

<https://jondron.ca>

[jond@athabascau.ca](mailto:jond@athabascau.ca)

# Solving The Wrong Problems



## Why Online Education Is and Must Be Different from In-Person Education

Invited speech, ICEMI 2022

Jon Dron, June 11 2022



# Technology: The ways we organize stuff to do stuff

More formally, **the orchestration of phenomena to our use** (W.Brian Arthur)



# Ways of teaching (pedagogical methods/pedagogies) are technologies, too



(so, learning technologies are those which include pedagogies in their assembly)





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



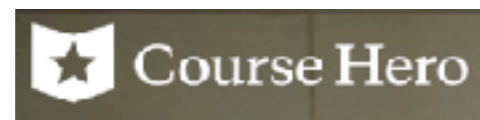
**But, nearly always, a technology  
also *makes* problems**



“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





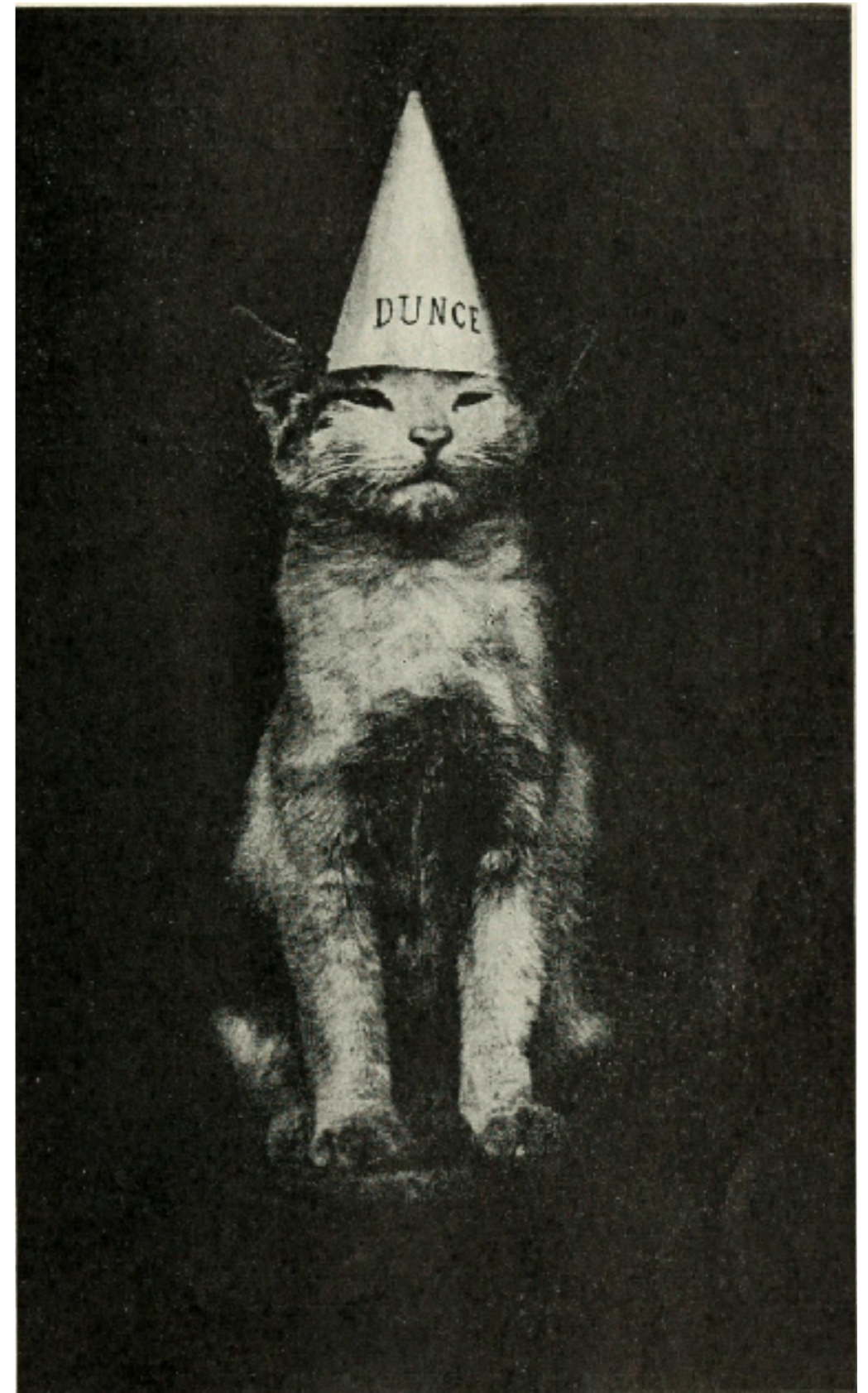
# Higher education has been around a long, long time



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



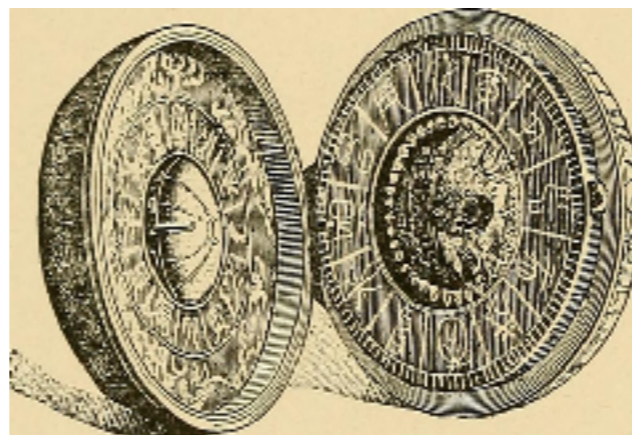
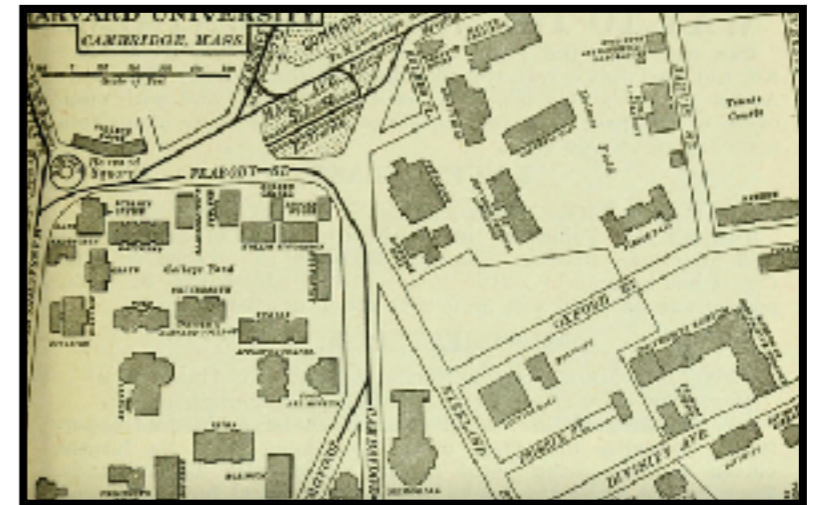
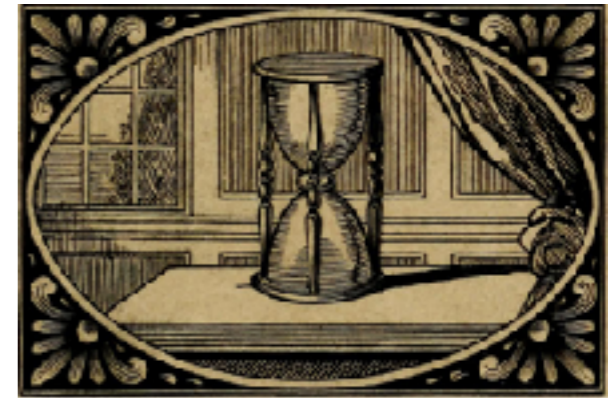
**What are the problems  
that pedagogies are  
meant to solve?**





# The hard problems

Physical boundaries and scarce resources







# Good solutions (for mediaeval times)





lectures

seminars

tutorials

classes

classrooms

workshops

schools

libraries

universities

labs

desks

textbooks

faculties

lecterns

blackboards

assignments

# What follows...

rules & regulations

tests

courses

curricula

grades

terms

timetables

credentials

semesters

programs

exams

convocations



**and**

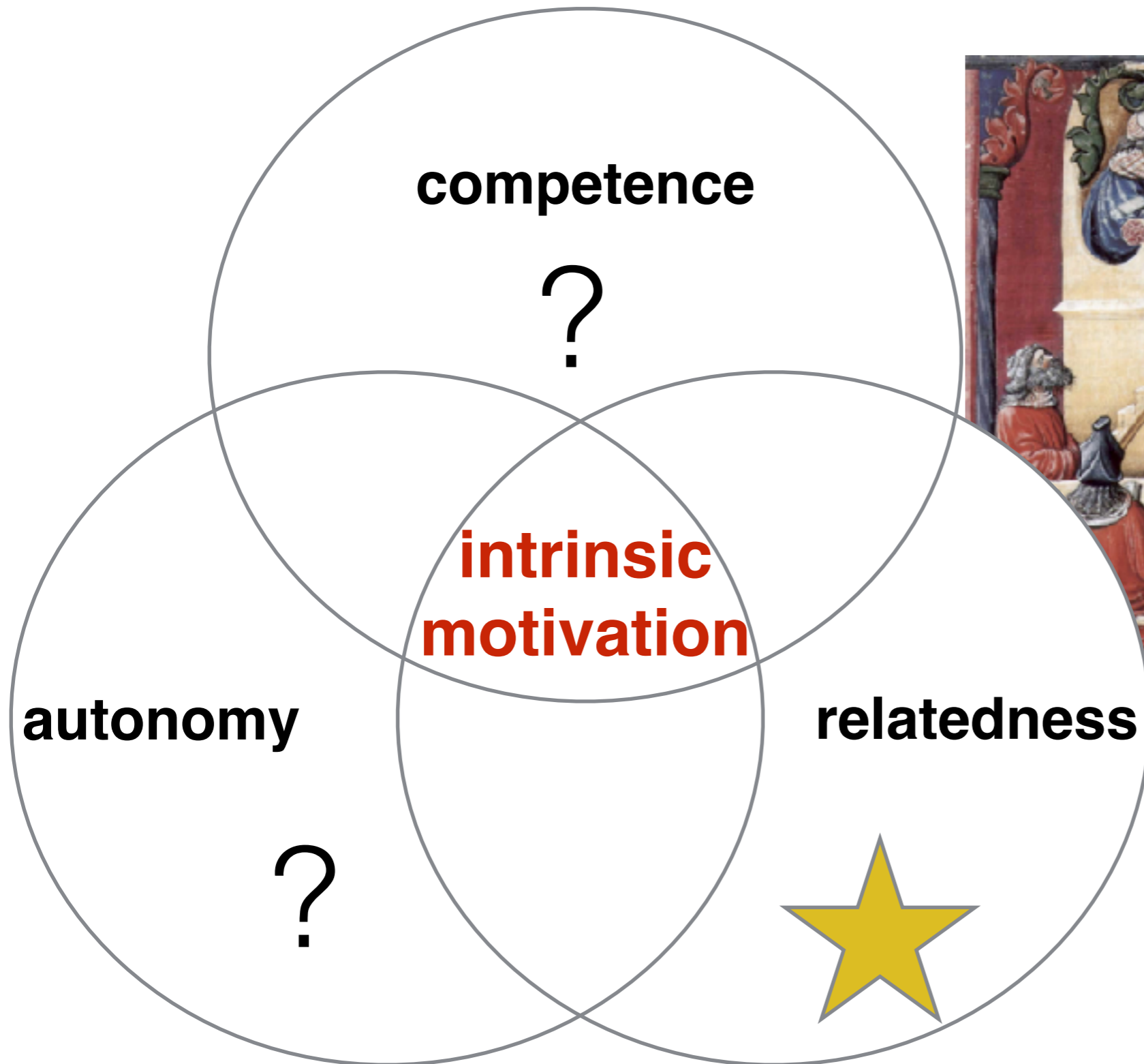
People who are not in control  
Confused people  
Bored people



People who would rather be somewhere else



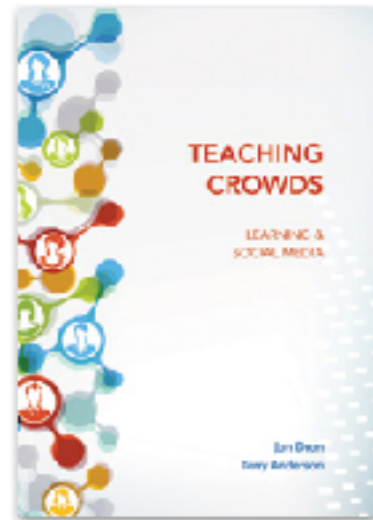
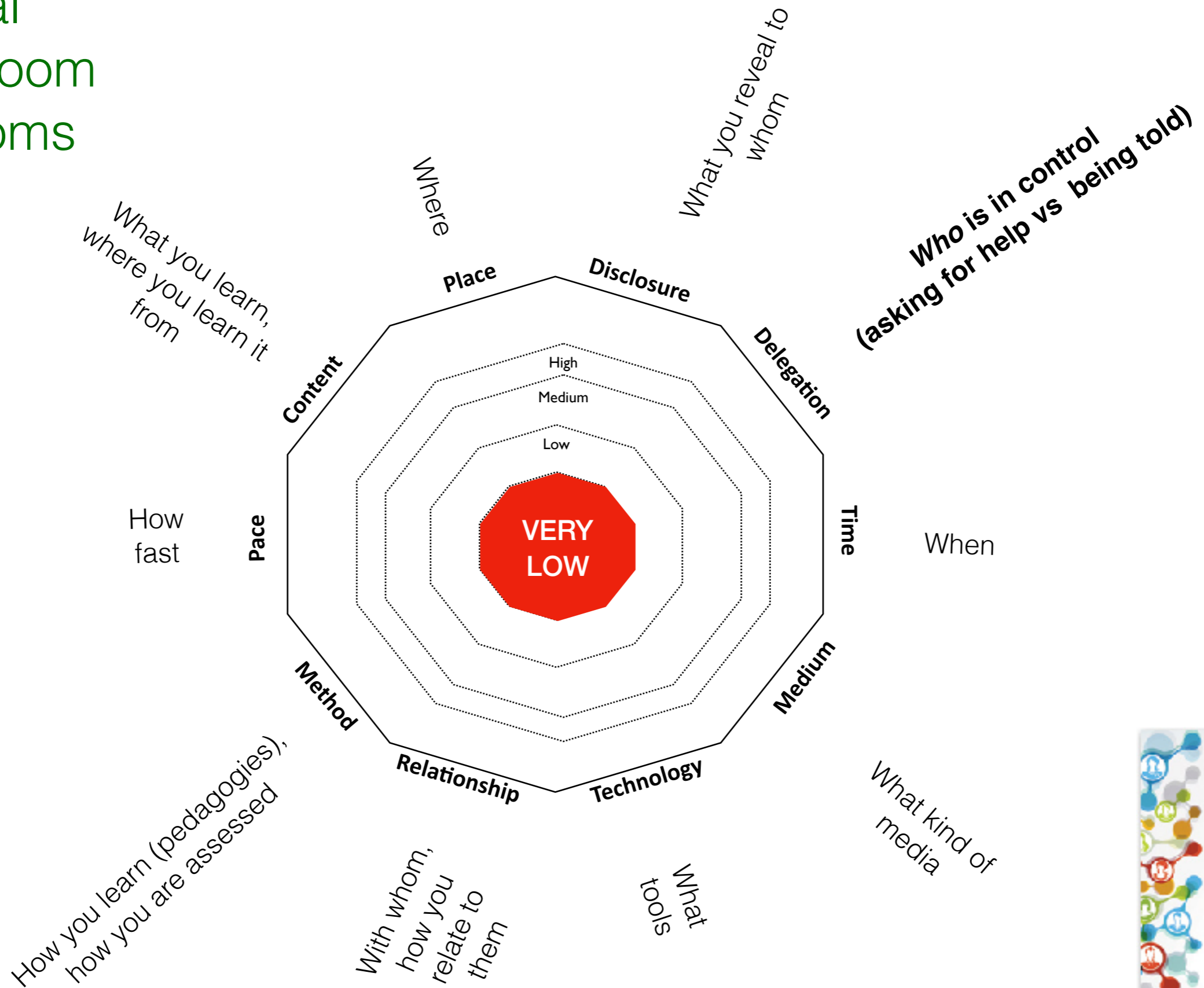
# Classroom motivation

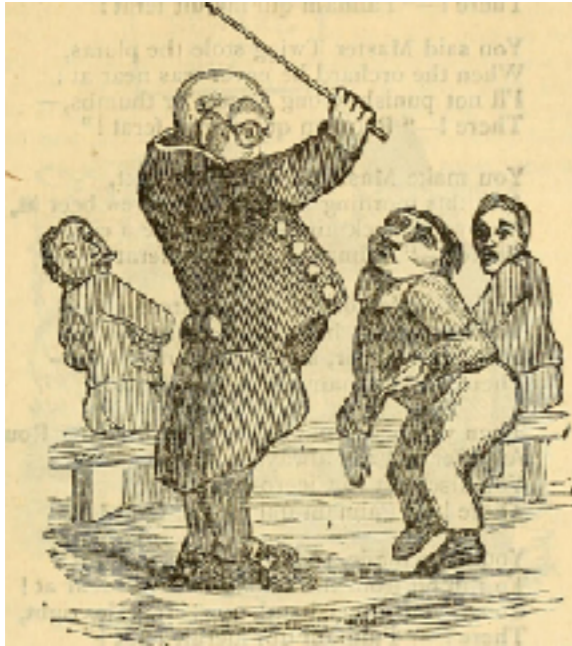


<http://selfdeterminationtheory.org>

Deci, E.L., & Ryan, R.M. (2000). The “What” and “Why” of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11, 227-268

# Typical classroom freedoms





**Ineffective** solutions  
use punishments  
and rewards



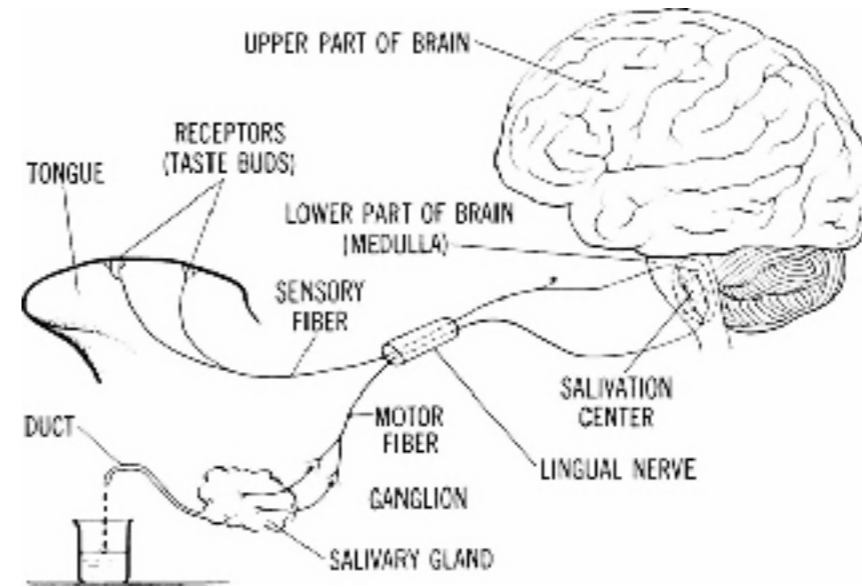
(that includes  
grades)



<https://alfiekohn.org>

Kohn, A. (1999). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes* (Kindle ed.). Mariner Books.

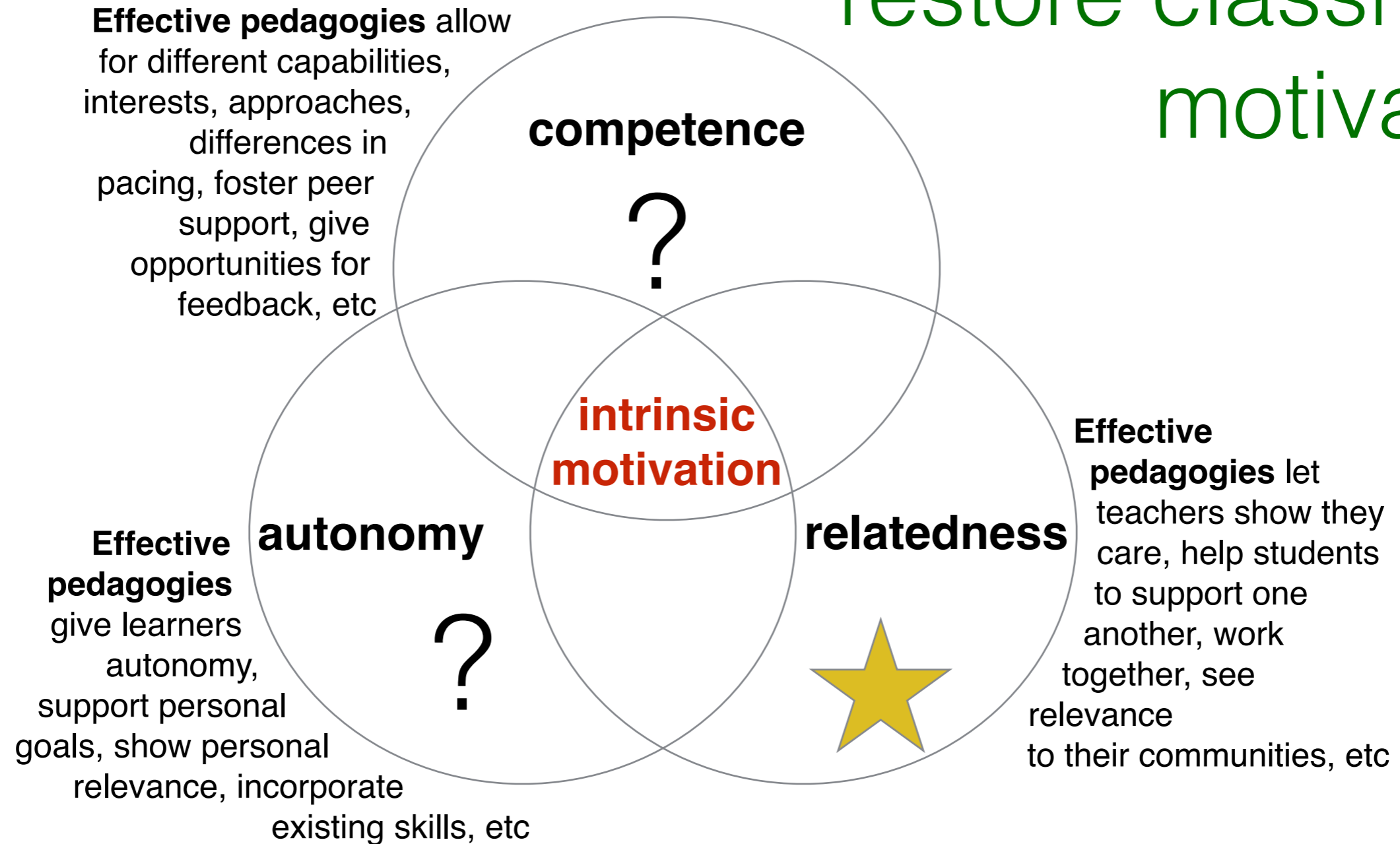
# Extrinsic motivation crowds out Intrinsic motivation.



**The reward, or avoidance of punishment, becomes the purpose (and *stays* that way)**



# Counter technologies to restore classroom motivation



<http://selfdeterminationtheory.org>



# In-person institutions (not just their teachers) teach





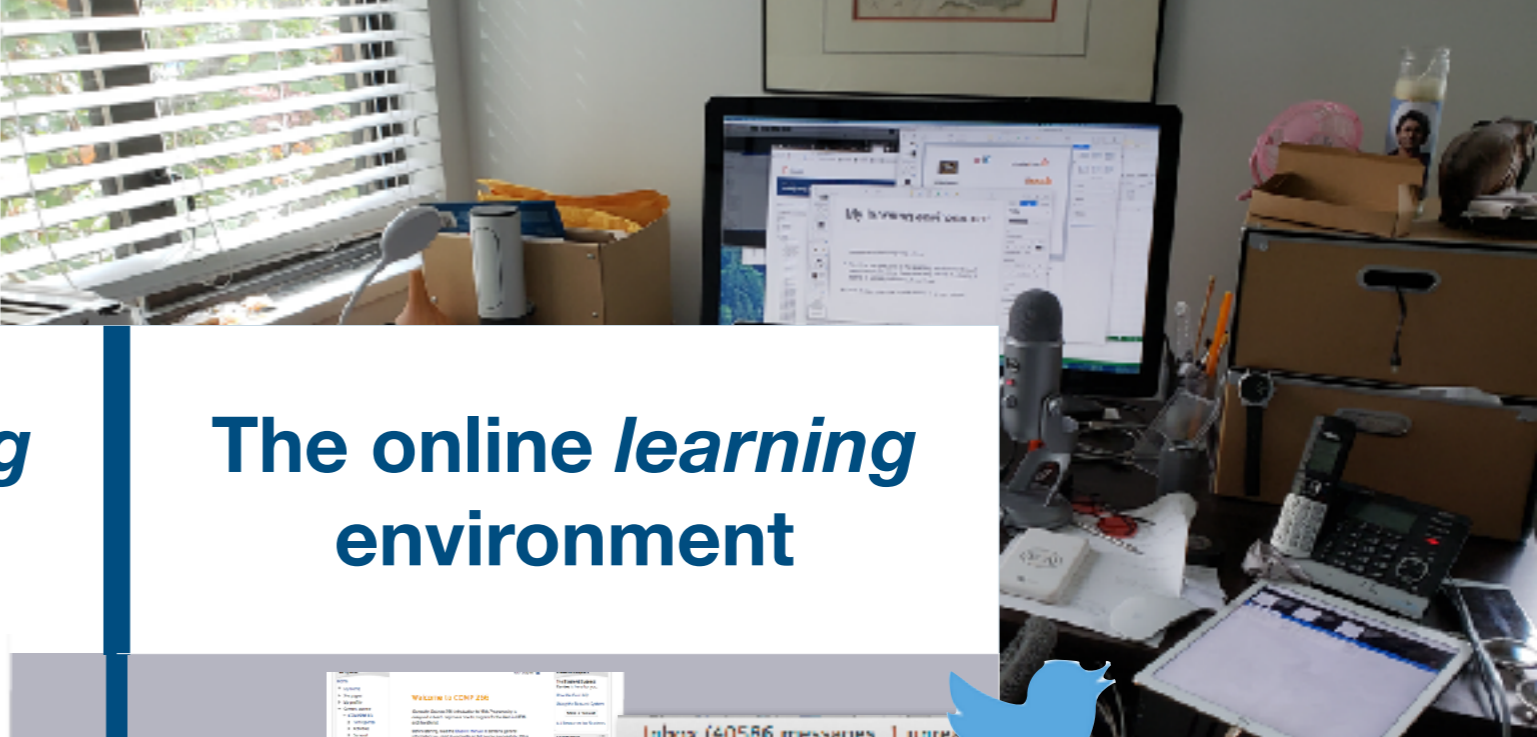


It's not the same online



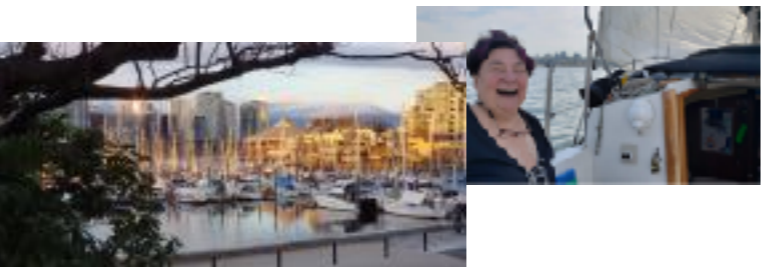
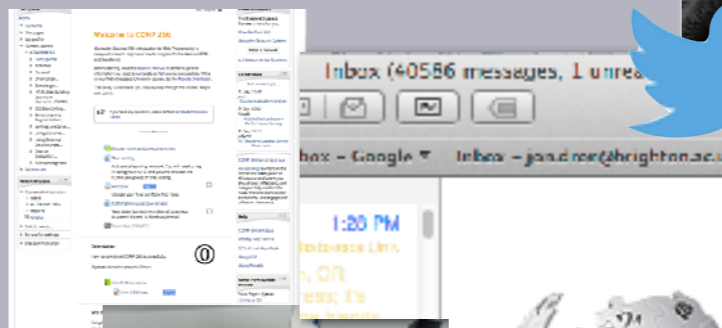
A virtual learning environment is not a learning environment

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



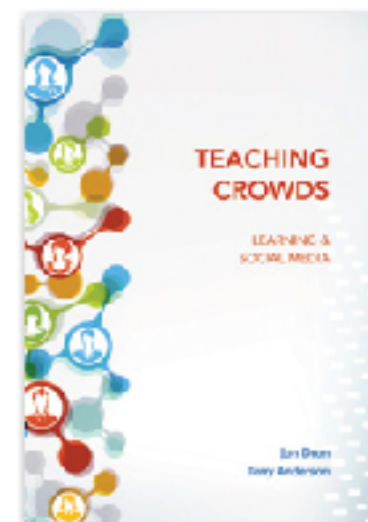
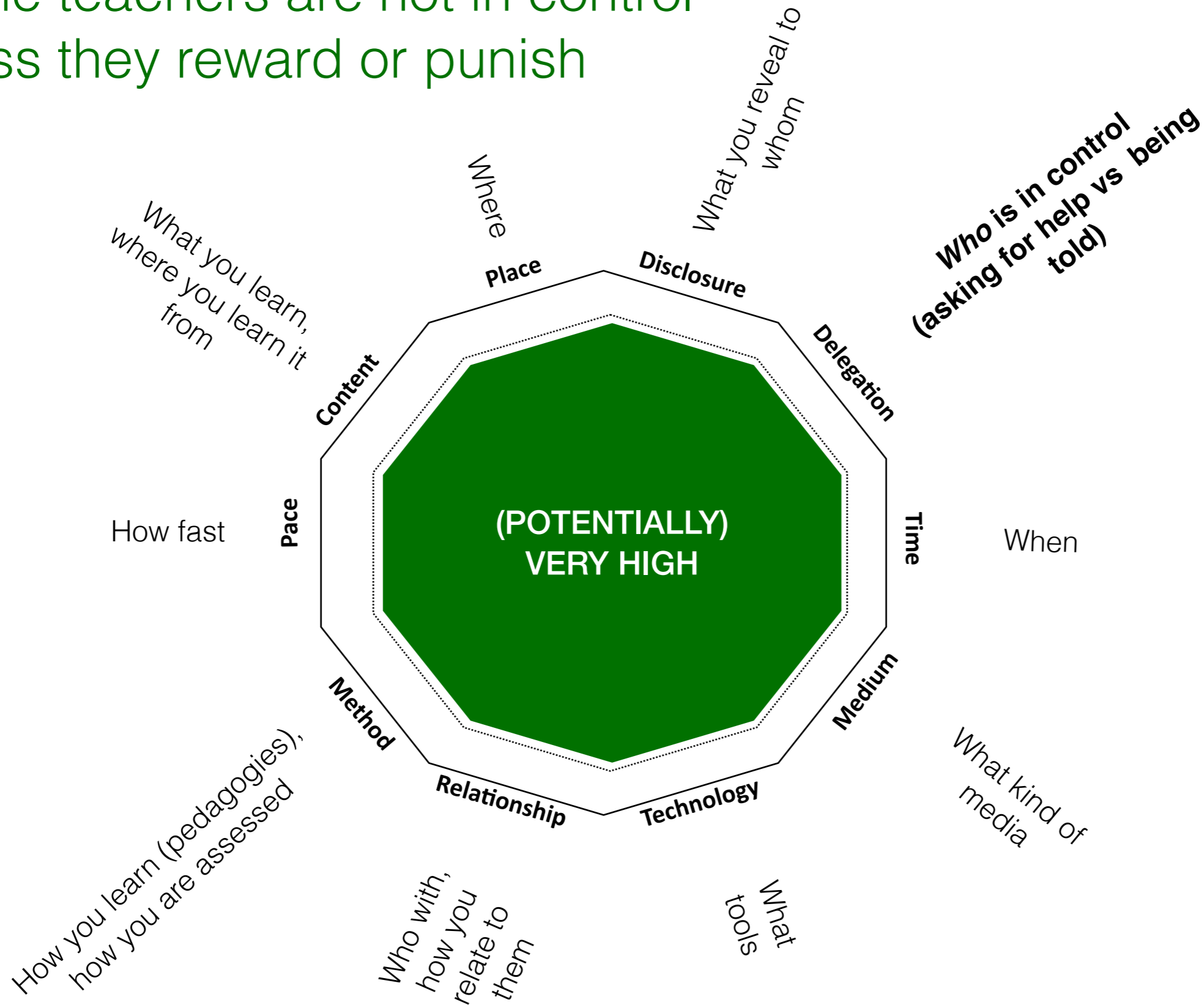
# The online *teaching* environment

# The online *learning* environment





# Online teachers are not in control unless they reward or punish





and yet...

Course categories

Undergraduate (66)

Graduate (2)

Winter 2015 (10)

Fall 2014 (12)

Individualized Study - Graduate Courses (3)

Spring 2014 (3)

Undergraduate - Archived Courses (29)

Graduate - Archived Courses

Spring 2012 (1)

Winter 2014 (10)

Fall 2013 (10)

Winter 2013 (12)

Spring 2013 (10)

Fall 2012 (11)



studentcentral

Home Community Online Library

Welcome, Jon

**Tools**

- Calendar
- User Directory
- Student email
- Staff email
- Tasks
- Address Book
- Personal settings
- MIS Office Viewers

**Life Support**

- Careers & Part-time jobs
- Childcare
- Computing, Libraries & Media
- Counselling
- Disability & Dyslexia
- Health & Wellbeing
- International Living here
- Money
- Partner Colleges
- Religious Life
- Restaurants, Cafes & Shops
- Rights & Responsibilities
- Safety & Security
- Sport Brighton
- Student Handbook

**My Study Areas**

Expand All

My Teaching

- CMIS Staff Area
- my course: MScIS - Masters in Information Systems
- my course: FdSc in eSystems Design & Technology
- my programme: Computing Undergraduate Programme
- my programme: FdSc Computing & HND Computing
- CBM05 - Reflective Uses of Information and Communication Technologies
- CI105 - Computing in Context
- CI106/161162 - Professional practice
- CI301 - The Individual Project
- CI302 - Informatics Individual Project
- CI307 - Adaptive Interactive Systems
- CI326 - Developments in Learning Technologies
- CI331 - Network Management
- CI333 - Web Mastery
- CS394/IS394 - The Individual Project
- CZ104 - Foundation for Professional practice
- CZ107 - Group Project
- CZ174 - Conduct of IT Projects
- CZ270 - Web Application Development

**My Announcements**

No new system announcements have been posted today.

Sport Brighton

- Cockcroft Sports Centre Holiday Closing Times

**News Flash**

- Exercise Tolerance Symposium
- Student E-mail Unavailable 3/4/07
- Costa Cafe Bar closed 7-8 March
- Community Downtime and Competition - Reminder
- Cockcroft Sports Centre Holiday Closing Times

**Clubs and Societies**

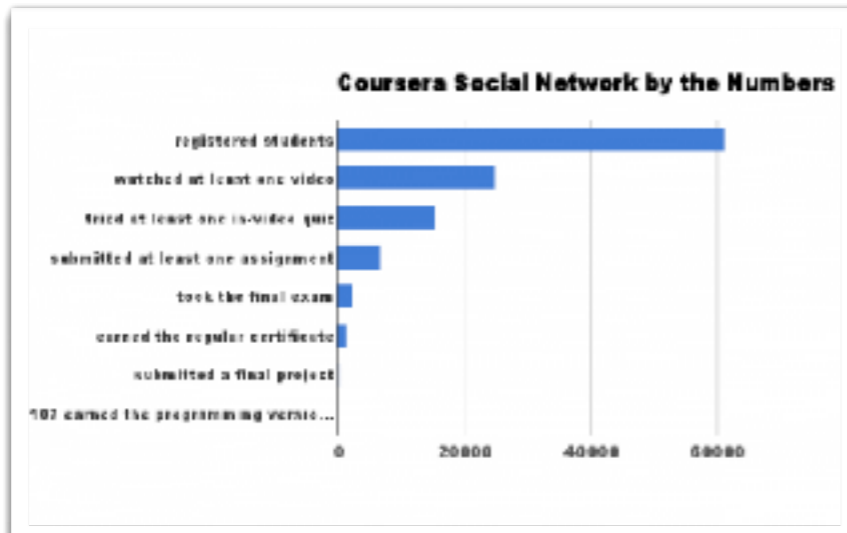
Organizations in which you are participating:

- Student Chat





# What happens when you take away the power of the teacher and keep the same controlling pedagogies?



<http://cogdogblog.com/2012/11/27/owning-massive/>

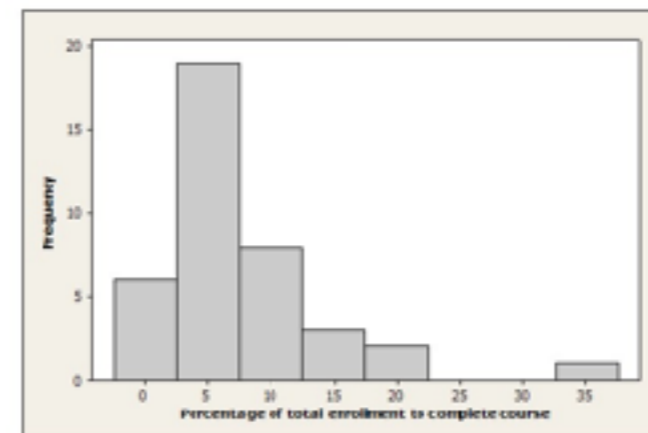


Figure 4. Histogram of completion rates for the sampled courses ( $n = 39$ ).

“Completion rates range from 0.9% to 36.1%, with a median value of 6.5%”

Katy Jordan, 2014: <http://www.irrodl.org/index.php/irrodl/article/view/1651/2774>

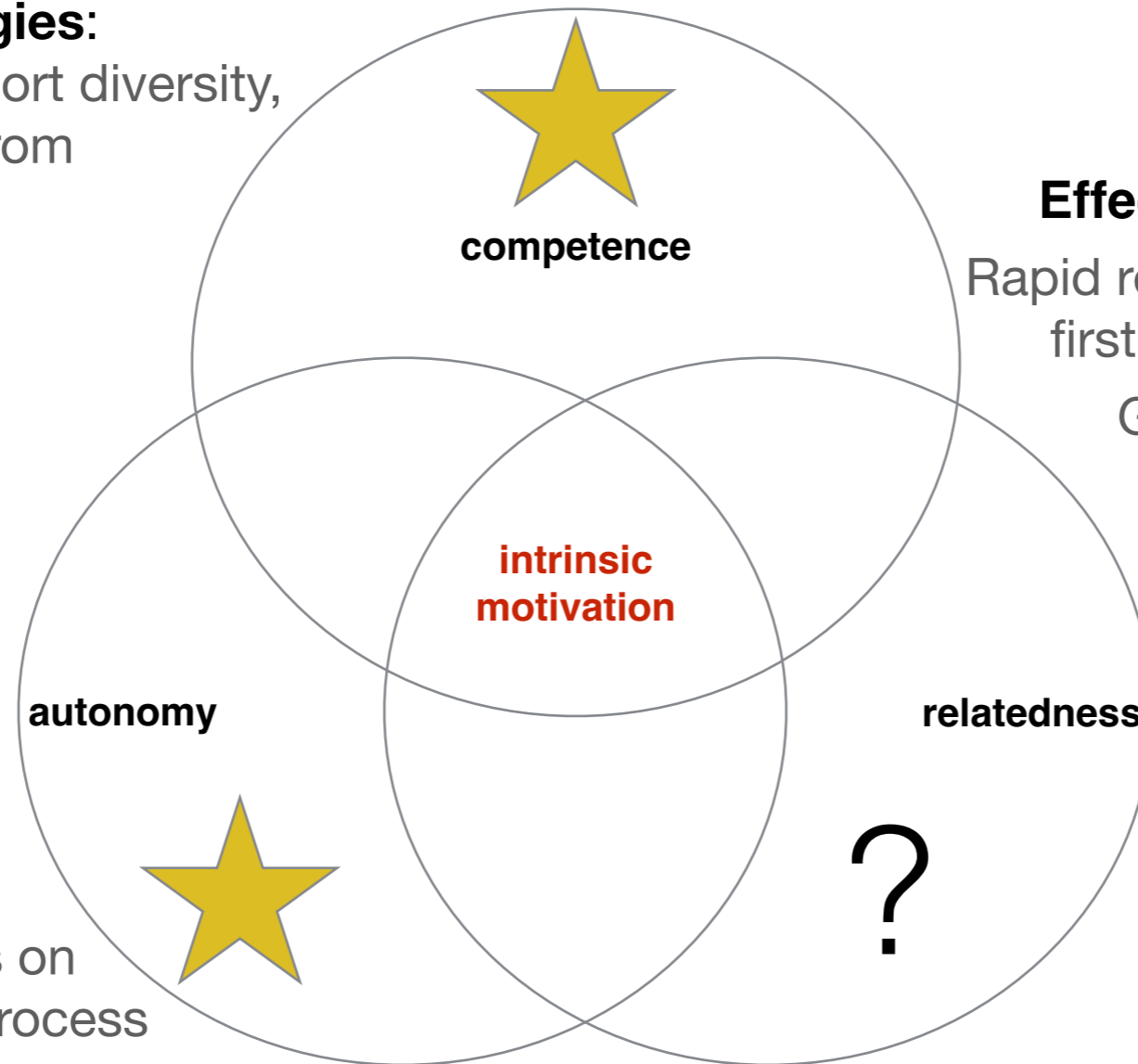
# Online motivation

## Effective pedagogies:

give choices, support diversity, curate resources from different sources

## Effective pedagogies:

let learners use their interests and environments, allow students to help define goals, respect diversity, focus on outcomes more than process



## Effective pedagogies:

Rapid response times (especially the first time)

Giving (time, attention, praise for work, responsibility)

Designs that valorize sharing

Designs that make observation easier

Shared activities

Online discussions

Trust building

Personal profiles

Active online presence

Proactive engagement





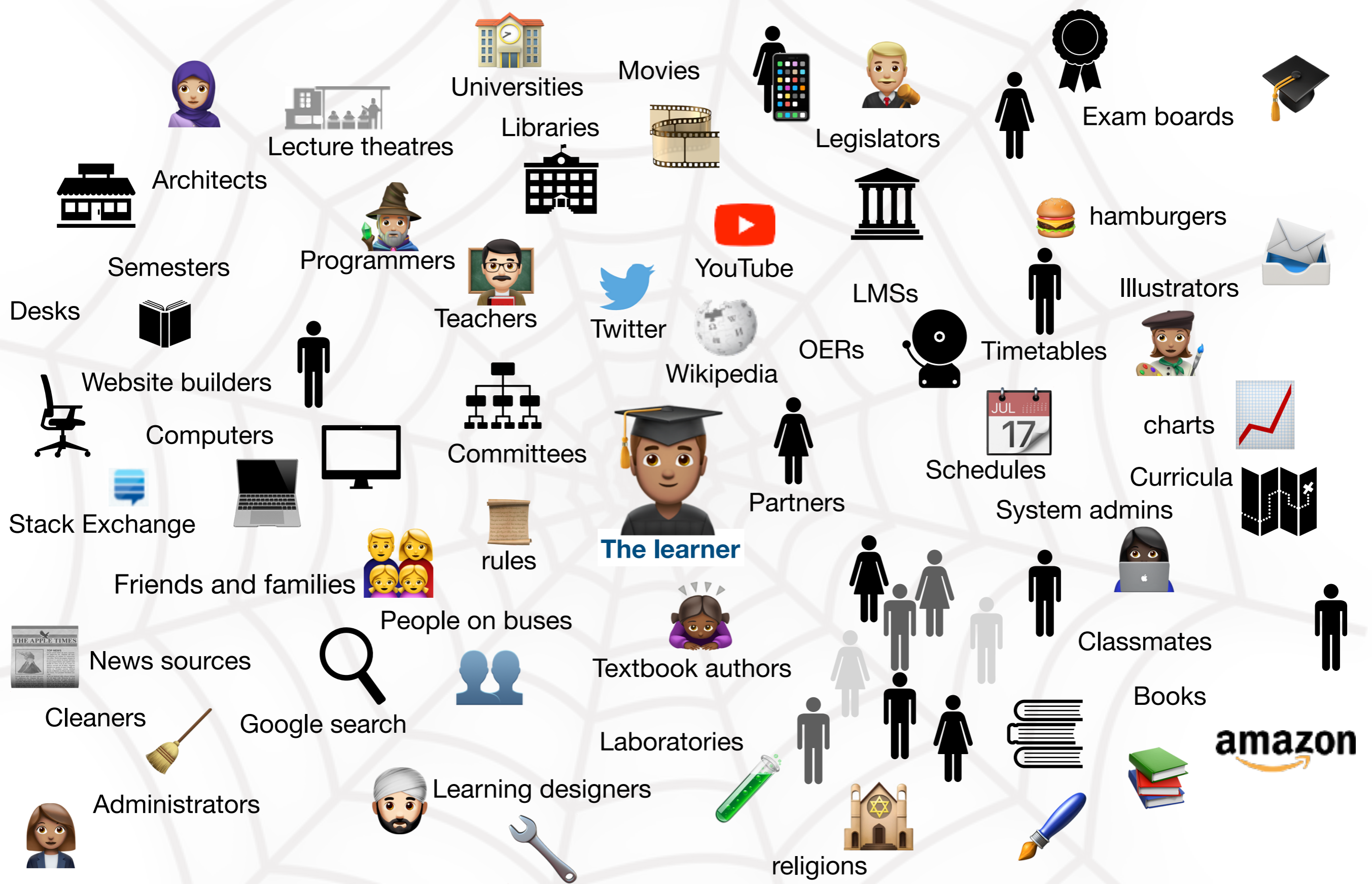
We don't just *participate* in learning technologies.

We co-participate.





# Understanding the distributed teacher





# Pedagogical patterns

## Controlling

## Liberating

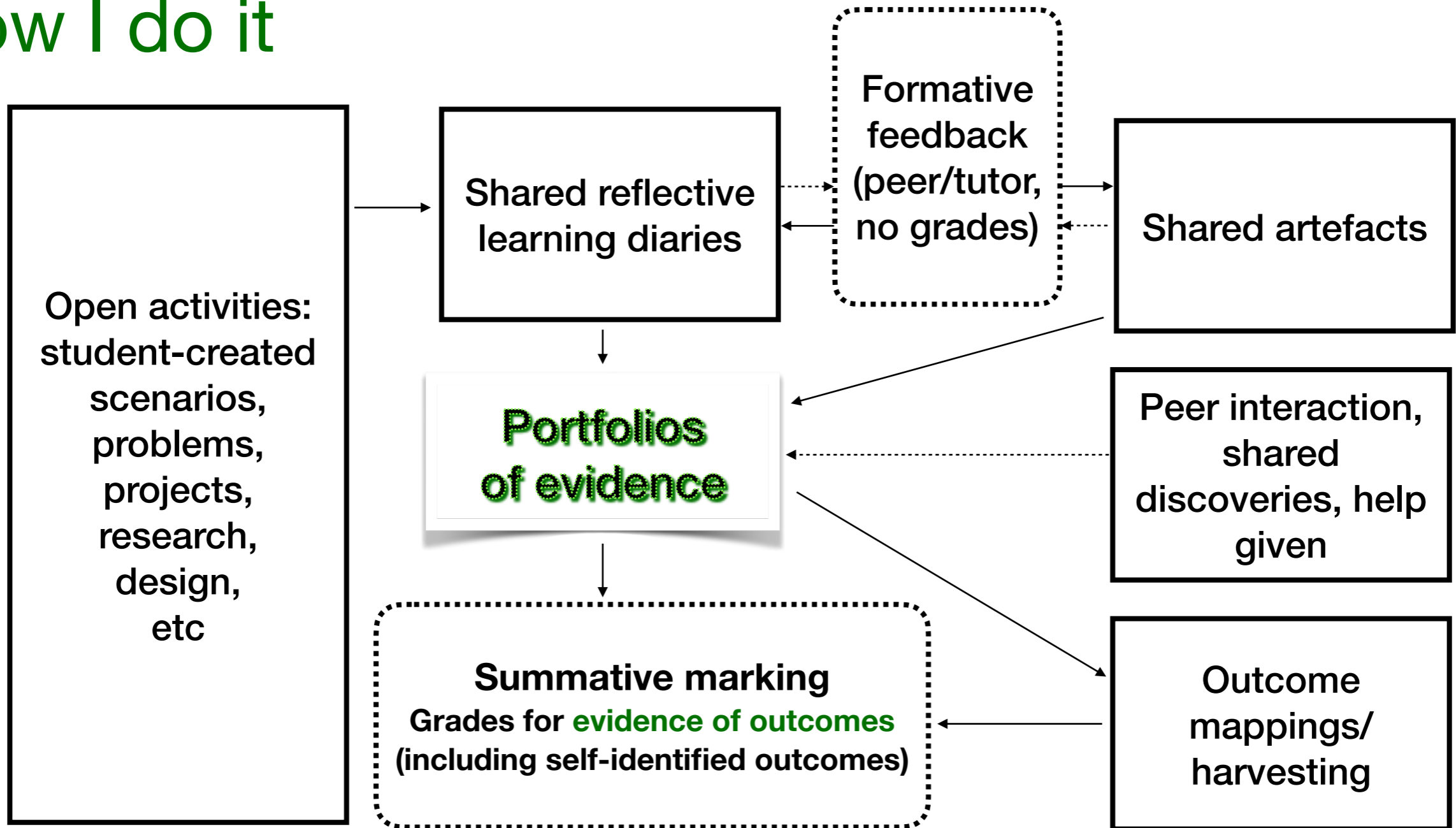
---

Creating content	→	Curating content
Telling, directing	→	Listening, observing
Fixed curriculum	→	Flexible paths
Timetables	→	Chunks, self-pacing
Rewarding, punishing	→	Supporting, caring
Leading, demanding	→	Role modelling, connecting
Collaboration	→	Cooperation
Fixed deadlines	→	Negotiable deadlines
Teacher-dictated challenges	→	Personal challenges
Fixed outcomes	→	Negotiable outcomes
Assignments and tests	→	Portfolios, problems, and projects
Assessing whether outcomes are met	→	Assessing evidence of learning

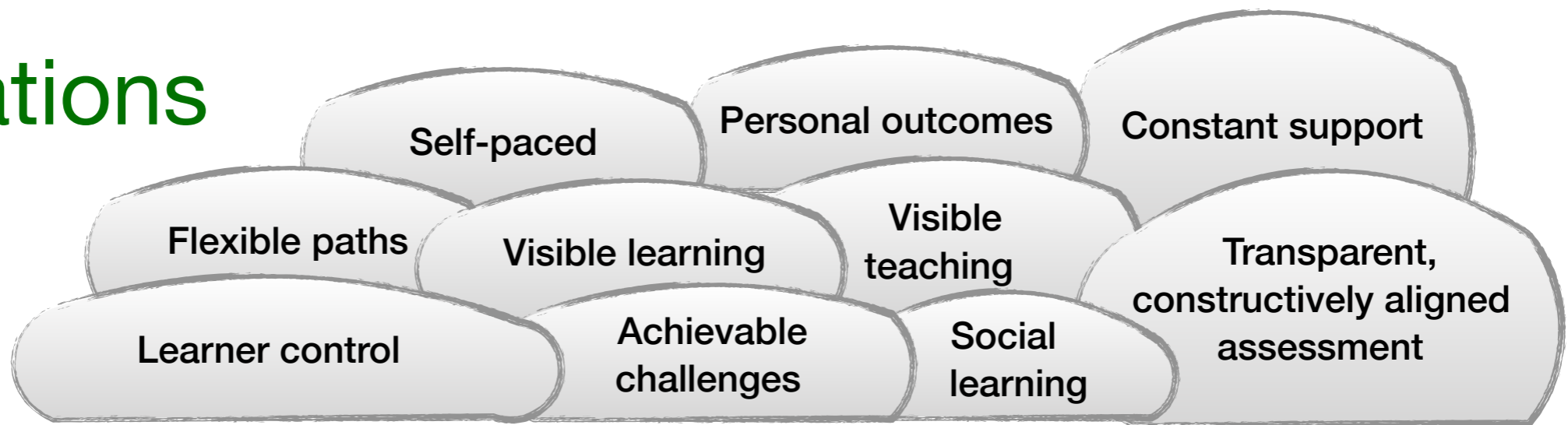
The easiest path in-person

The easiest path online

# How I do it

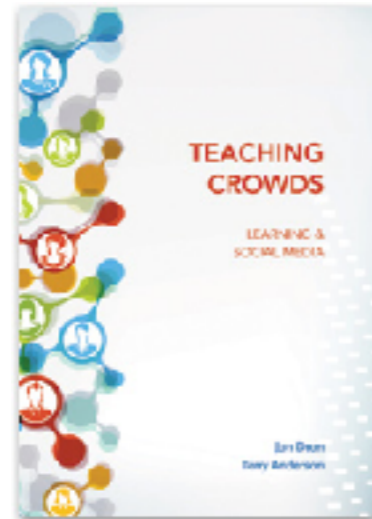
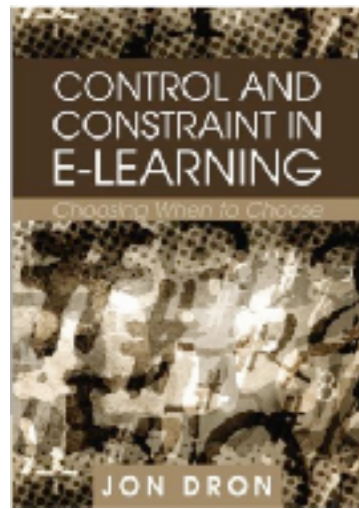


# Foundations





# Thank you



**Coming Spring 2023:  
How Education Works:  
Teaching, Technology, and  
Technique (AU Press)**



[jond@athabascau.ca](mailto:jond@athabascau.ca)



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



<https://jondron.ca/>

