Day of Educational Transformation
KAIST
3 December 2020
Education, post-coronavirus

Day of Educational Transformation
KAIST
3 December 2020
an illusion...
information transfer
sense-making
campus

information transfer

instructor-paced synchronous lecture

home

sense-making

self-paced asynchronous home work/study
Information transfer

instructor-paced synchronous lecture

sense-making

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

self-paced asynchronous home work/study
campus
information transfer
instructor-paced
synchronous
lecture

home
instructor-paced
asynchronous
recorded lecture

home
self-paced
asynchronous
home work/study

ALONE!
question
question

think
question

think

poll
question

think

poll

discuss

repoll

explain
question ➔ think ➔ poll ➔ discuss ➔ repoll ➔ explain
Higher learning gains

<table>
<thead>
<tr>
<th>Normalized Gain (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

Lecturing
Higher learning gains

- Lecturing: 20%
- PI: 80%

(normalized gain, %)
Peer instruction:
Higher learning gains
Better retention
Self-paced asynchronous pre-class reading

Instructor-led synchronous peer instruction

Campus

Sense-making

Home

Information transfer
online

information transfer

self-paced asynchronous

online

desense-making

instructor-led synchronous
interactive

self-paced
asynchronous

instructor-led
synchronous

online
information transfer

online
sense-making

Improving education

synchronous \[\xrightarrow{\text{↔}}\] asynchronous
Improving education

synchronous  ↔  asynchronous

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

synchronous \quad \rightarrow \quad \text{asynchronous}

instructor-paced \quad \leftrightarrow \quad \text{self-paced}
Improving education

synchronous -> asynchronous

instructor-paced -> self-paced
Improving education

more time to help students
where it really matters!
for a copy of this presentation:
mazur.harvard.edu
resource sheet:  bit.ly/fliponline
Follow me!  @eric_mazur