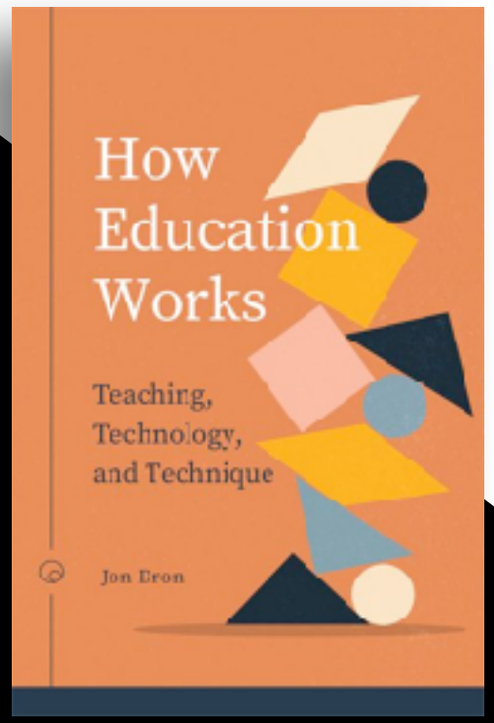
How to Be an Educational Technology

An Entangled Perspective on Teaching

Contact North | Contact Nord Webinar
September 2024



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Are these learning technologies?

A. An LMS

B. An online quiz

C. A school

D. A fallen tree branch

Could this be a technology?

What *is* a technology?

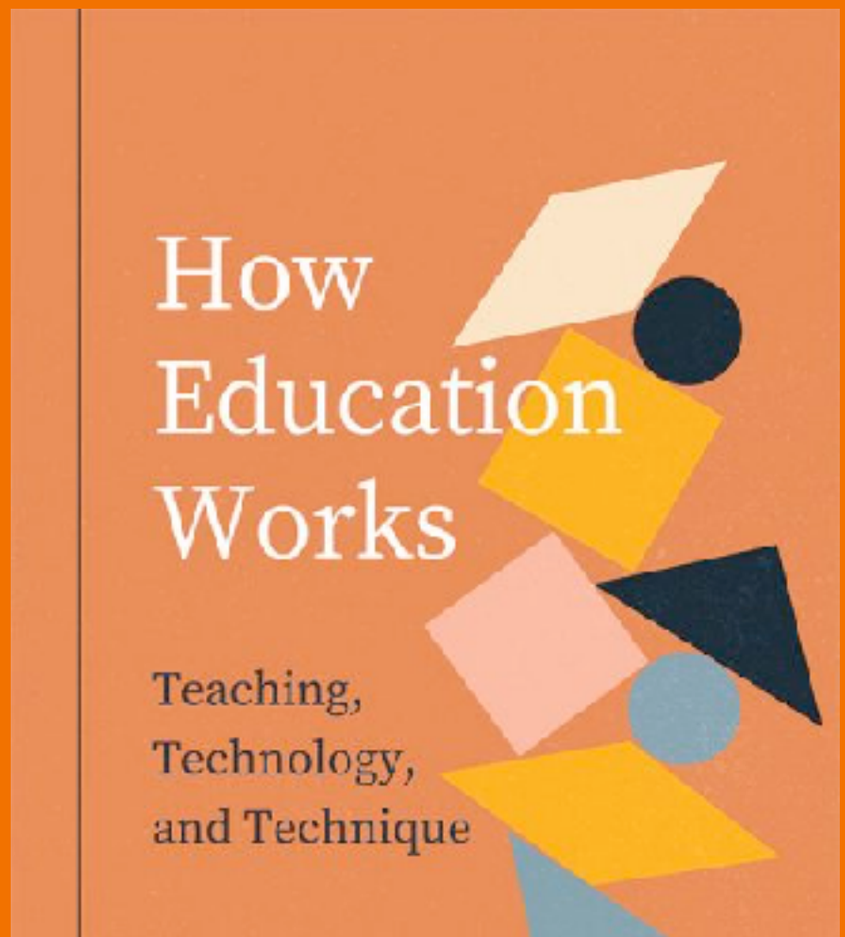
W. Brian Arthur:

Arthur, W. B. (2009). *The Nature of Technology: What it is and how it evolves*. Free Press.

The orchestration of phenomena to our use

me:

organizing stuff to do stuff



lots of stuff

any stuff

Pedagogies (pedagogical methods) are technologies, too

organizing stuff to do stuff

the stuff that is organized to do stuff includes *other* stuff that is organized to do stuff

technologies are assemblies

Arthur, W. B. (2009). *The Nature of Technology: What it is and how it evolves*. Free Press.

There are no naked pedagogies.

Pedagogies *never* come first.

What does it mean to *use* a technology?

Organizing stuff to do stuff

The use *is* a technology

We are participants in, not just users of technologies

and they participate in us

Technique: what we do with what has been done

technologies enacted by humans

(*or other intelligent agents*)

Soft technique/hard technique

talent <— —> skill

We are the orchestrators

and/

or

we are part of the orchestration

soft technique

T'ain't What You Do (It's the Way That You Do It)

Oliver, S., & Young, T. (1939). *T'aint what you do (it's the way that you do it)* [Audio recording]. Vocalion.

Aside: Generative AI can do soft technique, too

(unlike any prior technology)

Pace layering, path dependencies and adjacent possibles

The hard constrains the soft.
The hard enables the soft.

Technologies make more technologies possible

Hence our collective and individual intelligence and cultures

All intelligence is collective

and so is all teaching

We are *co*-participants

Swimming in a sea of teachers…

…the most important of which is the learner

Educational systems create the adjacent possibles for learning. They provide the parts.

The learner brings the rest and makes the whole.

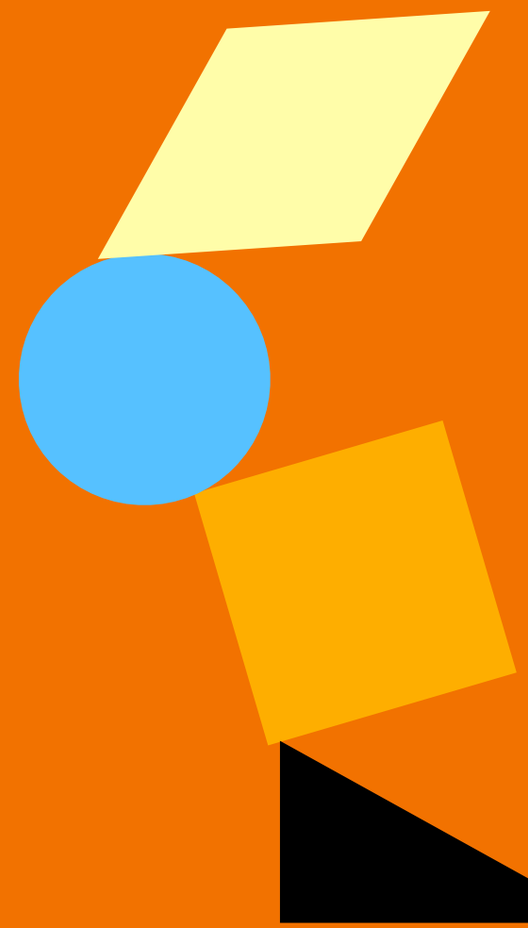
T'ain't What You Do (It's the Way That You Do It)

T'ain't What You Do (It's the Way That You Do It)

and the Way That Everyone Else Does It

That's what gets results

This explains a lot



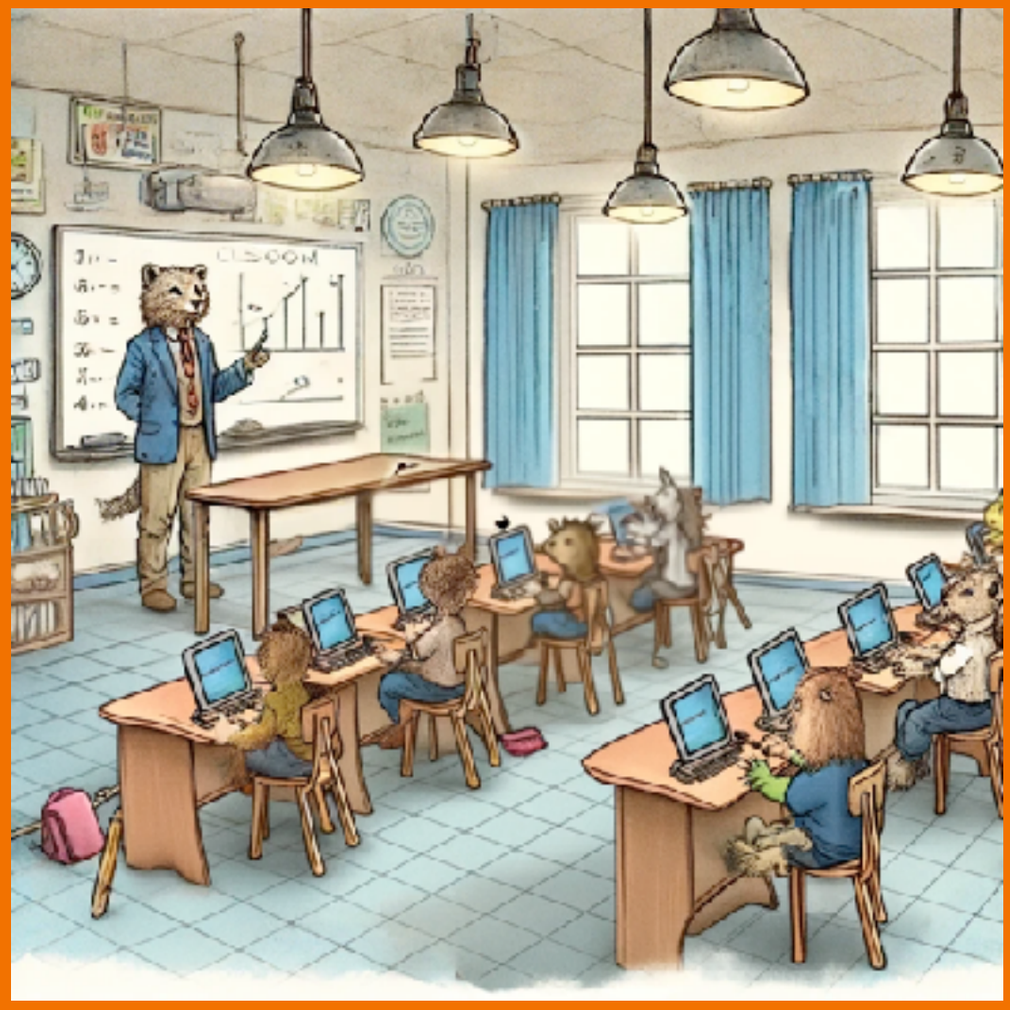
Do computers in classrooms improve learning outcomes?

Do transistors in classrooms improve learning outcomes?

Do screws in classrooms improve learning outcomes?

Does [insert your preferred teaching method here] in classrooms improve learning outcomes?

The 2 sigma challenge



The “no significant difference” phenomenon

Being-taught habits

Which teaching models work best?

connectivism

rhizomatic learning

heutagogy

communities of practice

andragogy

(social) constructivism

structuralism

progressivism

constructionism

communities of inquiry

cognitivism

Direct Instruction

behaviourism

instructivism

“Everything works” (including nothing)

Hattie, J. (2013). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Taylor & Francis.

What *does* make a difference…

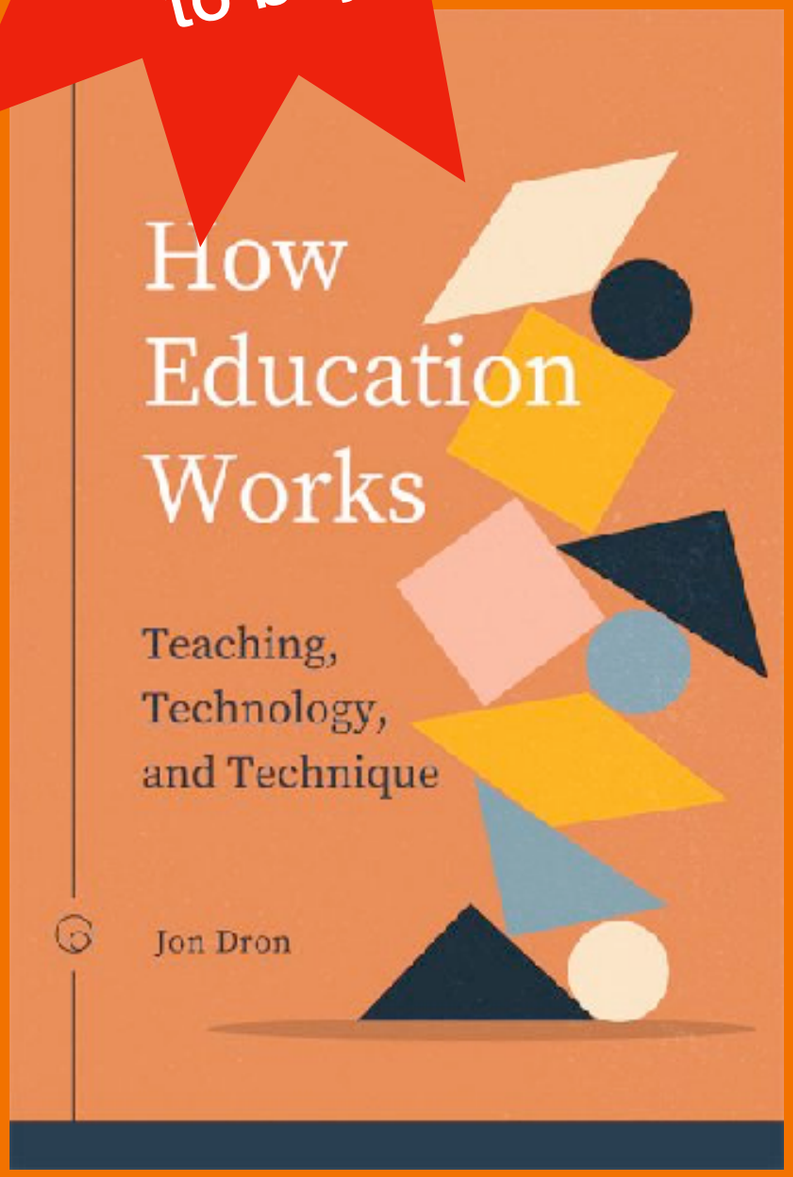
Passion
for learning, for teaching, for the subject

Compassion
for learners

Skill and talent
in all the technologies that matter (pedagogy, tech, content, organization, etc)

Understanding
of the whole (especially how learners are learning)

Free to read, inexpensive to buy!



Thank you

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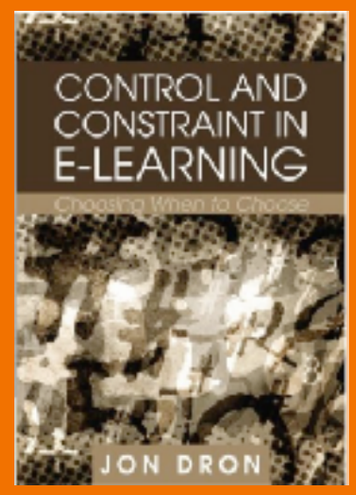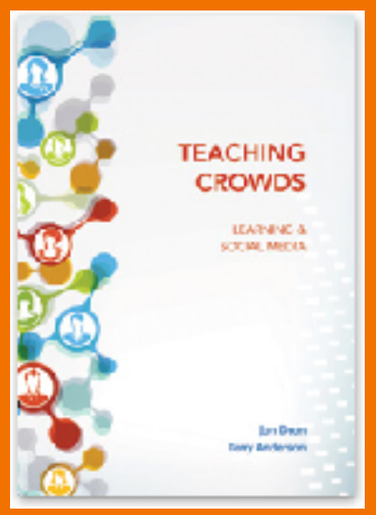
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