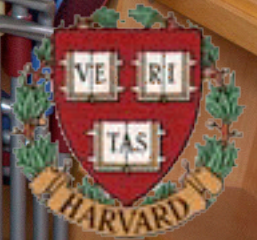


# How to flip your class online, when the world is flipping out



A hands/brains-on demo  
30 April 2020





A photograph of a modern classroom or office environment where students are working in groups. In the foreground, a woman with blonde hair is speaking to a group. To her right, a woman with dark hair is looking at a laptop. In the background, other students are working at desks with laptops. The room has large windows and a bright, open atmosphere.

**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**



**home**

**sense-making**

instructor-paced  
synchronous  
lecture

self-paced  
asynchronous  
home work/study

campus

information  
transfer

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

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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*

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



***two evidence-based approaches***



# let's explore these two steps

online

**information  
transfer**

self-paced  
asynchronous

online

**sense-making**

instructor-led  
synchronous

**let's explore these two steps**

**online**

**information  
transfer**

self-paced  
asynchronous

**online**

**sense-making**

instructor-led  
synchronous

**(using two free tools)**

asynchronous information transfer

online  
information transfer  
sense-making  
asynchronous  
synchronous

# Perusall



# asynchronous information transfer

**Perusall...**

- is a text-based **social learning platform**
- takes information transfer out of classroom

online

information  
transfer

online

sense-making

self-paced  
asynchronous

instructor-led  
synchronous

# asynchronous information transfer

online

online

**You will...**

information  
transfer

sense-making

**1. create a (dummy) course (while I create mine)**

**2. join my course to get the student experience**

self-paced  
asynchronous

instructor-led  
synchronous

# asynchronous information transfer

online

online

1. in your browser go to: [app.perusall.com](https://app.perusall.com)

information  
transfer

sense-making

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

self-paced  
asynchronous

instructor-led  
synchronous



# asynchronous information transfer

online

online

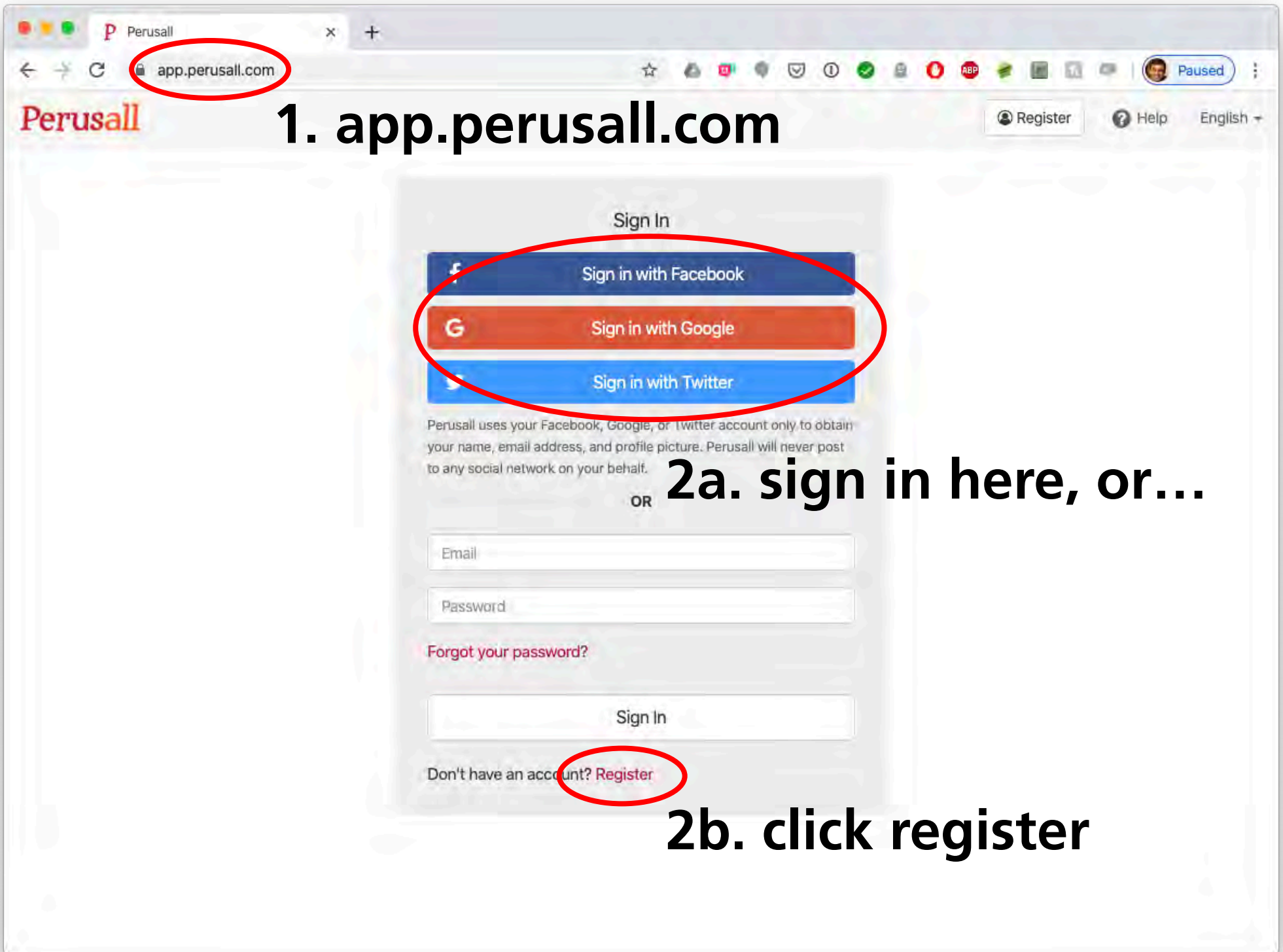
1. in your browser go to: [app.perusall.com](https://app.perusall.com)
2. if you have an account, log in, then wait
3. if you don't have an account, follow along

information  
transfer

sense-making

self-paced  
asynchronous

instructor-led  
synchronous



Perusall

app.perusall.com/welcome

Paused

Help FE

**1**

Create or enroll in a course

Start or join a club

**create a course...**

Welcome to Perusall! Let's finish setting up your account.

Courses are for formal courses at the college, university, and K-12 levels, or for continuing education or other training.

With Perusall clubs, you can read a book, article, or other materials with friends or colleagues you choose. Your group's conversations are private: club members decide who should be in the club. Select a book you have already purchased within Perusall to use it in your club free of charge; club members that haven't yet purchased the book can rent or purchase access at the regular Perusall price.

(if you logged in with existing account, click "Create course" at top left of page)



Perusall

app.perusall.com/welcome

Help FE

2 I am a student I am an instructor

3 I want to create a course...

☒ for students to access directly at perusall.com.

☐ integrated with my institution's Learning Management System.

Course name

Your unique course URL is based on this name. If you change the name, the URL will change.

Institution

Example Institution (Use for testing only, US)

Type to search for your institution, and [contact Perusall support](#) if your institution is not listed.

Course start date

Course end date

Enrollment estimate

20

The approximate number of students you expect to join the course. Perusall will use this value and the Target Group Size to create discussion groups for students.

Target group size

20

Students will be placed into groups of approximately this size and will only be able to see comments and questions within their group. Changing this setting will not retroactively apply to groups that have already been formed, to provide consistency for students.

Based on these settings, Perusall will place students into 1 discussion group(s) for each document. Discussion groups are fixed for a particular document once it is added to the course. [Learn more about discussion groups](#)

Select materials

[Browse our catalog of available titles](#)

Perusall

app.perusall.com/welcome

Help FE

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Select materials

...for students to access  
directly at perusall.com

Perusall

app.perusall.com/welcome

Help FE

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Select materials

[Browse our catalog of available titles](#)

# 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](mailto: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

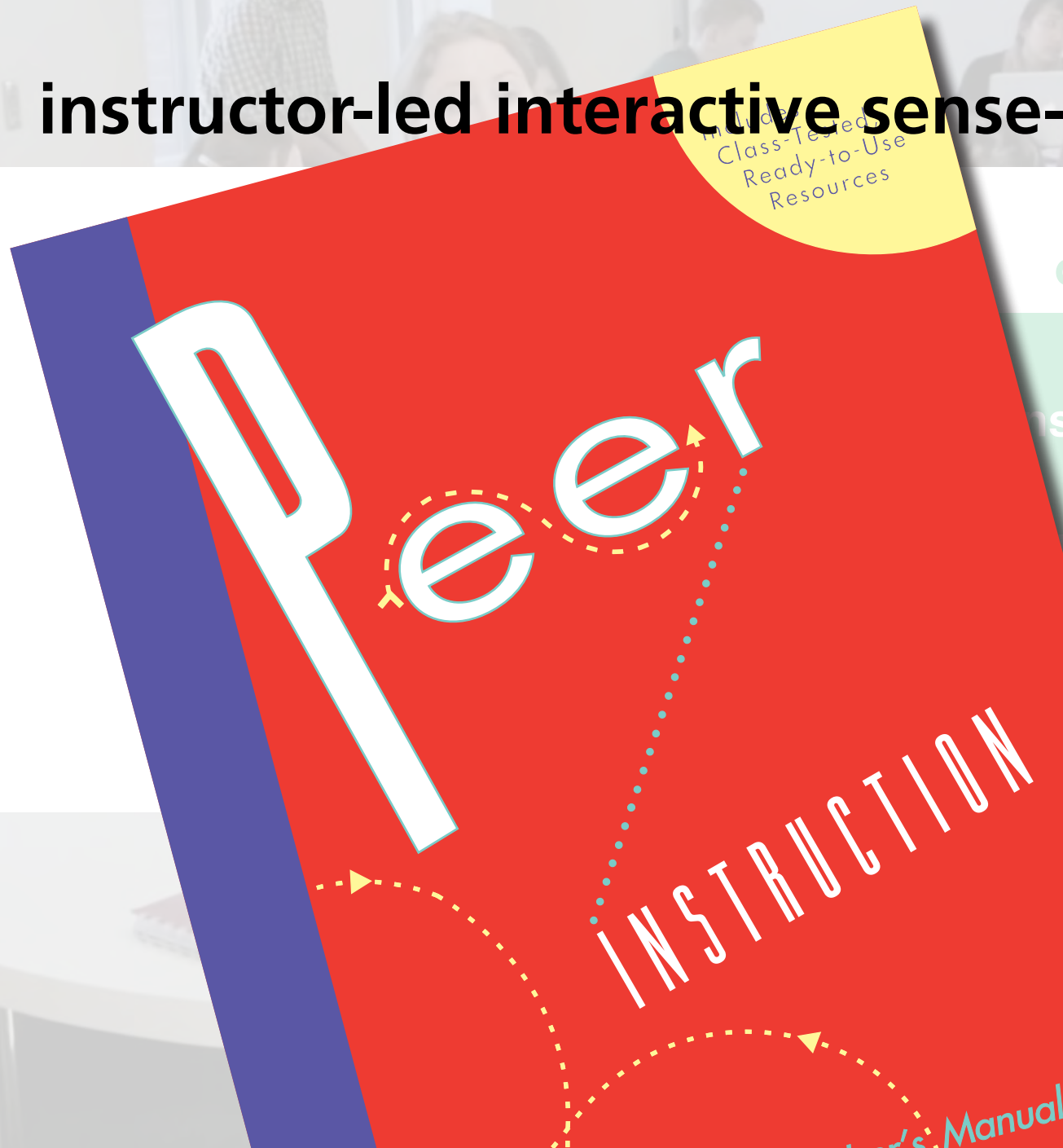
online

**sense-making**

instructor-led  
synchronous



# instructor-led interactive sense-making



online

se-making

uctor-led  
hronous

# instructor-led interactive sense-making

## Peer Instruction...

- interactive teaching method
- promotes meaningful thinking

online

information  
transfer

online

sense-making

self-paced  
asynchronous

instructor-led  
synchronous

**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

online

information  
transfer

online

sense-making

**Go to: [Pollev.com/ericmazur615](https://Pollev.com/ericmazur615)**

self-paced  
asynchronous

instructor-led  
synchronous



**question**



**think**



**poll**



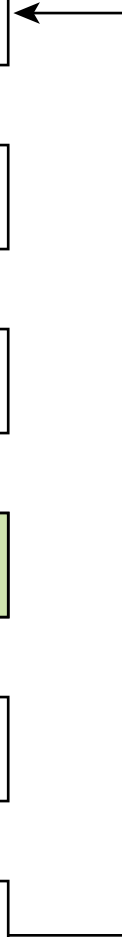
**discuss**



**repoll**



**explain**



online

ense-making

instructor-led  
synchronous

# 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**

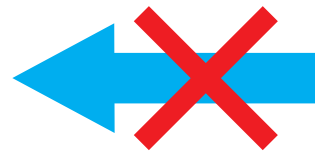
instructor-led  
synchronous



**campus**

**online**

**online**



**information  
transfer**

**sense-making**

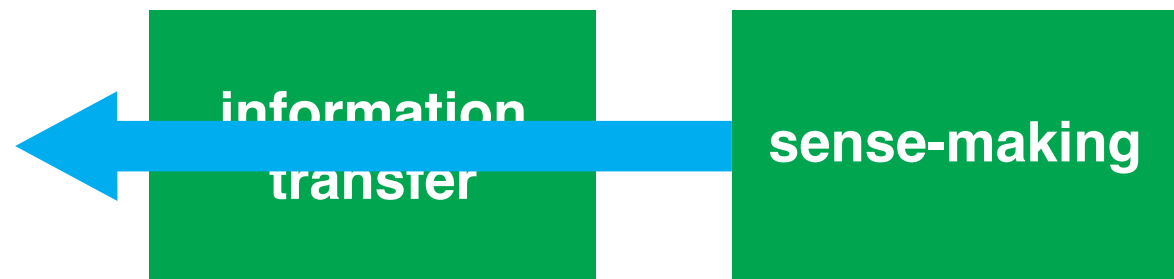
self-paced  
asynchronous

instructor-led  
synchronous

**campus**

**online**

**online**



self-paced  
asynchronous

instructor-led  
synchronous

**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**

**information  
transfer**

instructor-paced  
synchronous  
lecture

**home**

**sense-making**

self-paced  
asynchronous  
home work/study

campus

sense-making

projects

home

tutorials

information

transfer

experimental activities

instructor-led  
synchronous  
peer instruction

problem sets

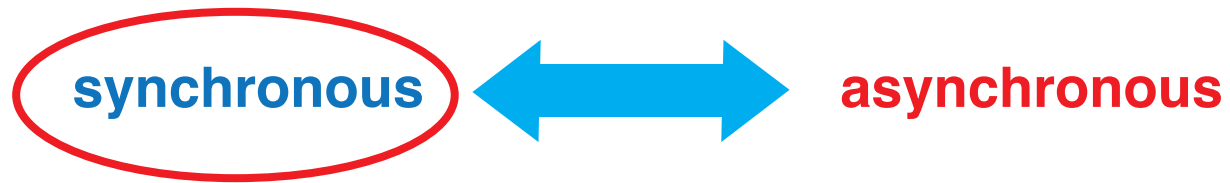
self-paced  
asynchronous  
pre-class reading

assessment

# Improving education

**synchronous**  **asynchronous**

# Improving education



everybody together  
at the same *time*



# Improving education

**synchronous**



**asynchronous**

**instructor-paced**



**self-paced**

# Improving education

synchronous



asynchronous

instructor-paced



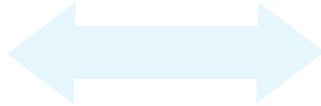
self-paced

everybody together  
at the same *pace*

# Improving education

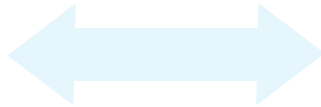
lecture

synchronous



asynchronous

instructor-paced

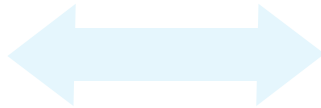


self-paced

# Improving education

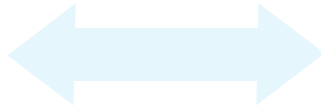
recorded lecture

synchronous



asynchronous

instructor-paced



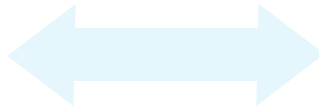
self-paced



# Improving education

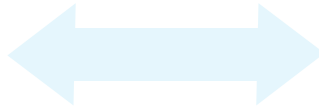
lab

**synchronous**



**asynchronous**

**instructor-paced**

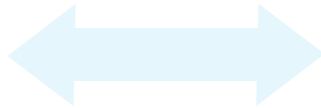


**self-paced**

# Improving education

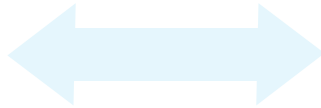
homework/study

synchronous



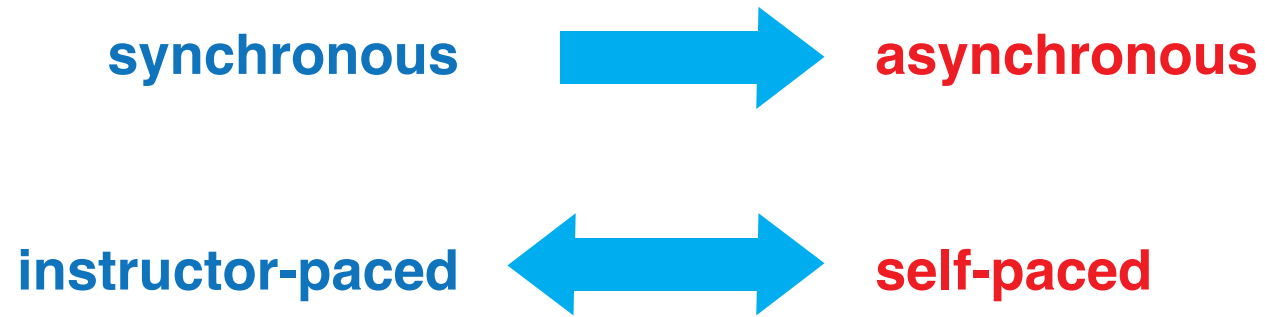
**asynchronous**

instructor-paced



**self-paced**

# Improving education



# Improving education

**synchronous**



**asynchronous**

**instructor-paced**



**self-paced**



# Improving education

synchronous



asynchronous

instructor-paced



self-paced

**more time to help students  
where it really matters!**

**Please help spread the word!**

**[calendly.com/ericmazur/fliponline](https://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](http://bit.ly/fliponline)**

**Follow me!**



**@eric\_mazur**