your browser go to:  app.perusall.com
2. if you have an account, log in, then wait
3. if you don’t have an account, follow along
1. app.perusall.com

2a. sign in here, or...

2b. click register
create a course...

(if you logged in with existing account, click “Create course” at top left of page)
…select “instructor” and…
for students to access directly at perusall.com
can’t find your institution? enter “Example Institution”
Why Perusall works

• social connection/interaction *in context*
• incentivizes/motivates participation
• machine learning analysis of engagement
• provides “Confusion Report” to instructor
A few notes

• Perusall is free
• Many textbooks free until summer
• Nearly 100% reading-assignment completion
• Students using Perusall perform better
Documents you can use with Perusall

• PDF, Word, html, or ePub files (free)
• open access material (free)
• source code with syntax highlighting (free)
• books (purchased by students* or institution)

*via Perusall or through university bookstore (support@perusall.com)
Publishers offering free textbooks until summer

- Broadview Press
- Cambridge University Press
- CRC Press
- McFarland
- McGraw-Hill Education
- Oxford University Press
- Princeton University Press
- Routledge
- SAGE
- Springer
- Taylor & Francis
- University Science Books
- Wiley
- W.W. Norton & Company
instructor-led interactive sense-making

- Online
- Information transfer
- Self-paced asynchronous
- Sense-making
- Instructor-led synchronous
instructor-led interactive sense-making
Peer Instruction...

- interactive teaching method
- promotes meaningful thinking
You will experience Peer Instruction by…

1. answering question individually
2. discussing question in breakout rooms
3. reanswering question
instructor-led interactive sense-making

Go to: PollEv.com/ericmazur615
Why Peer Instruction works

• engages students to think
• individualizes learning
• students use similar discourse
• helps avoid the “expert blind spot”
A few notes

Peer Instruction…

• greatly improves learning outcomes
• actively engages students online
• integrates with Perusall
self-paced asynchronous

information transfer

instructor-led synchronous

sense-making
campus

online

information transfer

self-paced asynchronous

online

sense-making

instructor-led synchronous
Self-paced asynchronous online information transfer sense-making instructor-led synchronous online campus
campus

self-paced
asynchronous
pre-class reading

sense-making

instructor-led
synchronous
peer instruction

home

information
transfer

self-paced
asynchronous
pre-class reading
Compare with the “old” approach

- **campus**
  - sense-making
  - instructor-led
  - synchronous
  - peer instruction

- **home**
  - information transfer
  - self-paced
  - asynchronous
  - pre-class reading
Compare with the “old” approach

- **Instructor-paced, synchronous, lecture** on campus
- **Self-paced, asynchronous, home work/study** at home

- **Information transfer**
- **Sense-making**
projects

tutorials

experimental activities

problem sets

assessment

campus

home

sense-making

instructor-led

synchronous

peer instruction

self-paced

asynchronous

pre-class reading

information

transfer

instructor-led
Improving education

synchronous ↔ asynchronous
Improving education

synchronous ↔ asynchronous

everybody together
at the same time
Improving education

synchronous ↔ asynchronous

instructor-paced ↔ self-paced
Improving education

synchronous ↔ asynchronous

instructor-paced ↔ self-paced

everybody together at the same pace
Improving education

 lecture

synchronous ↔ asynchronous

instructor-paced ↔ self-paced
Improving education

recorded lecture

synchronous ↔ instructor-paced

asynchronous ↔ self-paced
Improving education

lab

synchronous \leftrightarrow \text{asynchronous}

instructor-paced \leftrightarrow \text{self-paced}
Improving education

homework/study

- synchronous
- asynchronous
- instructor-paced
- self-paced
Improving education

synchronous \hspace{2cm} \rightarrow \hspace{2cm} \text{asynchronous}

instructor-paced \hspace{2cm} \leftrightarrow \hspace{2cm} \text{self-paced}
Improving education

- synchronous → asynchronous
- instructor-paced → self-paced
Improving education

more time to help students where it really matters!
Please help spread the word!

calendly.com/ericmazur/fliponline

(tell your colleagues and tweet)

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mazur.harvard.edu

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