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

A hands/brains-on demo

27 April 2020
75-student team & project based class!
information transfer
sense-making
campus

information transfer

instructor-paced
synchronous
lecture

home

sense-making

self-paced
asynchronous
home work/study
campus

information transfer

instructor-paced
synchronous
lecture

home

sense-making

self-paced
asynchronous
home work/study
Campus:
- Instructor-paced synchronous lecture
- Information transfer

Home:
- Instructor-paced synchronous online lecture
- Information transfer

Home:
- Self-paced asynchronous home work/study
- Sense-making
- Campus: Instructor-paced synchronous lecture
- Home (Information Transfer): Instructor-paced asynchronous recorded lecture
- Home (Sense-Making): Self-paced asynchronous home work/study
campus

information transfer

instructor-paced synchronous lecture

home

information transfer

instructor-paced asynchronous recorded lecture

home

sense-making

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)
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)
...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
instructor-led interactive sense-making
instructor-led interactive sense-making

Peer Instruction...

• interactive teaching method

• promotes meaningful thinking
instructor-led interactive sense-making

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
self-paced
asynchronous
online
question
think
poll
discuss
repoll
explain
online
instructor-led
synchronous
sense-making
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
online

information transfer

self-paced asynchronous

online

sense-making

instructor-led synchronous
campus

online

information transfer

self-paced asynchronous

online

sense-making

instructor-led synchronous
In this graphic, we see a comparison between campus and home learning environments:

**Campus**
- **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

- **Campus**
  - Instructor-paced
  - Synchronous
  - Lecture

- **Home**
  - Self-paced
  - Asynchronous
  - Home work/study

- **Information transfer**

- **Sense-making**
projects
home
information
transfer
tutorials
sense-making
experimental activities
instructor-led
synchronous
peer instruction
self-paced
asynchronous
pre-class reading
assessments
Improving education

synchronous ↔ asynchronous
Improving education

everybody together
at the same time
Improving education

synchronous <-> asynchronous

instructor-paced <-> self-paced
Improving education

everybody together at the same pace

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

lecture

synchronous ↔ asynchronous

instructor-paced ↔ self-paced
Improving education

recorded lecture

synchronous  <->  asynchronous

instructor-paced  <->  self-paced
Improving education

lab

synchronous ↔ asynchronous

instructor-paced ↔ self-paced
Improving education

homework/study

synchronous ↔ asynchronous

instructor-paced ↔ self-paced
Improving education

synchronous ↔ asynchronous

instructor-paced ↔ self-paced
Improving education

synchronous \(\rightarrow\) asynchronous

instructor-paced \(\rightarrow\) self-paced
Improving education

synchronous \rightarrow \textcolor{red}{\text{asynchronous}}

instructor-paced \rightarrow \textcolor{red}{\text{self-paced}}

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

calendly.com/ericmazur/fliponline

(tell your colleagues and tweet)

Follow me! @eric_mazur
for a copy of this presentation:

mazur.harvard.edu

resource sheet:  bit.ly/fliponline

Follow me!  @eric_mazur