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

A hands/brains-on demo

May 1 2020
75-student team & project based class!
information transfer

sense-making
Information transfer vs. sense-making

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

**Home**
- Self-paced
- Asynchronous
- Homework/study
Campus

Information transfer

Instructor-paced
Synchronous
Lecture

Home

Sense-making

Self-paced
Asynchronous
Home work/study
campus

instructor-paced synchronous lecture

home

information transfer

instructor-paced synchronous online 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

sense-making

instructor-led synchronous
interactive

online

information transfer

self-paced asynchronous

online

sense-making

instructor-led synchronous
interactive

two evidence-based approaches
let’s explore these two steps
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
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
- online
  - sense-making
  - instructor-led synchronous
instructor-led interactive sense-making
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
Self-paced asynchronous online information transfer sense-making

instructor-led synchronous think poll discuss repoll explain

question
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

self-paced asynchronous

online

information transfer

sense-making

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

information transfer

self-paced asynchronous → instructor-led synchronous

online → campus

sense-making
self-paced asynchronous pre-class reading

instructor-led synchronous peer instruction
Compare with the “old” approach

<table>
<thead>
<tr>
<th>Campus</th>
<th>Home</th>
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<tbody>
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Compare with the “old” approach

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  - Lecture
  - Information transfer

- **Home**
  - Self-paced
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  - Home work/study
  - Sense-making
self-paced asynchronous pre-class reading

instructor-led synchronous peer instruction

sense-making

information transfer

projects homecampus

tutorials

experimental activities

problem sets

assessment
Improving education

synchronous ↔ asynchronous
Improving education

everybody together
at the same *time*

synchronous ↔ asynchronous
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 \leftrightarrow asynchronous

instructor-paced \leftrightarrow 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 \hspace{2cm} \rightarrow \hspace{2cm} \text{asynchronous}

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

synchronous \rightarrow asynchronous

instructor-paced \rightarrow self-paced
Improving education

synchronous \[\rightarrow\] asynchronous

instructor-paced \[\rightarrow\] 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)

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mazur.harvard.edu

resource sheet:  bit.ly/fliponline

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