

Education, post-coronavirus



Jornadas Virtuales de Educación
CeRP del Norte, Uruguay
September 30, 2020



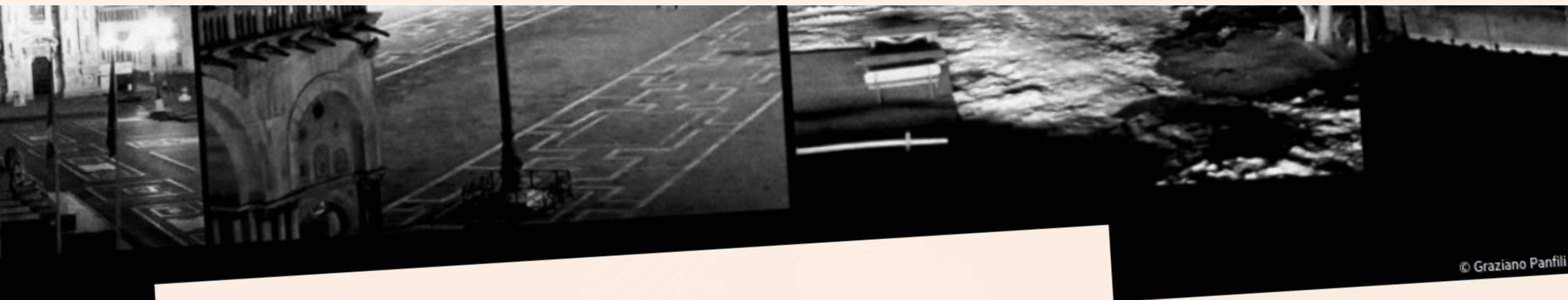
Education, post-coronavirus



@eric_mazur

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September 30, 2020





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Life & Arts

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Yuval Noah Harari: the world after coronavirus

This storm will pass. But the choices we make now could change our lives for years to come

Yuval Noah Harari MARCH 20 2020

337



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Humankind is now facing a global crisis. Perhaps the biggest crisis of our generation. The decisions people and governments take in the next few weeks will probably shape the world for years to come. They will shape not just our healthcare systems but also our economy, politics and culture. We must act quickly and decisively. We should also take into account the long-term consequences of our actions. When choosing between alternatives, we should



Save

Humankind is now facing a global crisis. Perhaps the biggest crisis of our generation. The decisions people and governments take in the next few weeks will probably shape the world for years to come. They will shape not just our healthcare systems but also our economy, politics and culture. We must act quickly and decisively. We should also take into account the long-term consequences of our actions. When choosing between alternatives, we should ask ourselves not only how to overcome the immediate threat, but also what kind of world we will inhabit once the storm passes. Yes, the storm will pass, humankind will survive, most of us will still be alive — but we will inhabit a different world.

Many short-term emergency measures will become a fixture of life. That is the nature of emergencies. They fast-forward historical processes. Decisions that in normal times could take years of deliberation are passed in a matter of hours.

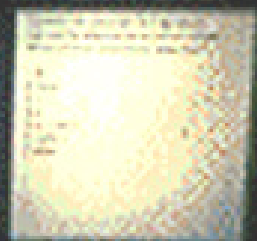
Immature and even dangerous technologies are pressed into service, because the risks of doing nothing are bigger. Entire countries serve as guinea-pigs in large-scale social experiments. What happens when everybody works from home and communicates only at a distance? What happens when entire schools and universities go online? In normal times, governments, businesses and educational boards would never agree to conduct such experiments. But



1. The first part of the lecture is devoted to the study of the properties of the function $f(x)$ defined on the interval $[a, b]$. We shall assume that $f(x)$ is continuous on $[a, b]$ and that $f(a) = f(b)$. We shall also assume that $f(x)$ is not constant on $[a, b]$. We shall prove that in this case there exists a point $c \in (a, b)$ such that $f(c) = \max_{x \in [a, b]} f(x)$ and $f(c) = \min_{x \in [a, b]} f(x)$.

2. The second part of the lecture is devoted to the study of the properties of the function $f(x)$ defined on the interval $[a, b]$. We shall assume that $f(x)$ is continuous on $[a, b]$ and that $f(a) = f(b)$. We shall also assume that $f(x)$ is not constant on $[a, b]$. We shall prove that in this case there exists a point $c \in (a, b)$ such that $f(c) = \max_{x \in [a, b]} f(x)$ and $f(c) = \min_{x \in [a, b]} f(x)$.

3. The third part of the lecture is devoted to the study of the properties of the function $f(x)$ defined on the interval $[a, b]$. We shall assume that $f(x)$ is continuous on $[a, b]$ and that $f(a) = f(b)$. We shall also assume that $f(x)$ is not constant on $[a, b]$. We shall prove that in this case there exists a point $c \in (a, b)$ such that $f(c) = \max_{x \in [a, b]} f(x)$ and $f(c) = \min_{x \in [a, b]} f(x)$.









an illusion. . .

quick reflection



The background of the slide is a faded, artistic illustration of a person's face, focusing on the eyes. The face is rendered in a sketchy, painterly style with muted colors. The eyes are large and expressive, looking directly forward. The overall tone is contemplative and artistic. The text is overlaid on this background.

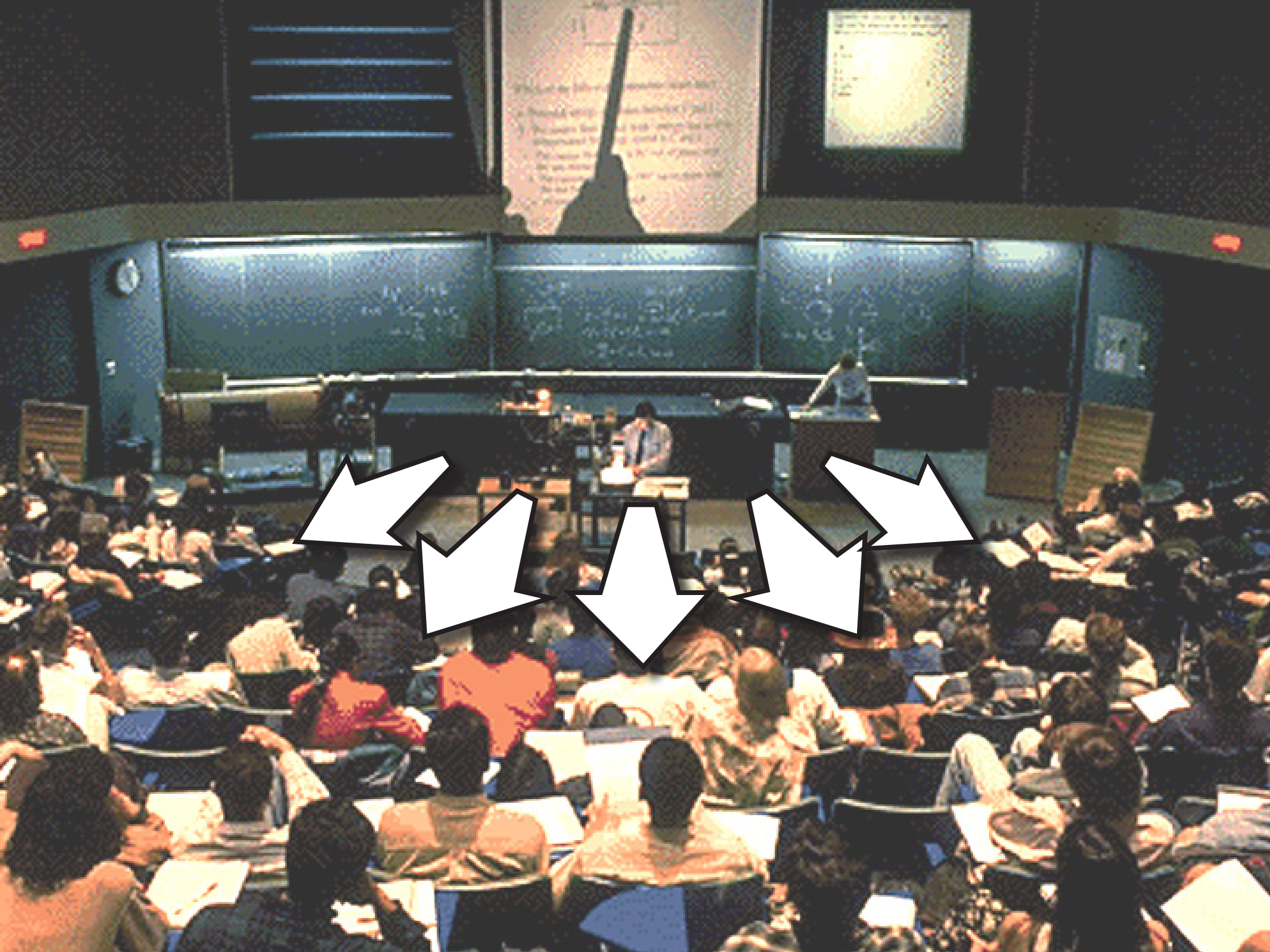
quick reflection

think of something you are good at

The background of the slide is a faded image of a book cover. It features a portrait of a man with a beard and a turban, looking slightly to the side. The text 'quick reflection' is printed in a bold, black, sans-serif font at the top of the cover. The book is bound in a light-colored, textured material, possibly leather or cloth, with visible vertical lines suggesting the spine and cover edges.

quick reflection

how did you become good at that?





**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

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information
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synchronous
lecture

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information
transfer

instructor-paced
asynchronous
recorded lecture

home

sense-making

self-paced
asynchronous
home work/study

ALONE!

question

question



think

question



think



poll

question



think



poll



discuss

question



think



poll



discuss



repoll

question



think



poll



discuss



repoll



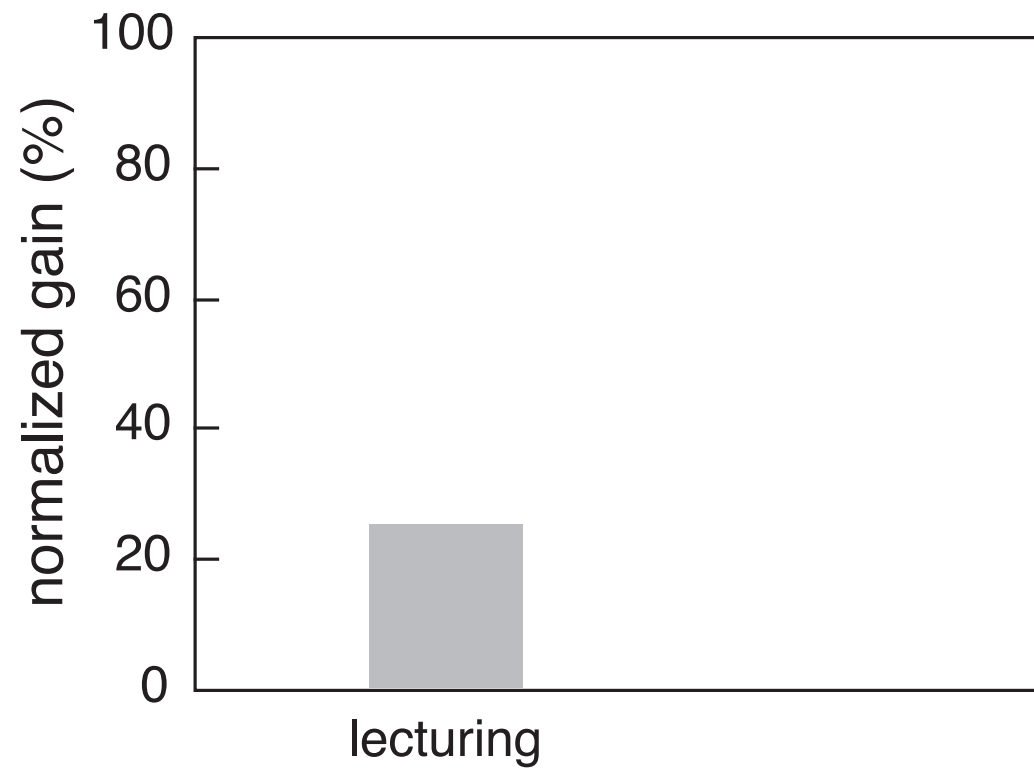
explain

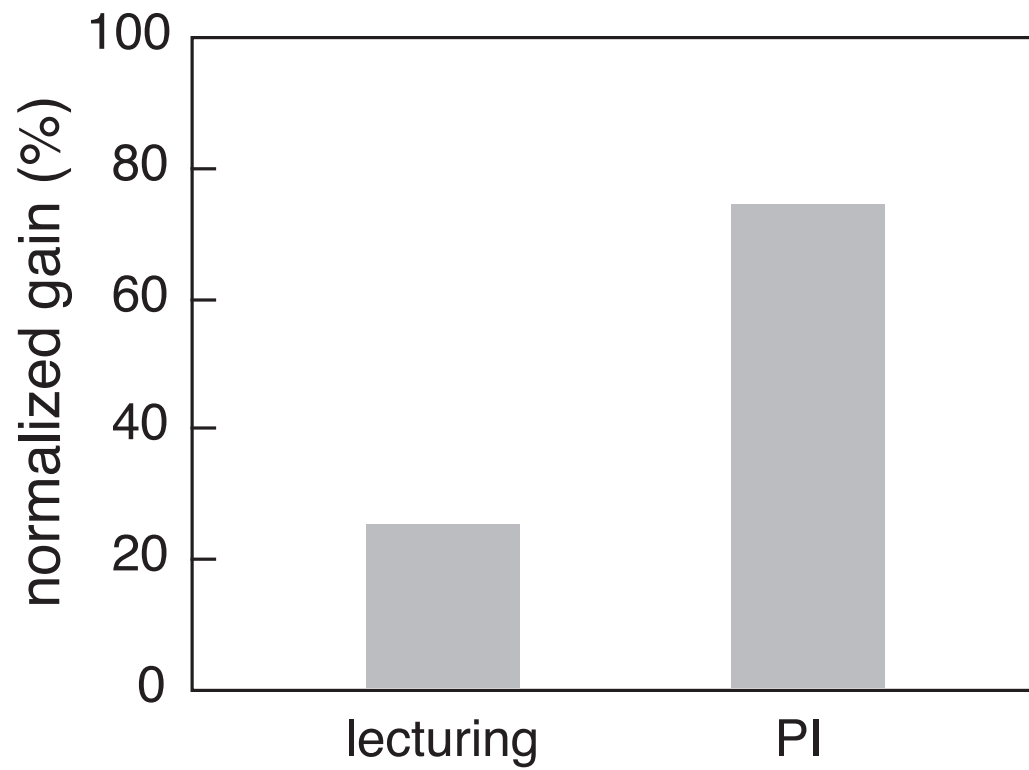




Higher learning gains

INSTRUCTION







Peer

Higher learning gains

Better retention

The graphic features the word 'Peer' in a large, white, sans-serif font with a light blue outline, positioned diagonally across the upper half. Two yellow dashed arrows originate from the word: one points from the 'P' towards 'Higher learning gains', and the other points from the 'er' towards 'Better retention'. The background is a light red/pink color with a diagonal blue stripe on the left side.

INSTRUCTION

campus

sense-making

instructor-led
synchronous
peer instruction

home

**information
transfer**

self-paced
asynchronous
pre-class reading



online

**information
transfer**

self-paced
asynchronous

online

sense-making

instructor-led
synchronous



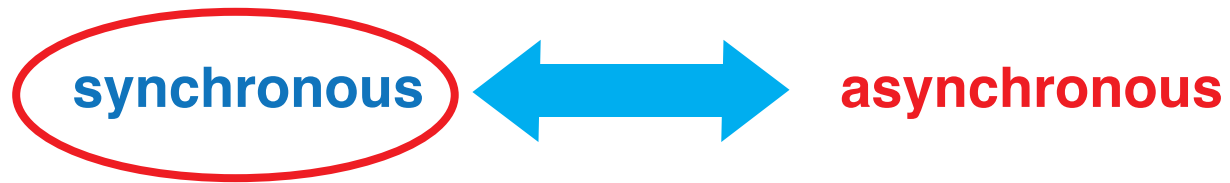
interactive

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

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



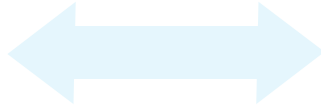
self-paced

everybody together
at the same *pace*

Improving education

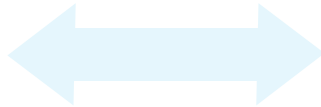
lecture

synchronous



asynchronous

instructor-paced

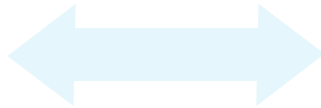


self-paced

Improving education

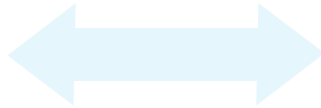
recorded lecture

synchronous



asynchronous

instructor-paced

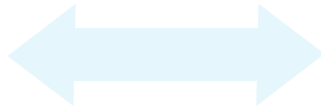


self-paced

Improving education

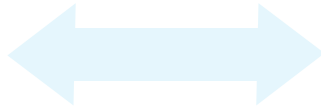
lab

synchronous



asynchronous

instructor-paced

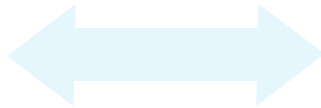


self-paced

Improving education

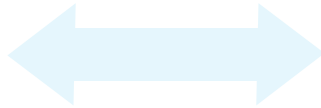
homework/study

synchronous



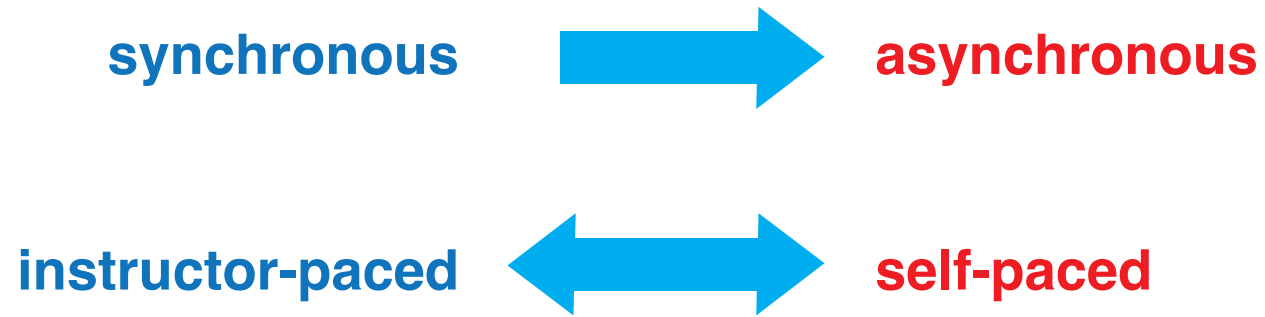
asynchronous

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!**

for a copy of this presentation:

mazur.harvard.edu

resource sheet: bit.ly/fliponline

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