

**It ain't what you do,
it's the way
that you do it:
that's what gets
results**

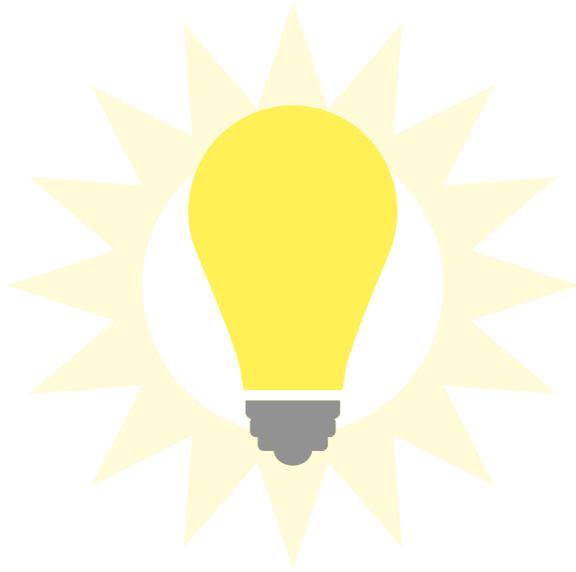
<https://jondron.ca>
jond@athabascau.ca



ICEEL 2022

Jon Dron, November 2022





My proudest teaching moment



my student: (angrily) You're not teaching me anything!

me: *But are you learning anything?*

my student: Yes, more than on any other course I've ever taken. But I have to do it **all** myself. You're not *teaching* me anything.



technology

/tek'näləjē/

noun *and* verb

The organization of
stuff (*any* stuff)
to do stuff (*any*
stuff)



teaching

/'tēCHiNG/

noun

The organization of stuff to support learning.

We are *all* teachers

Methods of teaching *are* technologies

We are *all* learning technologists





**On the whole, the ‘stuff’
technology does is to solve
problems.**

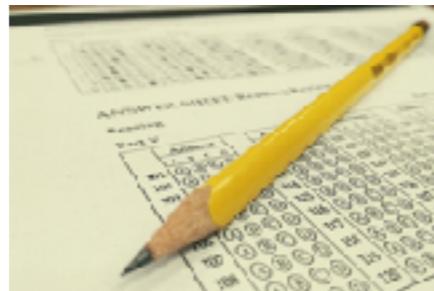
**But, nearly always, a technology
also *makes* problems**



“Developing counter technologies to correct the new kinds of damage constantly being created by technological innovations is a **policy of despair**” (Dubos, 1969)



Often, the problems a technology solves are *caused* by other technologies



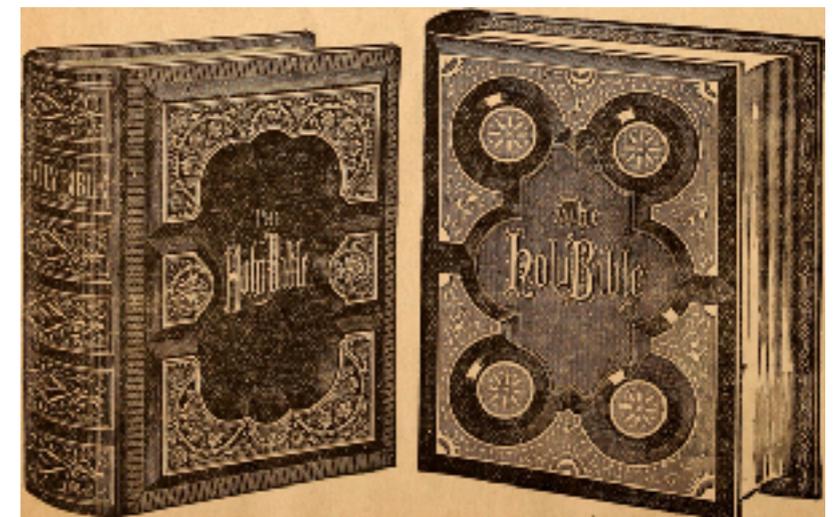
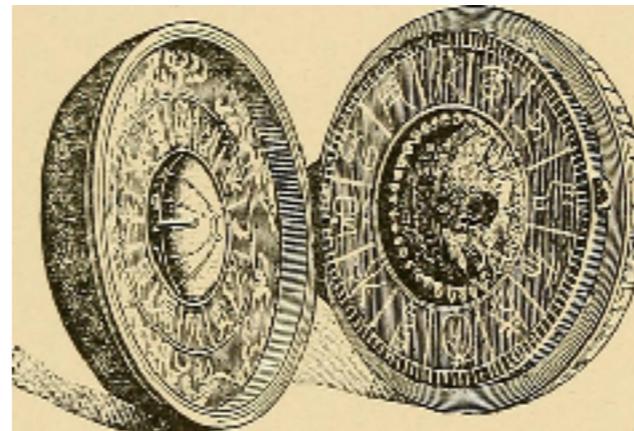
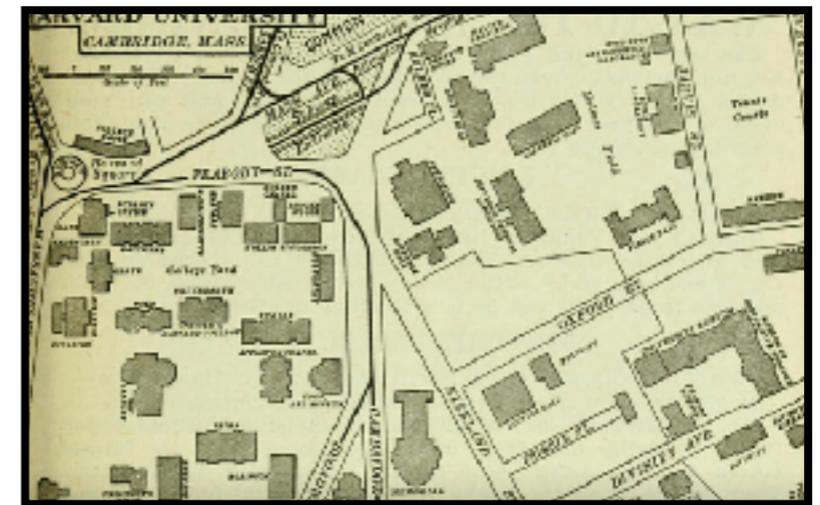
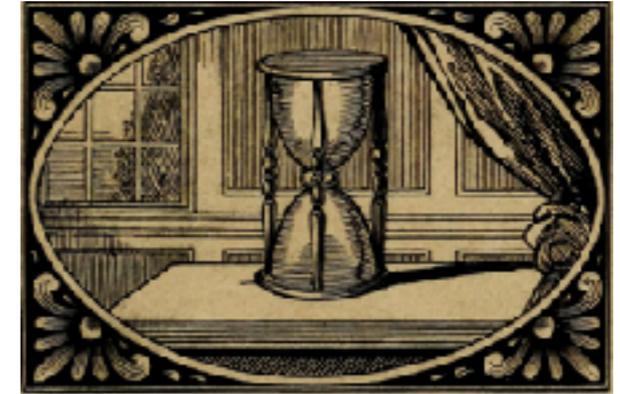
Higher education has been around a long, long time

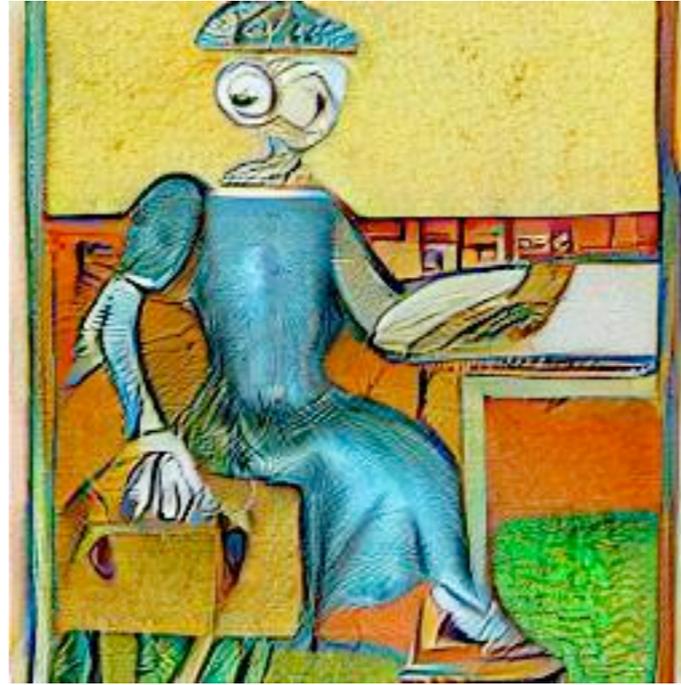


***a lot* of its technologies
are counter-technologies**

The hard problems (for in-person teachers)

Physical
boundaries
and scarce
resources

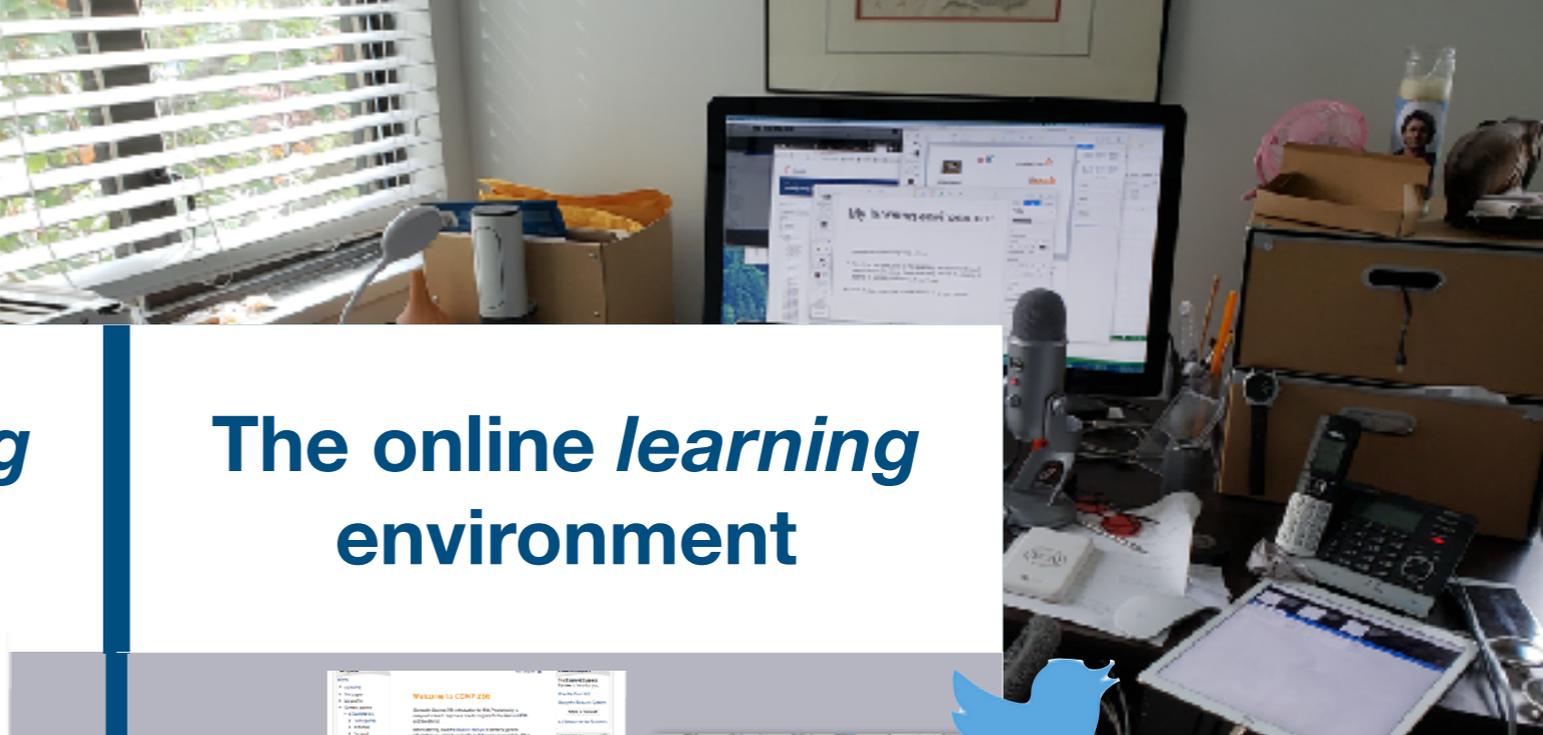




It's not the same online

A virtual learning environment
is not a learning environment

It is **part** of the *learner's*
environment



The online *teaching* environment

The online *learning* environment

There is no such thing as online learning

Why in-person teaching met fail online, and what to do in

Invited 1988, Newfoundland International Trends in Education, Otago University

Jon Dron, June 14 2002

Quora

Google

StackExchange

WIKIPEDIA
The Free Encyclopedia

KHANACADEMY

GitHub

YouTube CA
stackoverflow

Instagram

Facebook

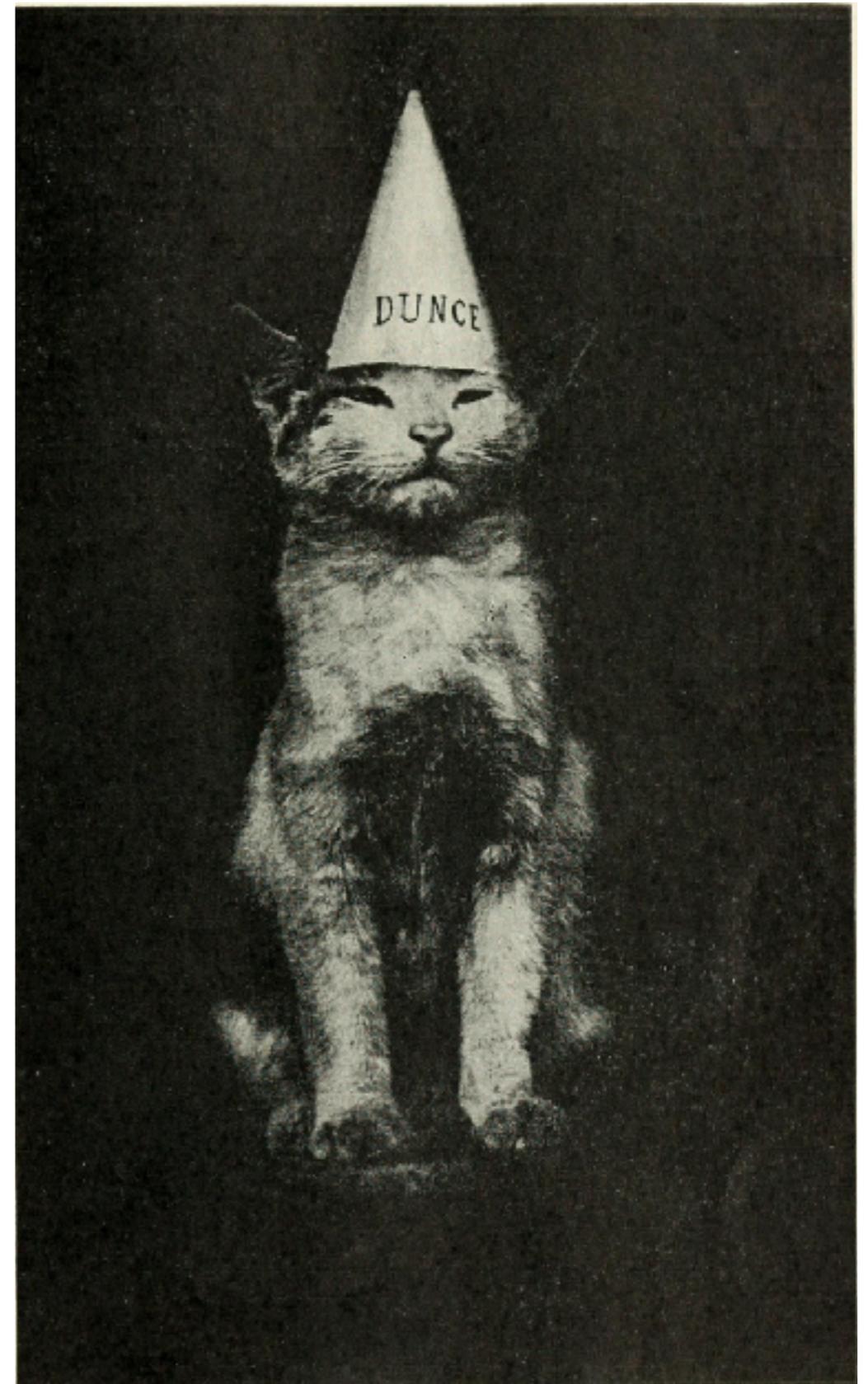
WhatsApp

Calculator

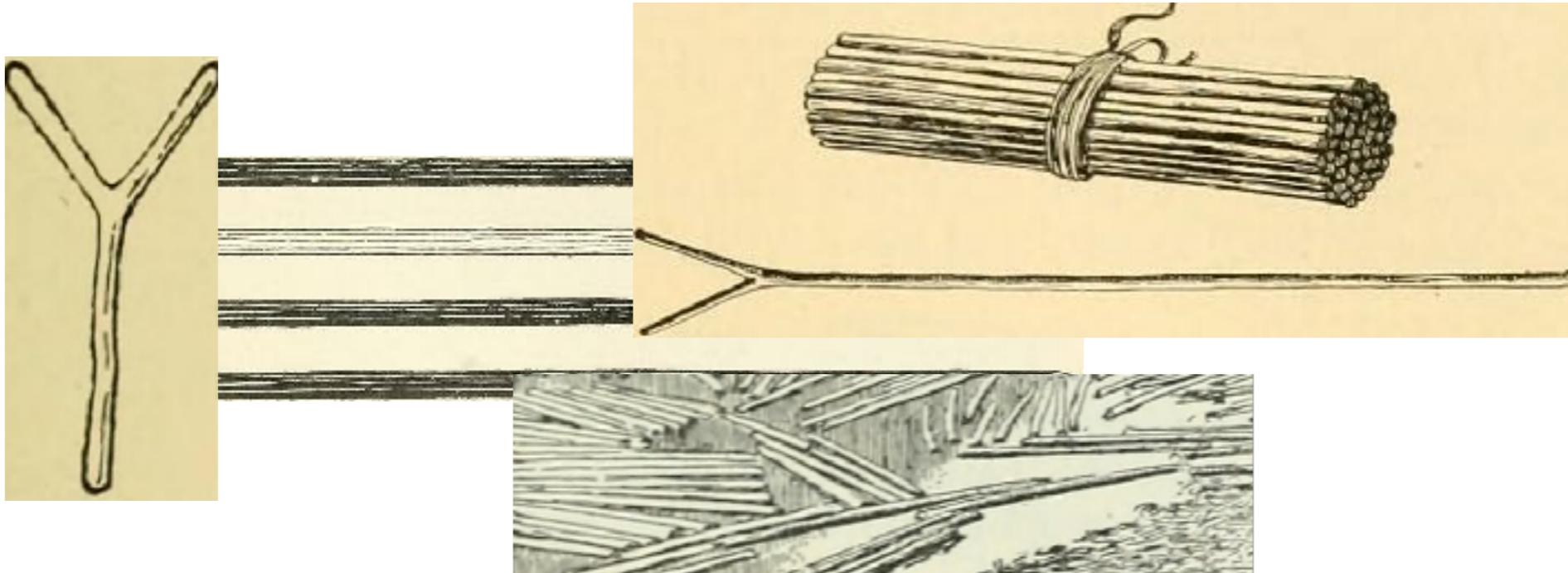
Dictionary

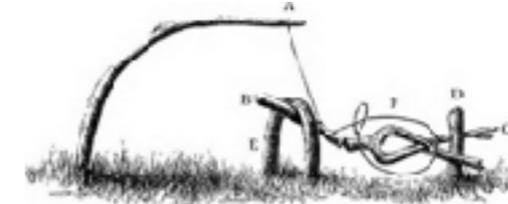
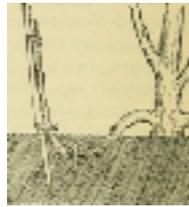
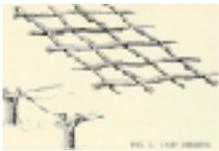
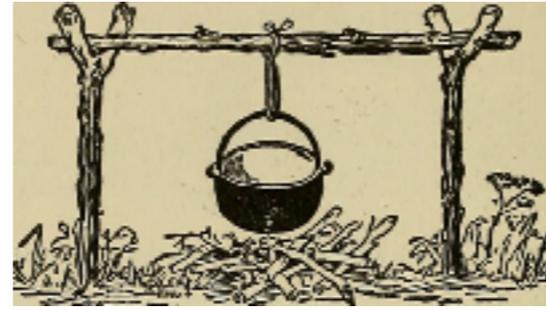
You can't control this this

**What are the problems
that in-person
education has solve?**

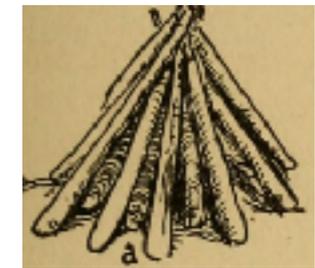
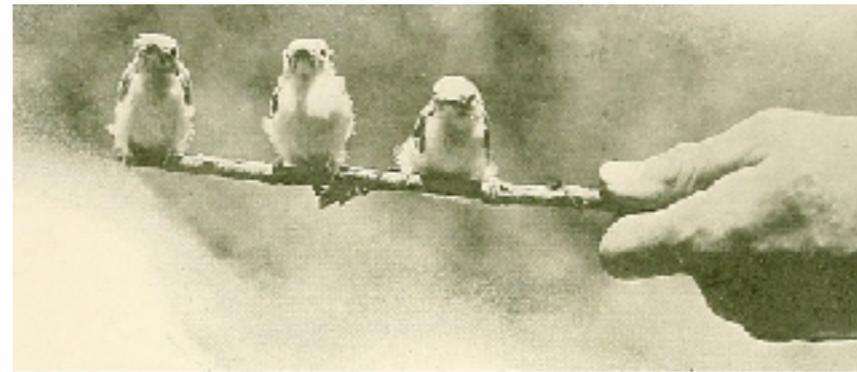
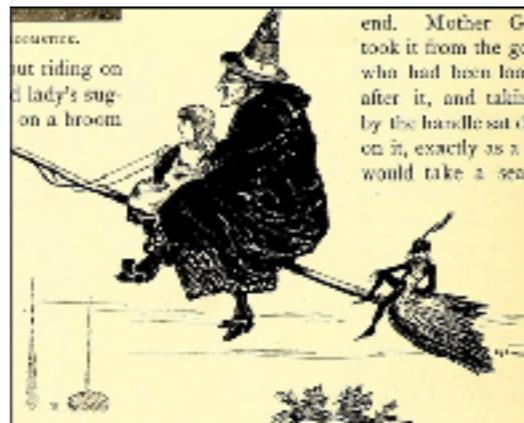


What are some educational uses for a stick?



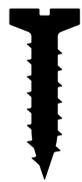


The stick becomes a technology when we add methods (and maybe other stuff)



All technologies work this way

These are silly questions



Does the use of screws in classrooms improve learning?



Does the use of computers in classrooms improve learning?



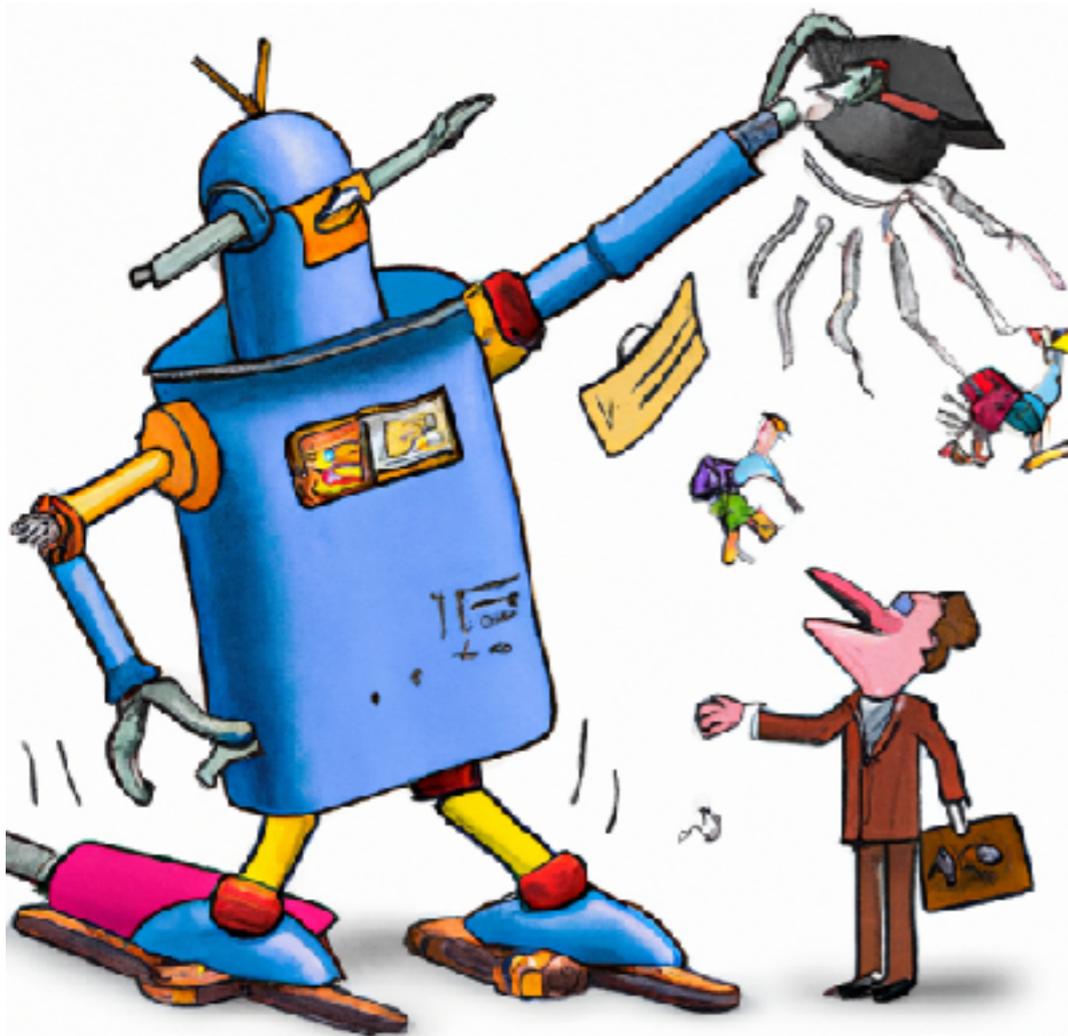
Does the use of <insert preferred teaching method here> in classrooms improve learning?

Does choice of technology matter?

Yes, **hugely**. Especially when the technology does things by itself. But:

1. **Methods** are technologies too;
2. The **assembly** matters more than its parts.

and...



Tain't what you
do...





technique

/tek'nēk/

noun

***A way of doing stuff.
The stuff we do to fill
in the gaps left by the
stuff that has been
done.***

**We don't just
use
technologies.**

***We participate*
in them.**

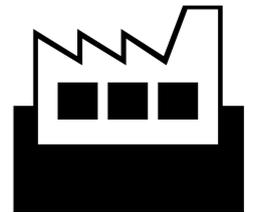
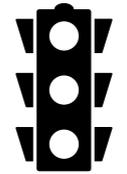
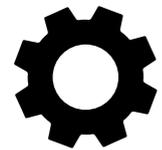


<https://flic.kr/p/2iCkb3V>



Hard technologies

We are part of the stuff that is organized.

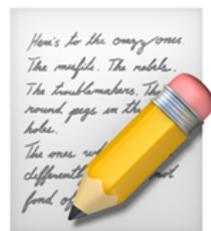


“Technique” means playing our roles correctly



Soft technologies

We are organizing the stuff.



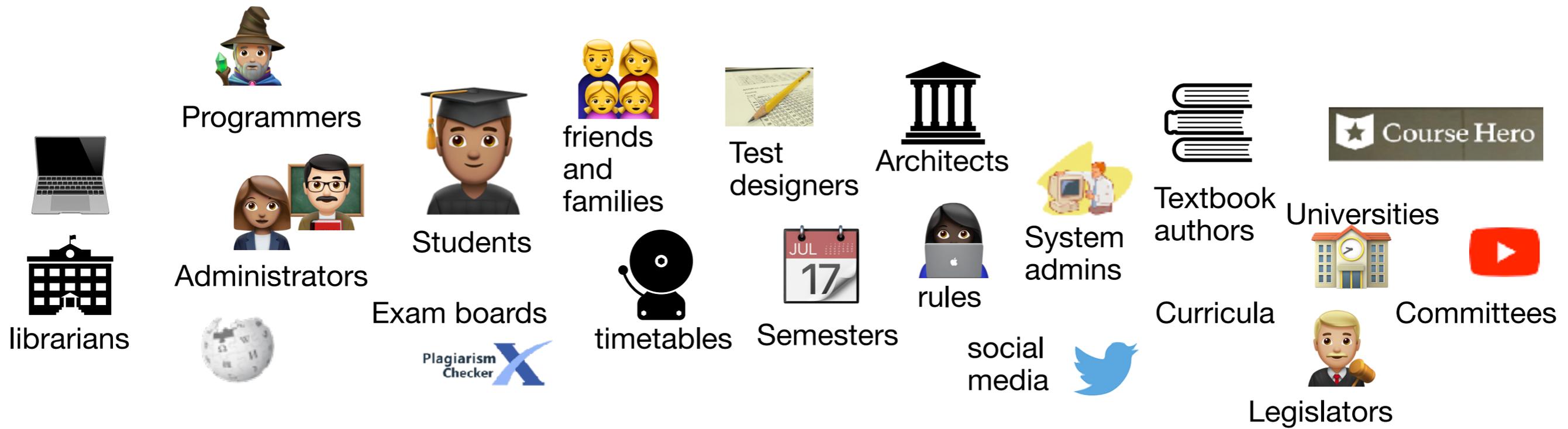
“Technique” means playing our roles well



There are *always* many teachers who co-participate in any learning event.

Many organizers of much stuff for learning.

And every one of them is using technique.



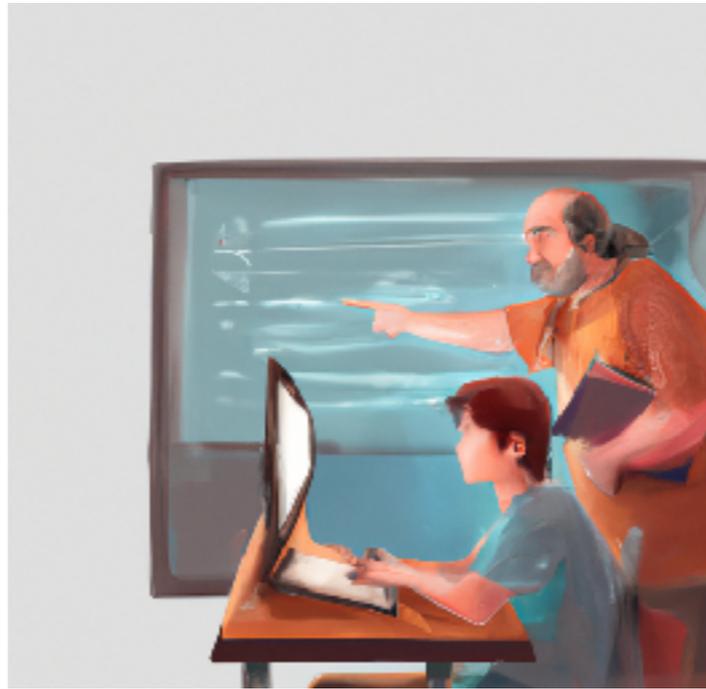
buildings, software, furniture, timetables, cafes, textbooks, libraries, common rooms, other learners and, above all, the one who is learning are each part of the teaching gestalt



Why does this matter?

**It explains the
no-significant-
difference phenomenon**





It is why Bloom's 2 sigma challenge can never be met

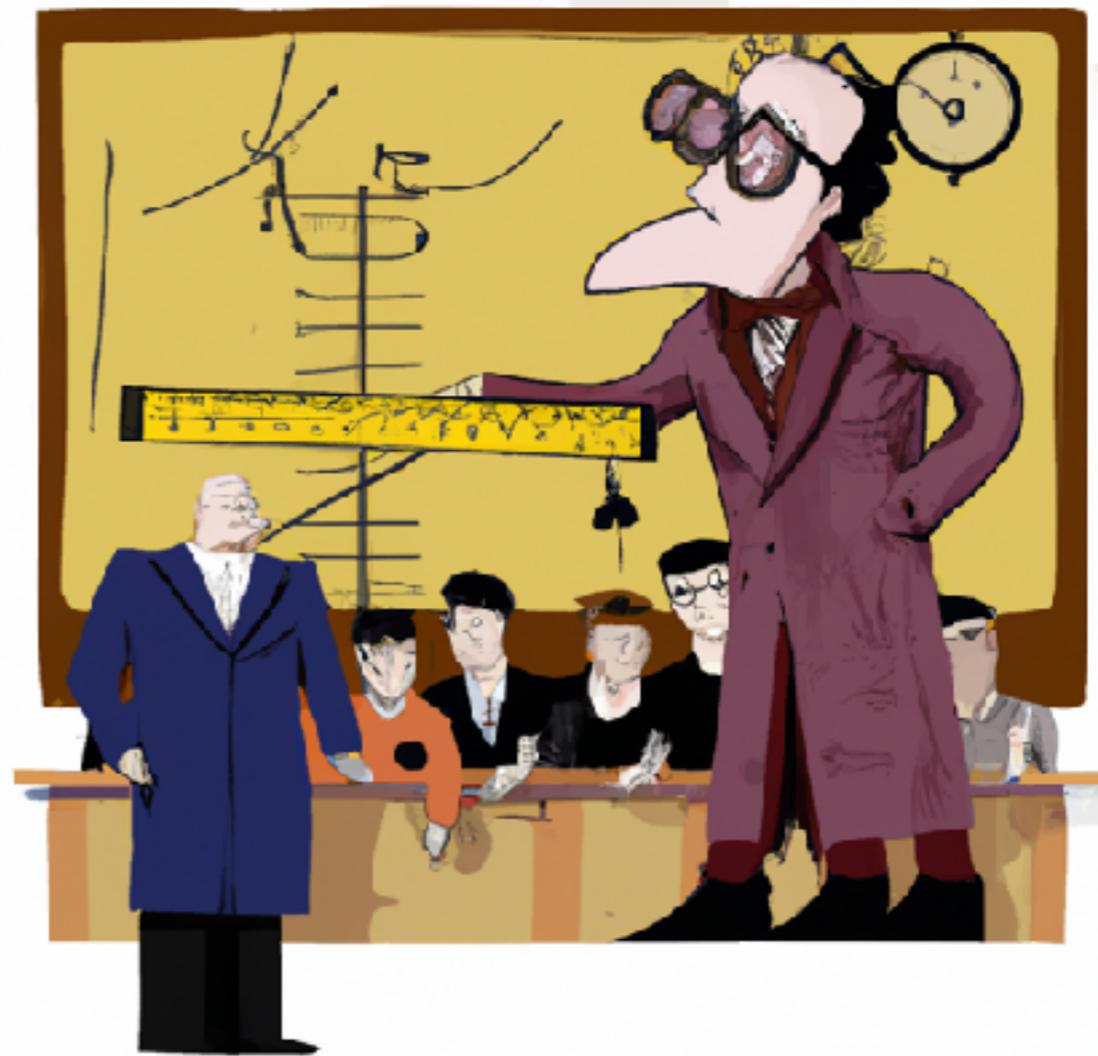


**It explains why teaching to
perceived learning styles
seldom, if ever, makes any
difference**

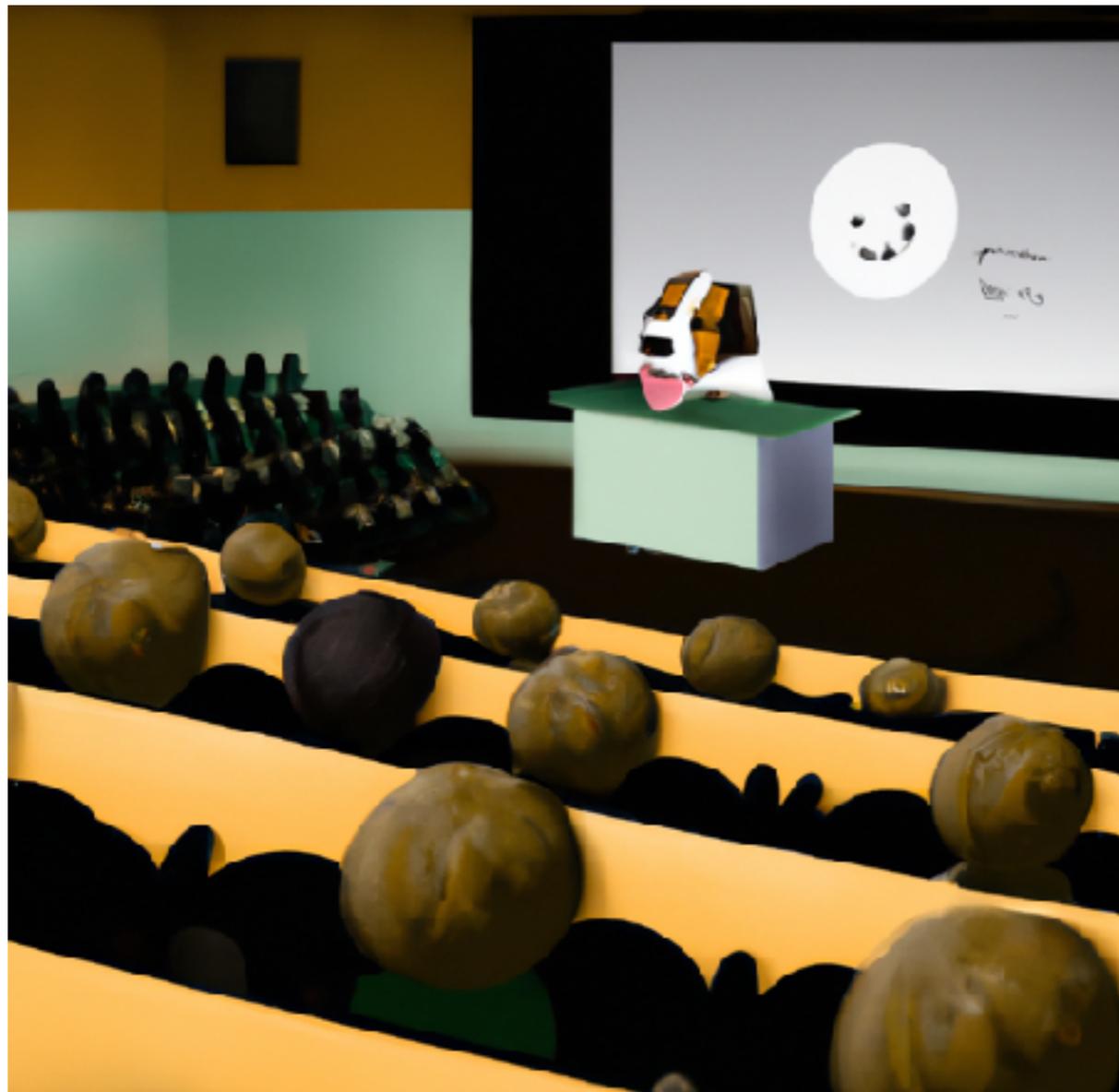


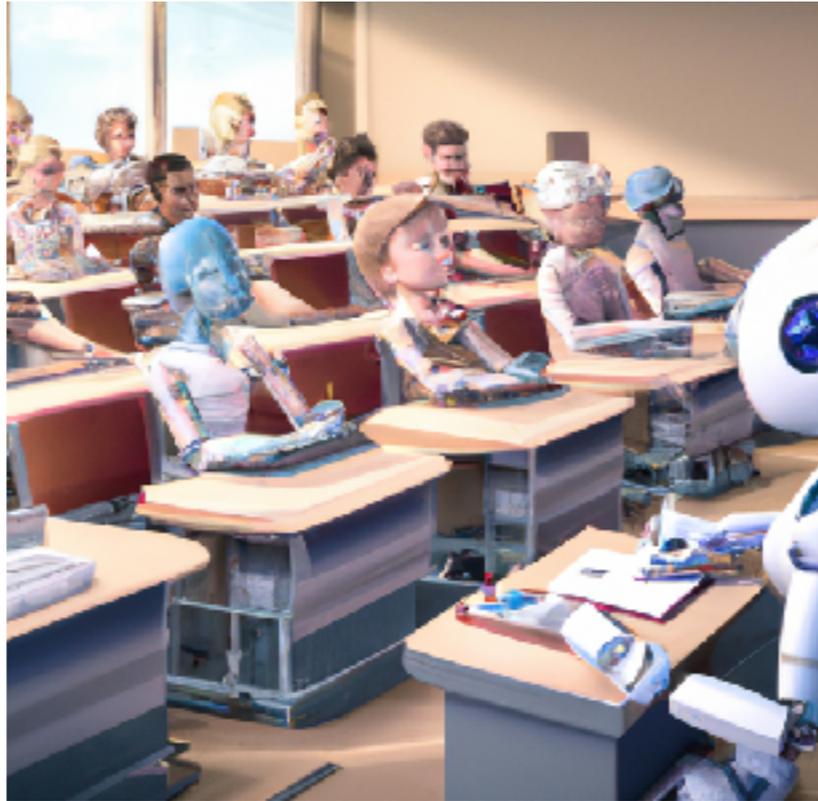
**(and, even if it did, we
would be reinforcing
unhelpful habits)**

**It is why there
is no such thing
as a science of
teaching**



**It is why bad teaching
sometimes works very
well**





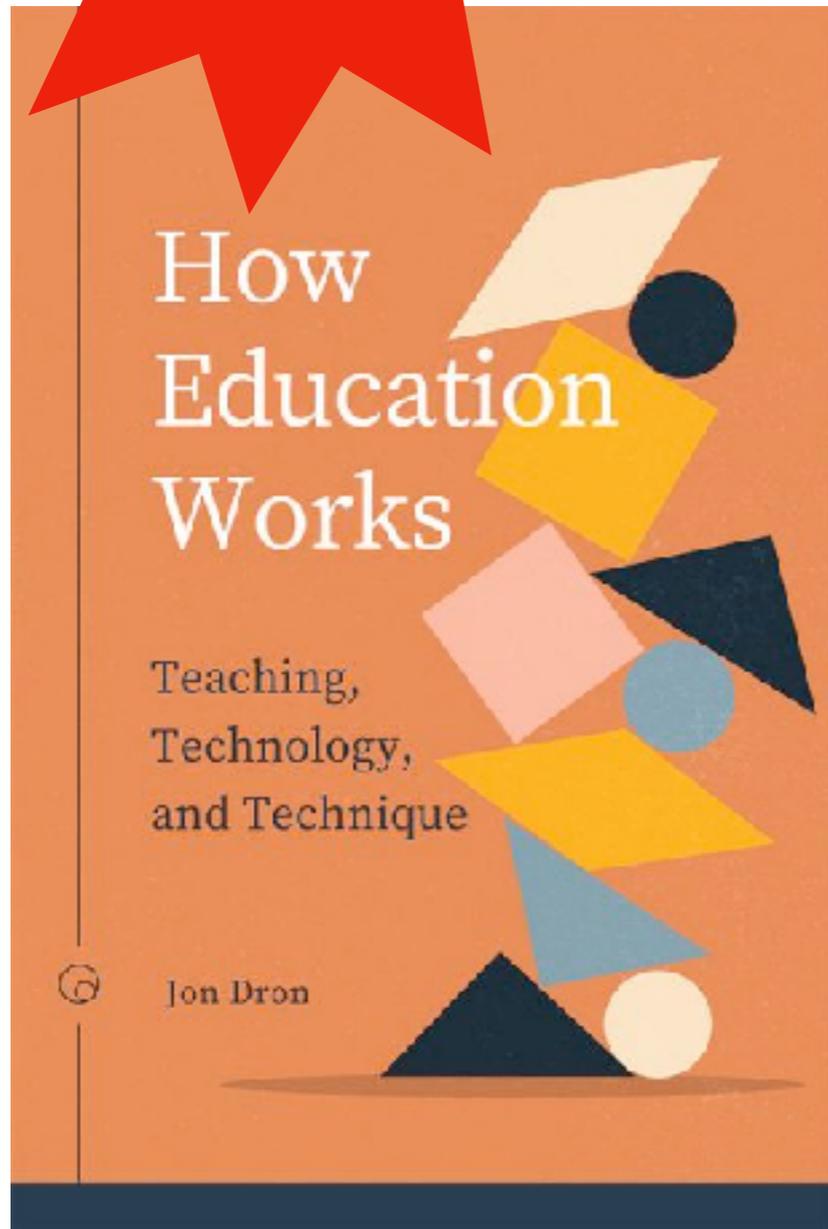
It is why online learning *should* not and *cannot* be like in-person learning (and hybrid approaches are very difficult)

And it matters to how we teach online...

- **let go (but stay close)**
- **design the process, not the product**
- **make learning (not just its products) visible**



Due out
May
2023



Thank you

✉ jond@athabascau.ca

🐦 [@jondron](https://twitter.com/jondron)

🌐 <https://jondron.ca/>

📡 [@jondron@mastodon.social](https://mstdn.social/@jondron)



<http://howeducationworks.ca>

