

Let's set learning free!



University:Future Festival 2021
3 November 2021



Let's set learning free!



@eric_mazur

University:Future Festival 2021
3 November 2021







March 2020

AP50

1 before (and just after) pandemic



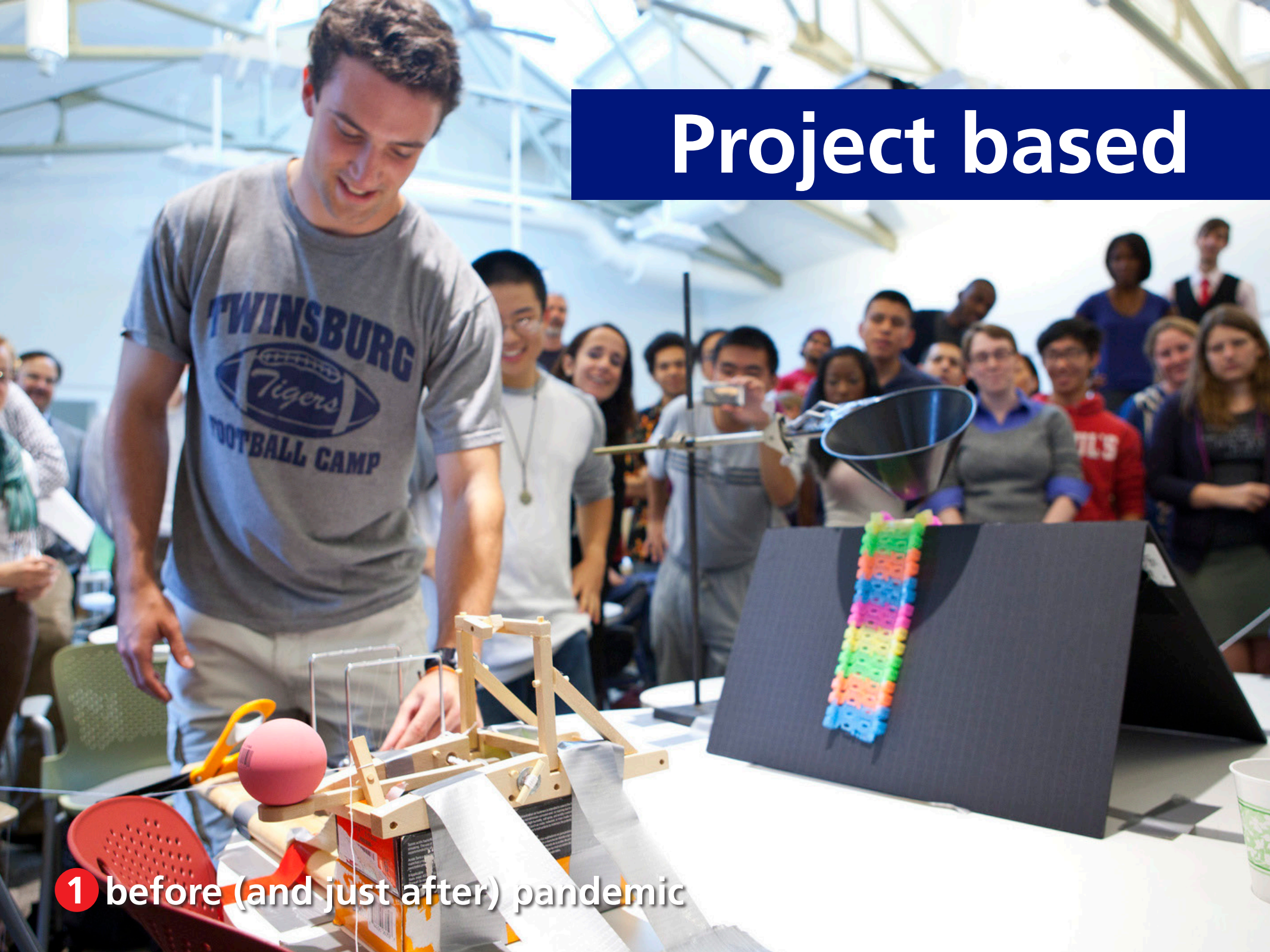


Team based

1 before (and just after) pandemic

Project based

1 before (and just after) pandemic






Intrinsic motivation

1 before (and just after) pandemic



1 before (and just after) pandemic



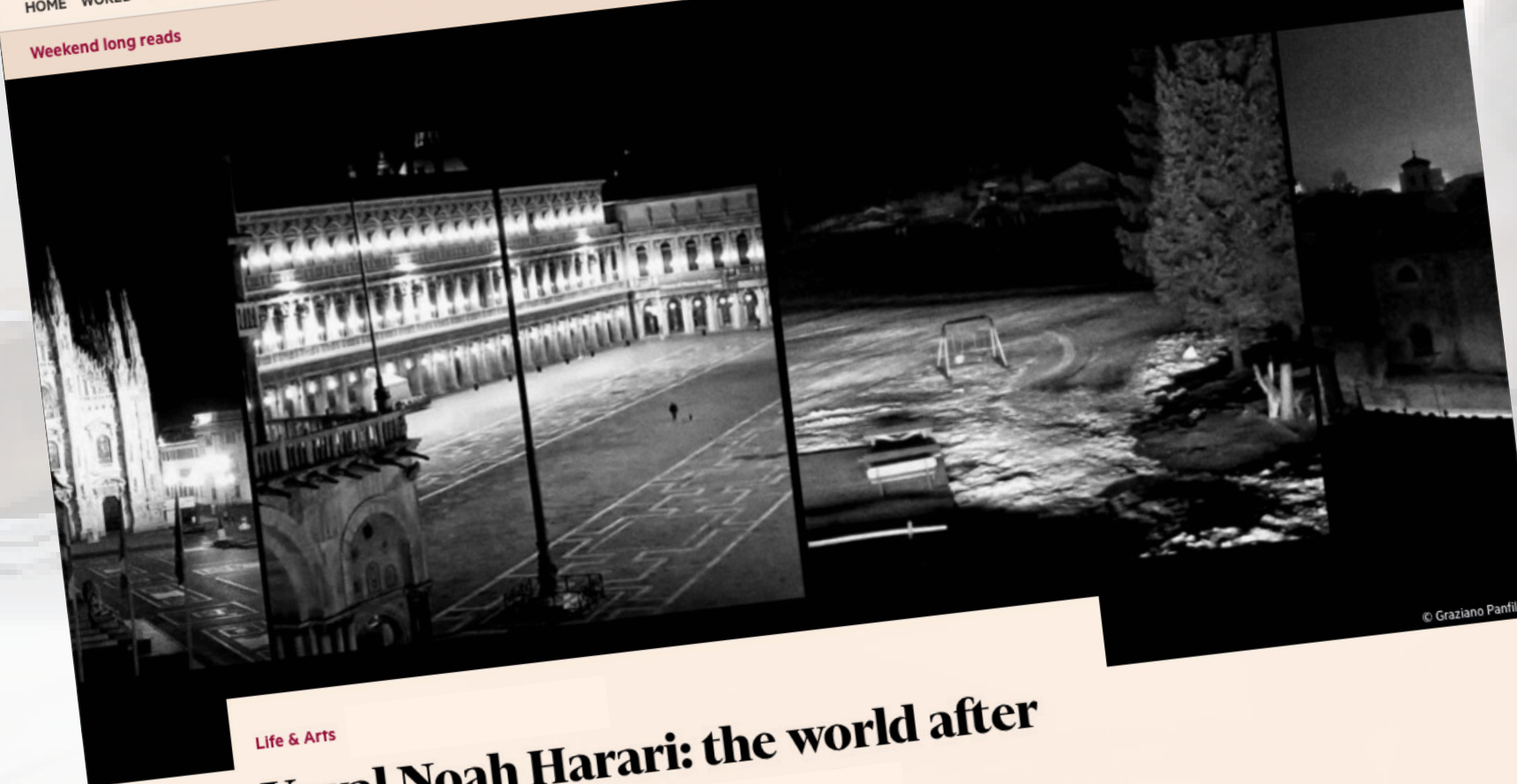
no lectures

no exams

① before (and just after) pandemic



Weekend long reads



© Graziano Pantili

Life & Arts

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

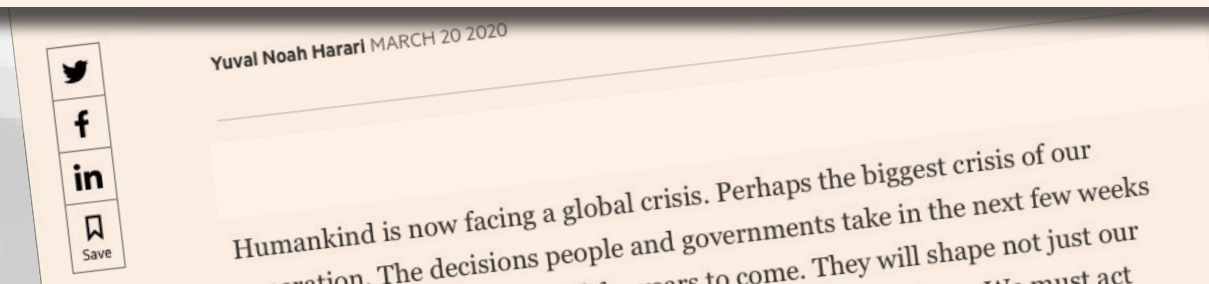


Save

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 shape the world to come. They will shape not just our lives but the lives of generations to come. We must act

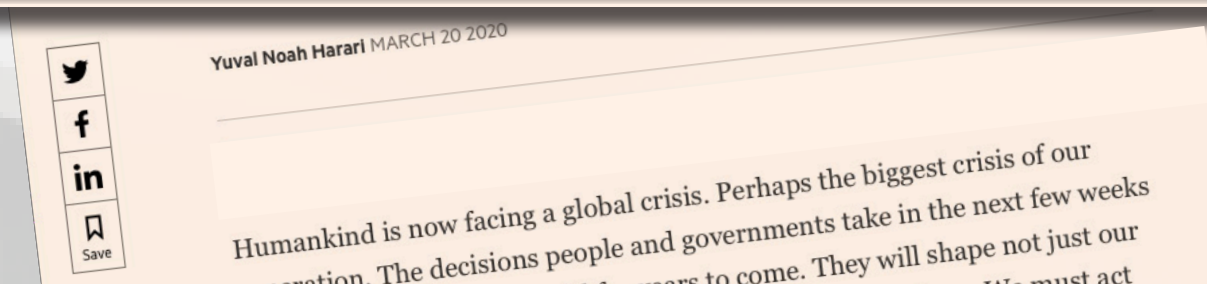


Many short-term emergency measures will become a fixture of life. That is the nature of emergencies. They fast-forward historical processes. Decisions that in normal times could take years of deliberation are passed in a matter of hours. Immature and even dangerous technologies are pressed into service, 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 these aren't normal times.





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 these aren't normal times.





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 these aren't normal times.



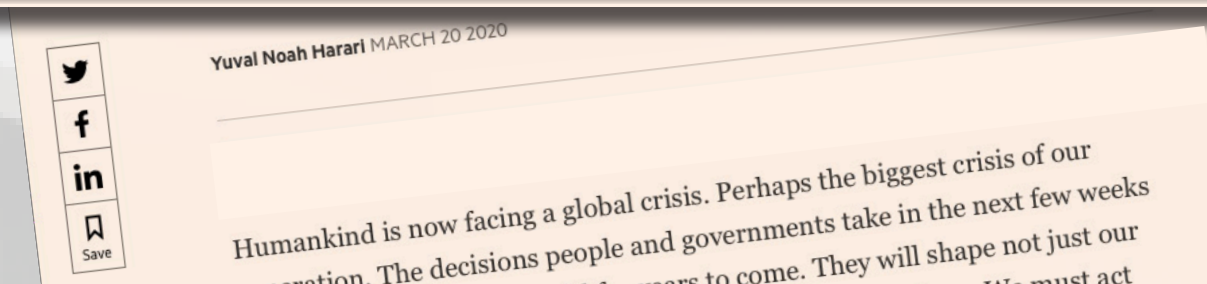


Many short-term emergency measures will become a fixture of life. That is the nature of emergencies. They fast-forward historical processes. Decisions that in normal times could take years of deliberation are passed in a matter of hours. Immature and even dangerous technologies are pressed into service, 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 these aren't normal times.





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 these aren't normal times.

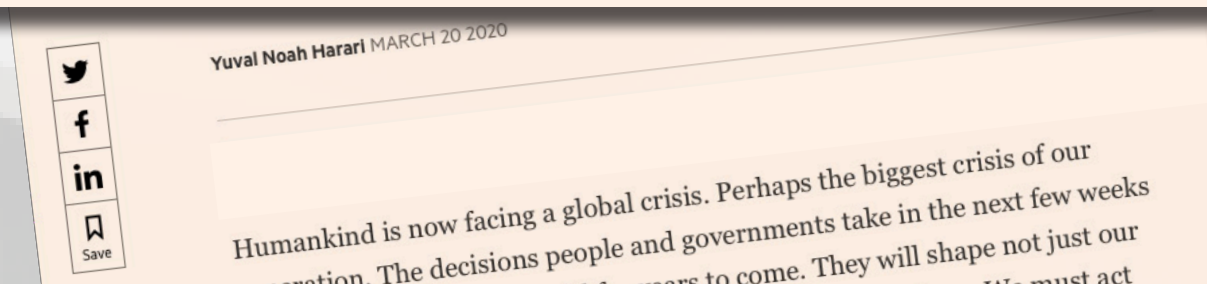




Many short-term emergency measures will become a fixture of life. That is the nature of emergencies. They fast-forward historical processes. Decisions that in normal times could take years of deliberation are passed in a matter of hours. Immature and even dangerous technologies are pressed into use. Entire countries

Will remote teaching become a fixture of life?

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 these aren't normal times.





March 13, 2020

1 before (and just after) pandemic

Moving online

"How can I transfer online what I do in the classroom?"

Moving online

***"How can I transfer online what I do in the classroom?"
(challenge)***

Moving online

***"How can I transfer online what I do in the classroom?"
(challenge)***

Moving online

"How can I transfer online what I do in the classroom?"
(challenge)

"What can I do online that I cannot do in the classroom?"
(opportunity)

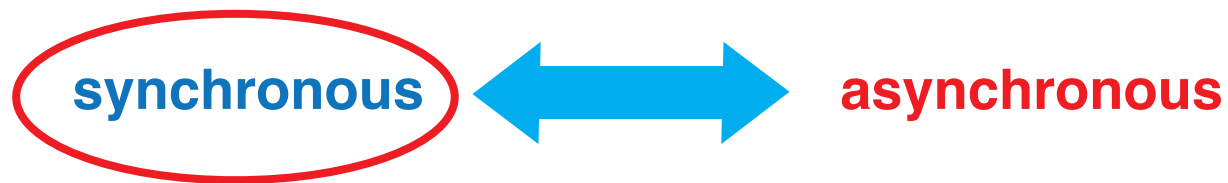
Changes implemented

- **Minimize sync/instructor-paced**
- **Personalize instruction**

Minimize sync/instructor-paced

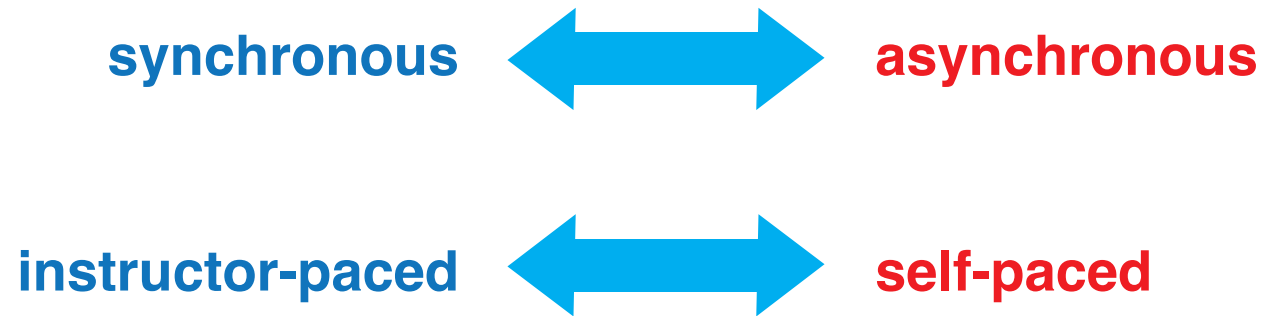
synchronous ↔ asynchronous

Minimize sync/instructor-paced

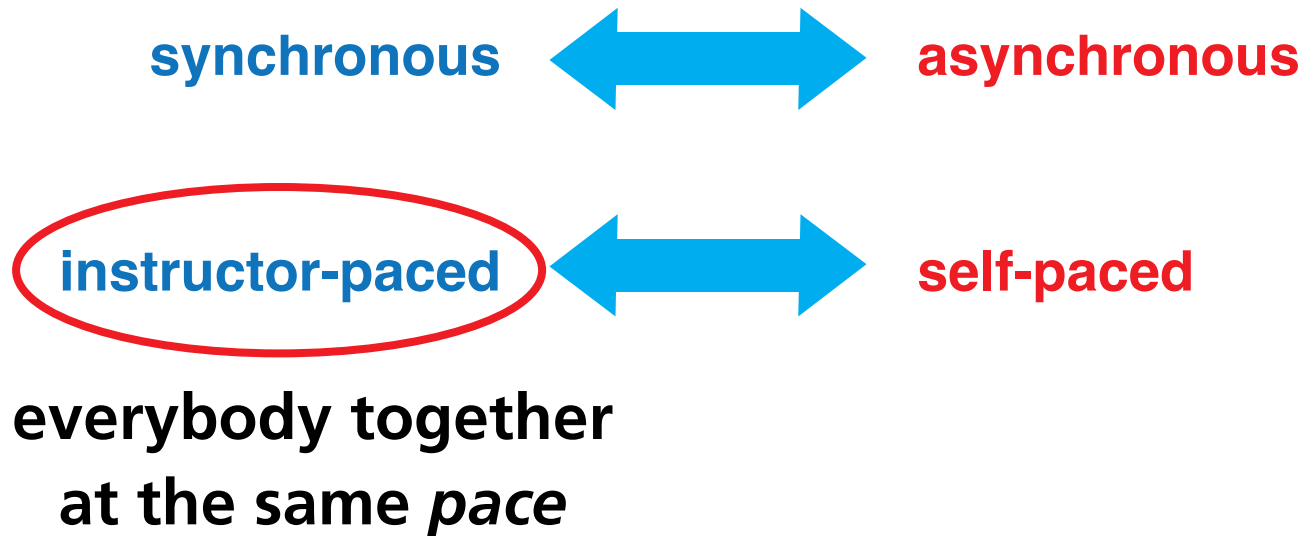


everybody together
at the same *time*

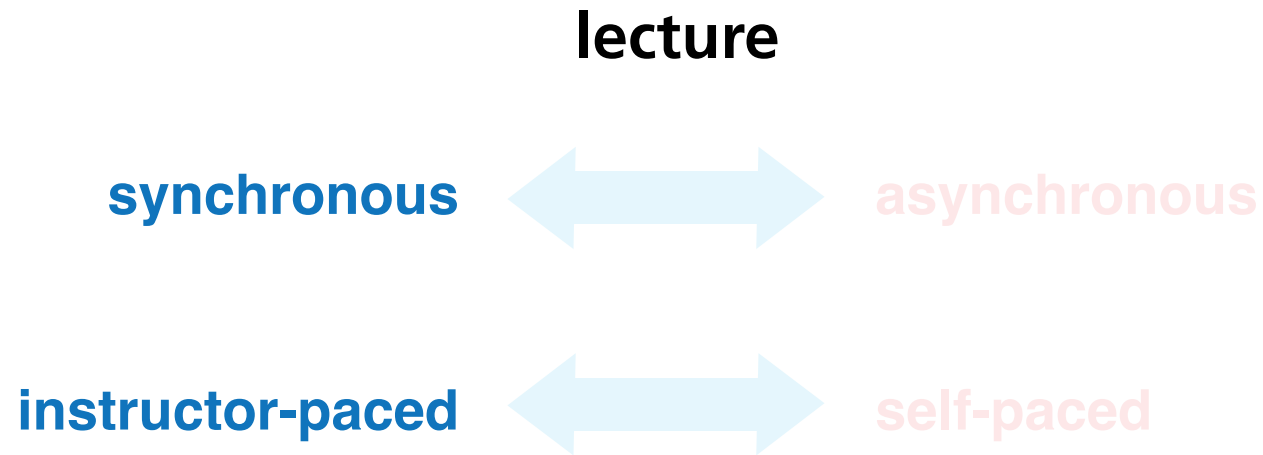
Minimize sync/instructor-paced



Minimize sync/instructor-paced



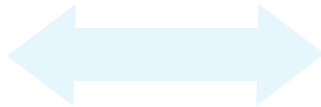
Minimize sync/instructor-paced



Minimize sync/instructor-paced

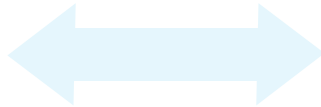
recorded lecture

synchronous



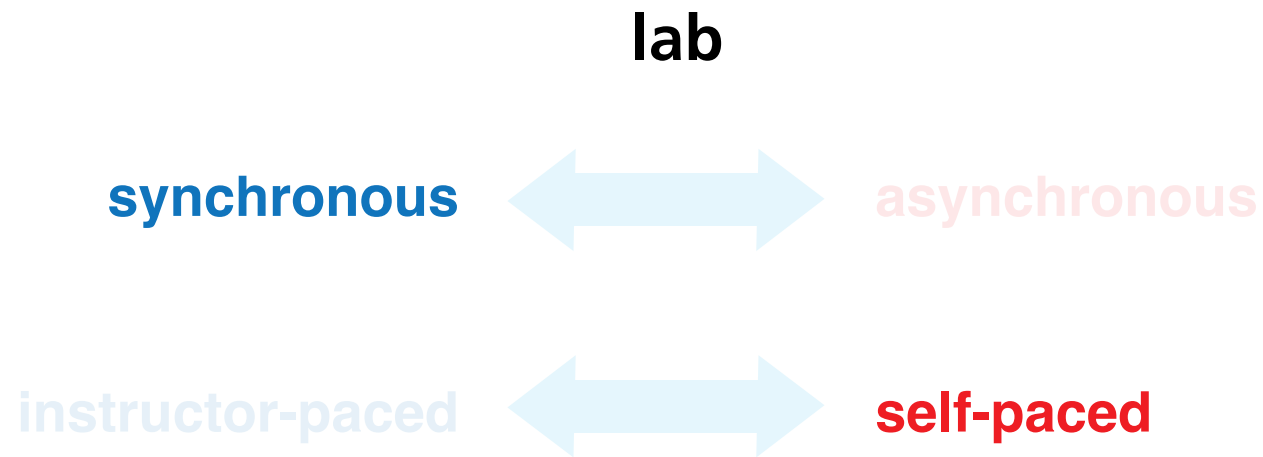
asynchronous

instructor-paced



self-paced

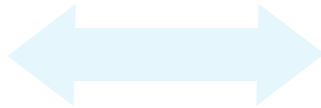
Minimize sync/instructor-paced



Minimize sync/instructor-paced

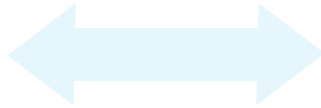
homework/study

synchronous



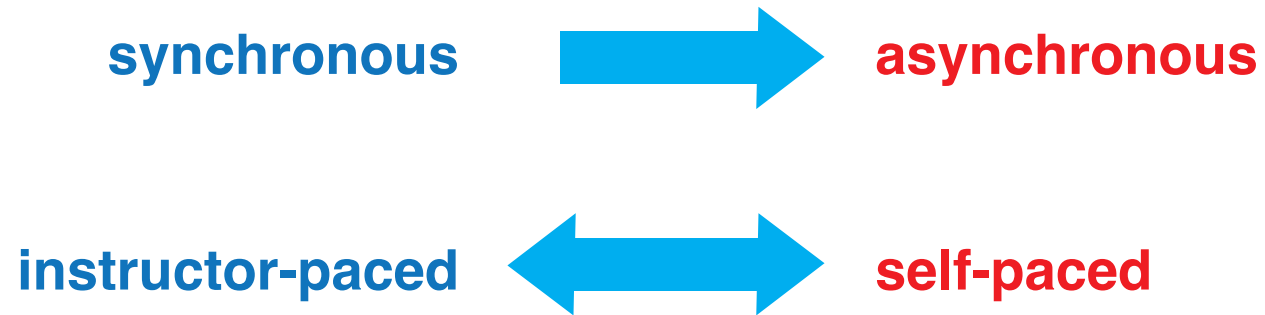
asynchronous

instructor-paced

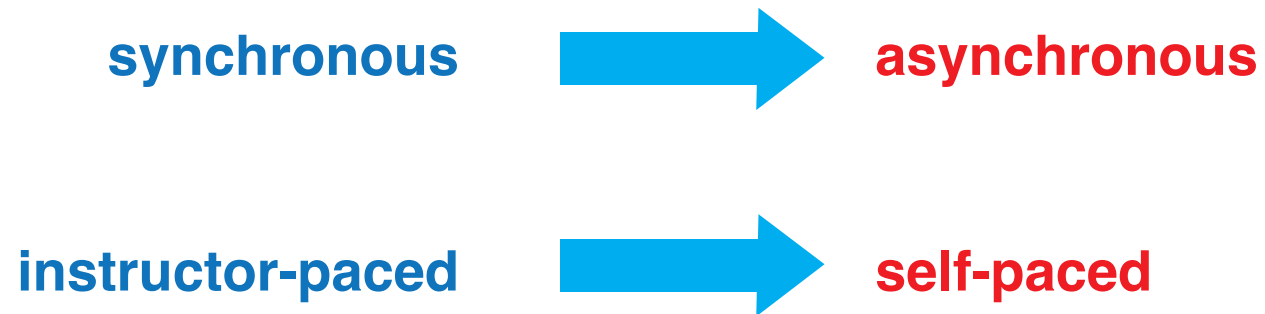


self-paced

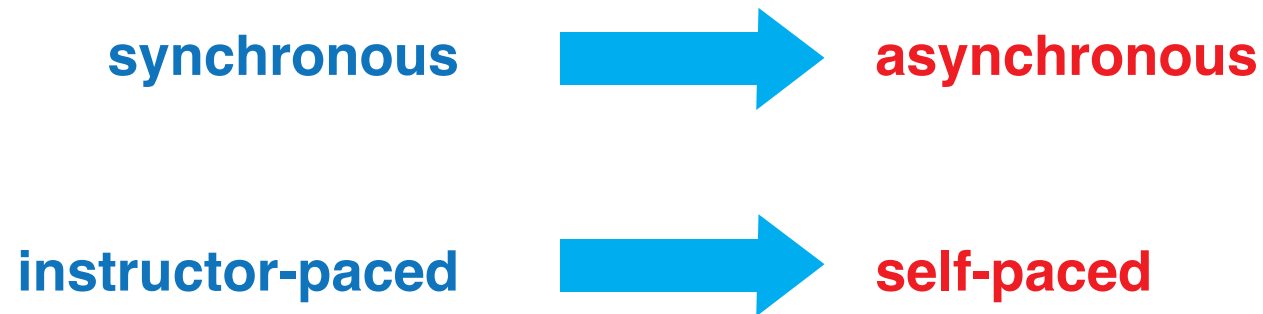
Minimize sync/instructor-paced



Minimize sync/instructor-paced



Minimize sync/instructor-paced



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

A background image of a modern classroom or meeting space. Several students are seated around a large white circular table, working on laptops. One student in the foreground is looking at a laptop screen displaying a data visualization. Other students are in the background, some standing and talking. The scene is brightly lit with large windows in the background.

Personalize instruction

instead of all students coming to instructor's room...

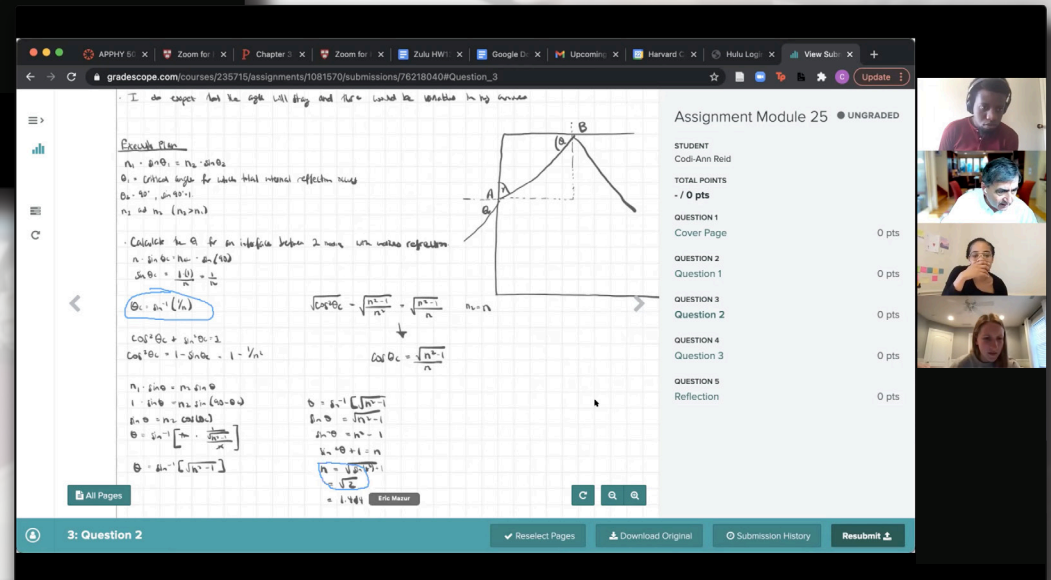
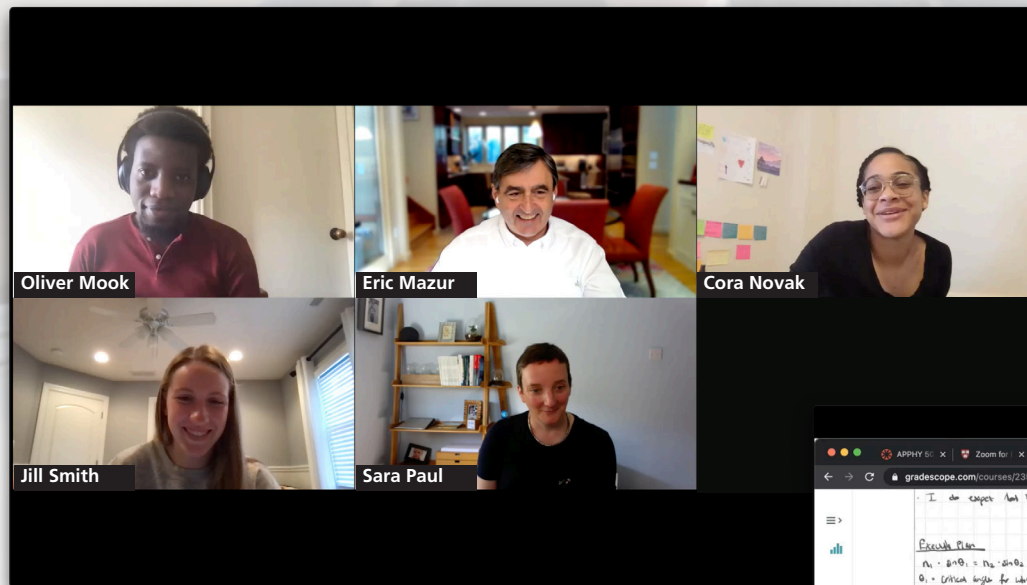
Personalize instruction

instead of all students coming to instructor's room...

...instructional staff visits each team's own room

Personalize instruction

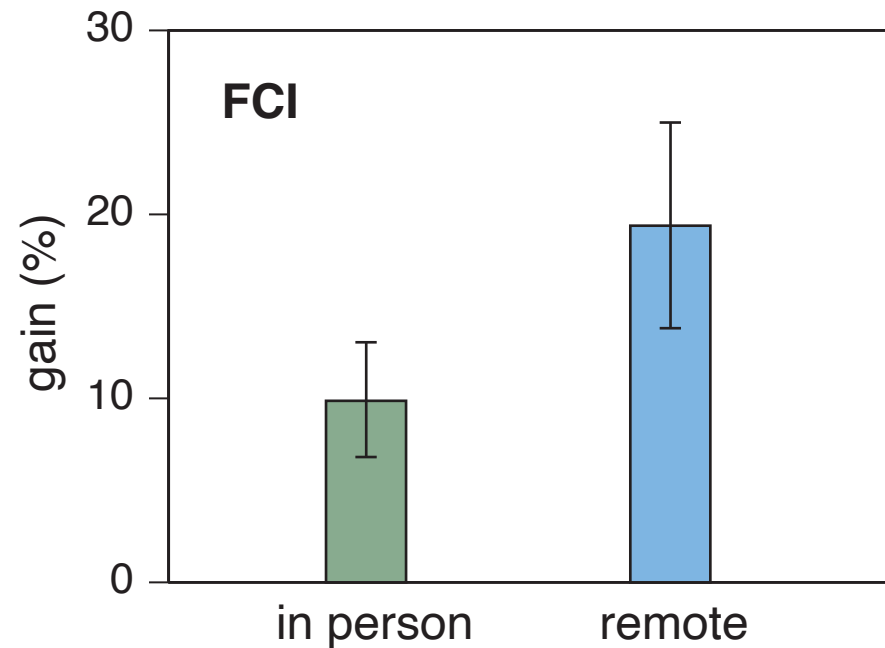
80 students in one room → 20 rooms with 4 students



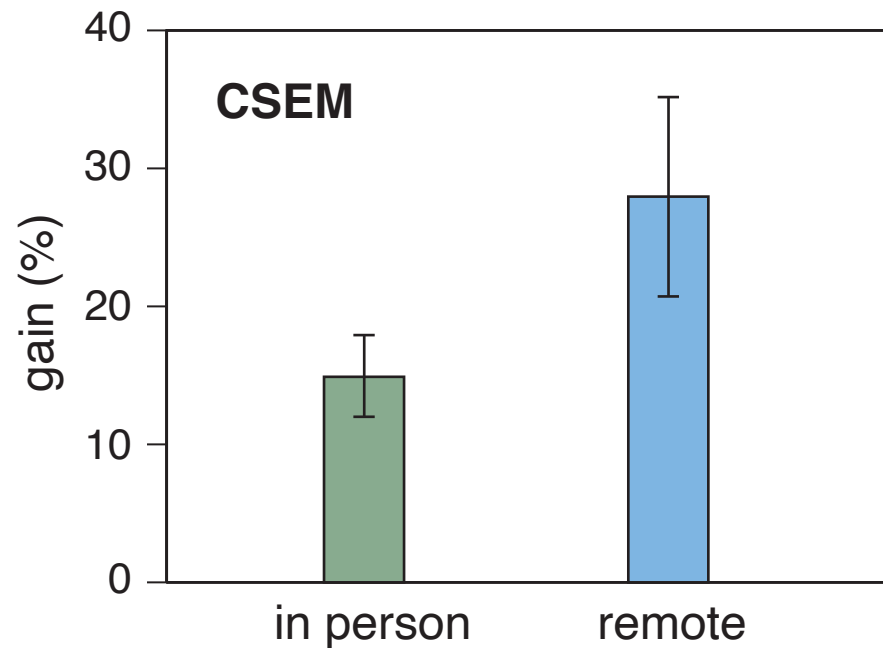
Changes implemented

- **Minimize sync/instructor-paced**
- **Personalize instruction**
- **Specifications Grading**

Fall Content Learning Gain



Spring Content Learning Gain



Self Efficacy

belief in ability to succeed in a certain domain

Doubling of

- content learning gains
- physics self-efficacy gains

Research Shows Students Falling Months Behind During Virus Disruptions

The abrupt switch to remote learning wiped out academic gains for many students in America, and widened racial and economic gaps. Catching up in the fall won't be easy.

Improved

- sense of growth and autonomy
- sense of support and community
- course evaluation



I did my best teaching ever remotely!

Research Shows Students Falling Months Behind During Virus Disruptions

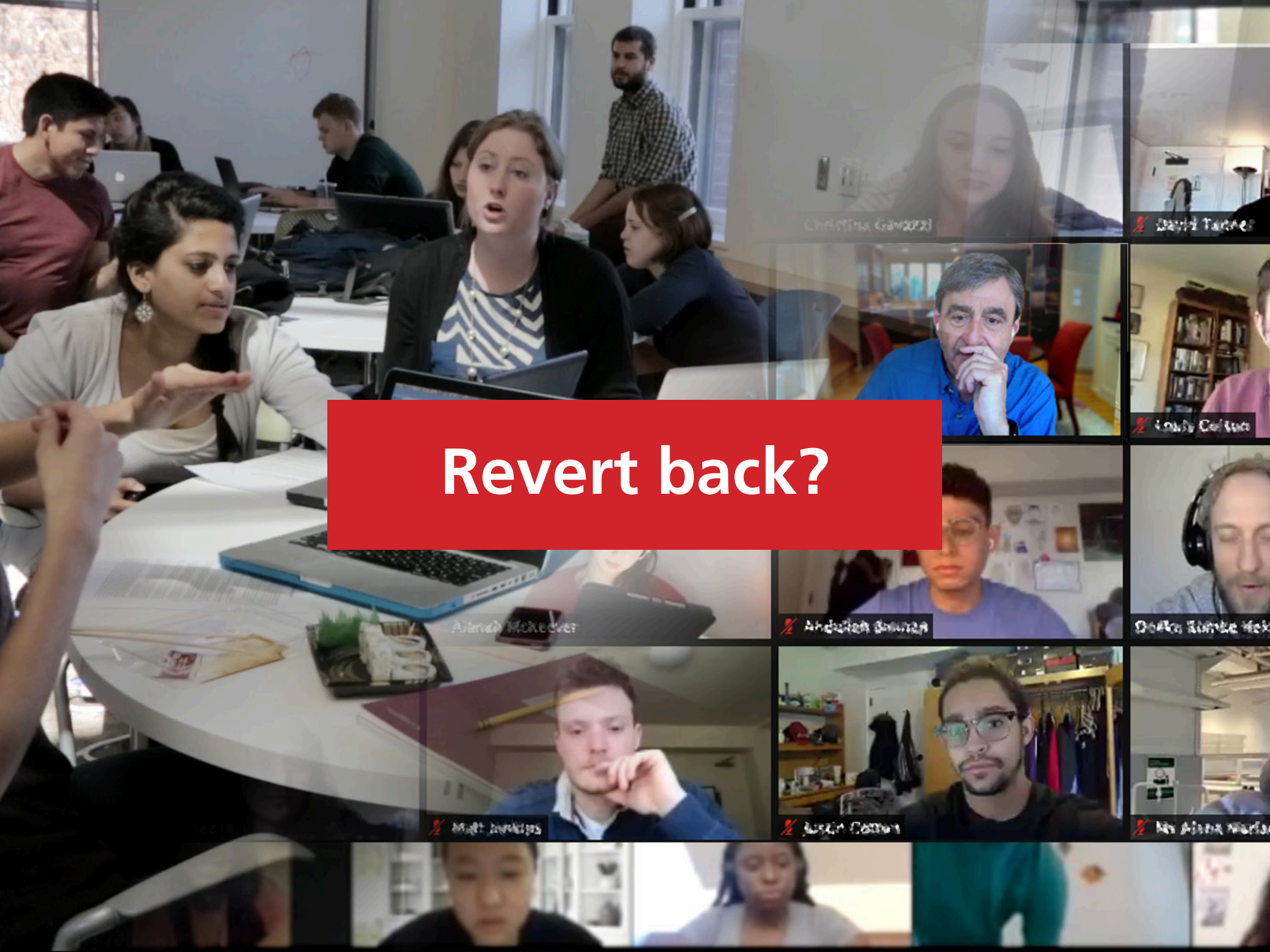
The abrupt switch to remote learning wiped out academic gains for many students in America, and widened racial and economic gaps. Catching up in the fall won't be easy.

3 results



I did my best teaching ever remotely!

So, now what?



Revert back?

(Post?) Pandemic changes

Sections — in person or online (same experience, either way!)

You and your team can decide not only when, but also how to participate in the regular weekly class meetings for AP50. You can meet with your team and the TFs and me in the classroom (Pierce Hall 301), during one of the two section times. Alternatively, you can meet with us via Zoom, ideally during those same time slots.



In person: You and your teammates will be seated around a table in Pierce Hall 301 and share your work with each other using Zoom. Members of the teaching staff will check in with you at the table. (**Note:** Unlike in the picture, face coverings are **mandatory** in the classroom.)



Online: You and your teammates will meet in your team's Zoom meeting room and communicate and share your work with each other using Zoom. Members of the teaching staff will check in with you in your team's Zoom room.

Multimodal approach

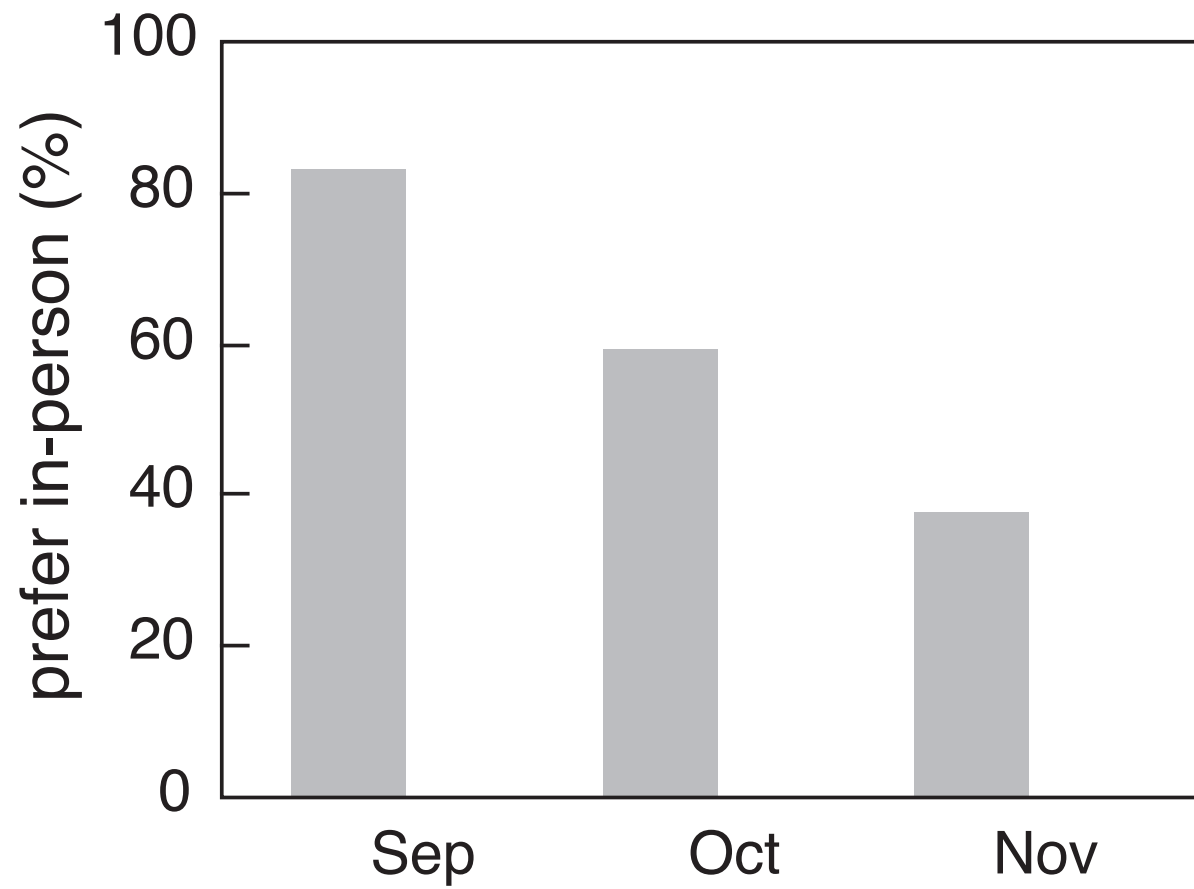
No matter how you participate, the experience will be the same, as we carry out all class activities on the same platforms in person and online. On Zoom, your team will meet in its own Zoom room and you will share your work with each other via Zoom. In the in-person classroom your team will be seated at a table and also use Zoom to share work, but of course you'll need to use a camera or microphone — you can just talk to each other. In both cases, whenever your team is ready to have its work validated by the teaching staff or if you have a question, you will notify us on Slack and one of us will visit your Zoom room or come to your table in person. **Note:** Face coverings are **mandatory** for all in-person meetings (see below for additional details).

You **don't need to commit to in-person or online in advance**, and you can switch back and forth as you please, **provided the entire team agrees to participate at the same time and in the same modality for a given activity** (all in-person or all online). To facilitate that process, we will ask you for your preferences before we form teams and match you with people who have similar preferences.

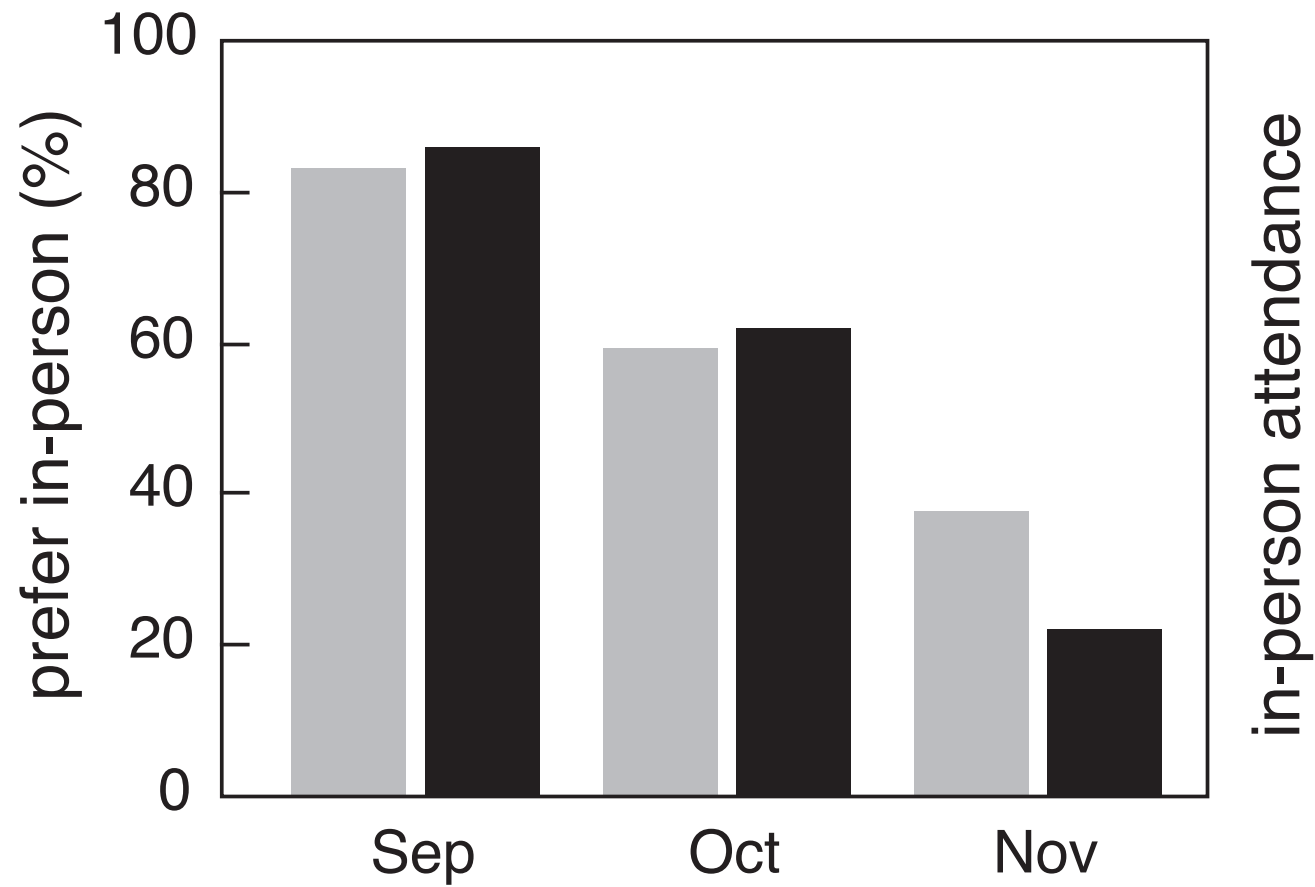
Sections — Logistics

...in Pierce Hall 301. If you participate online, begin your section by going to the [AP50 Teaching Team Room](#) on Zoom. All ... the AP50 Teaching Team Room on ...

in-person vs. remote



in-person vs. remote



Weekend long reads



© Graziano Pantili

Life & Arts

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



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 shape the world for years to come. They will shape not just our lives but the lives of future generations. We must act



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 these aren't normal times.





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

pres
tire

Remote teaching may well become a fixture of life

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 these aren't normal times.



Yuval Noah Harari MARCH 20 2020

Humankind is now facing a global crisis. Perhaps the biggest crisis of our
eration. The decisions people and governments take in the next few weeks
ers to come. They will shape not just our
We must act



“breaking down classroom walls”

for a copy of this presentation:

mazur.harvard.edu

course Canvas page: bit.ly/erics_course

Follow me!



@eric_mazur