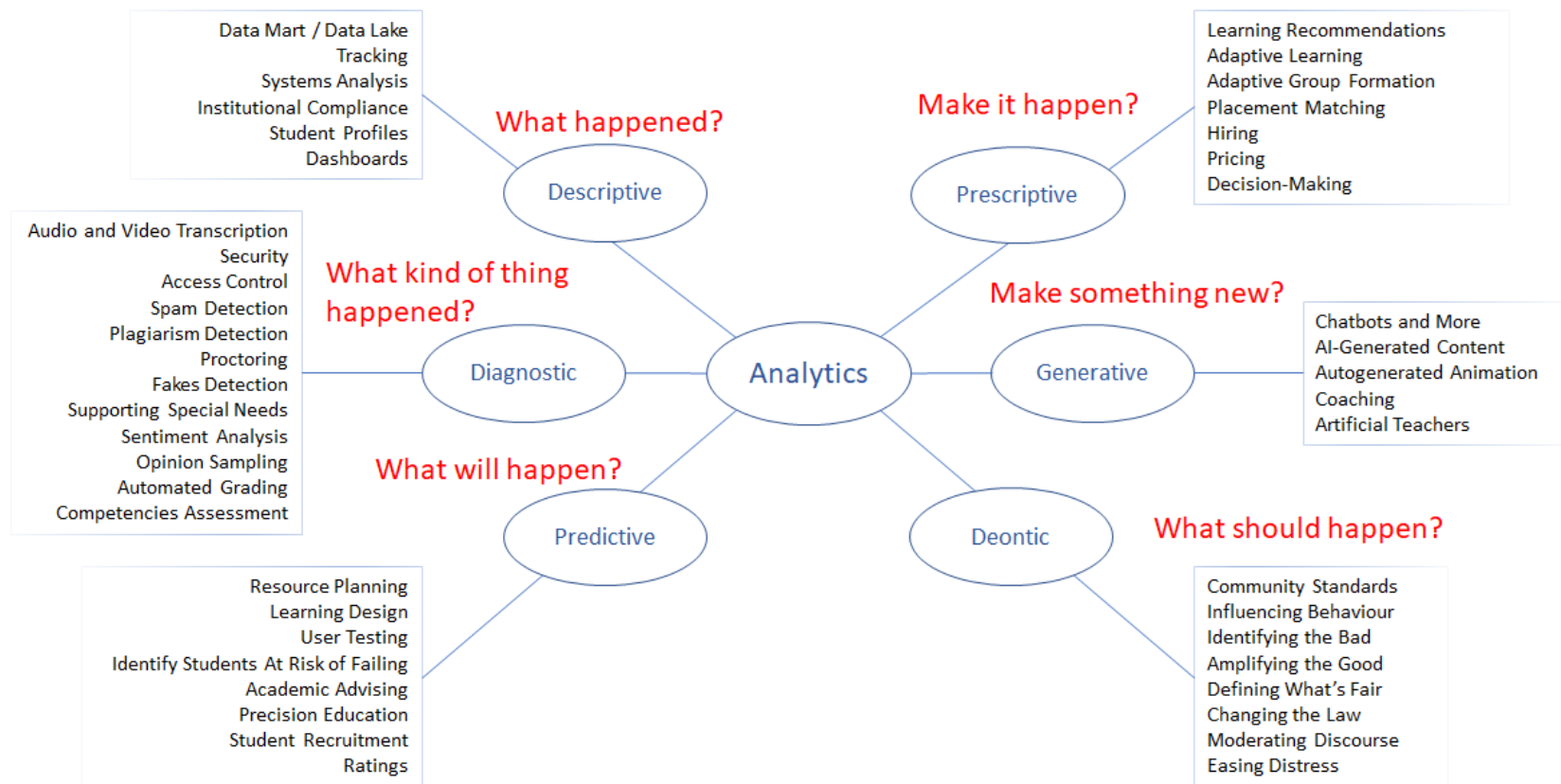


Promises I Made in the Abstract

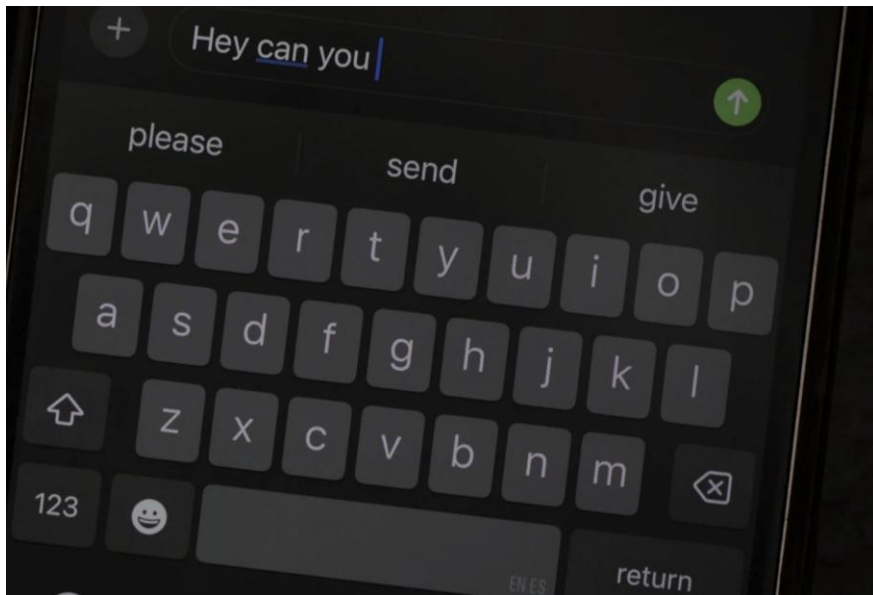
- Outline some recent advances in artificial intelligence, highlighting in particular their potential to impact open education, both positively and negatively.
 - This means far more than online instruction and adaptive learning.
 - It means more than open content and automated assessment.
- Focus on how AI is shaping and will transform how we understand ourselves as interactive, purpose-based and open learning communities.
- Offer a framework based on agency and care to work with the new technology to support genuinely emancipatory open learning for everyone.

Applications of AI - A Taxonomy

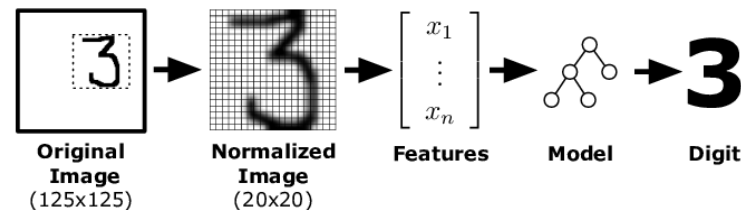


Advances in Artificial Intelligence

Large Language Models



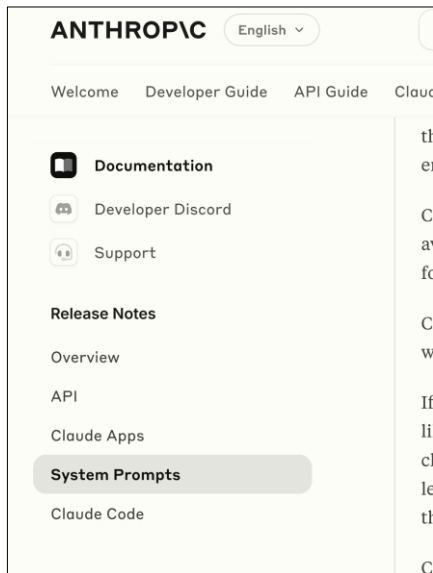
- [The completion Game](#) 21
- [Which of these Things Does Not Belong](#)
- [What number is this?](#)
- [Duck-Rabbit / Gestalt](#)



See Carl T. Bergstrom, Jevin D. West. 2025. Autocomplete in Overdrive. <https://thebullshitmachines.com/lesson-1-autocomplete-in-overdrive/>

Advances in Artificial Intelligence

System Prompts



Eg. For Claude

<https://docs.anthropic.com/en/release-notes/system-prompts#may-22th-2025>

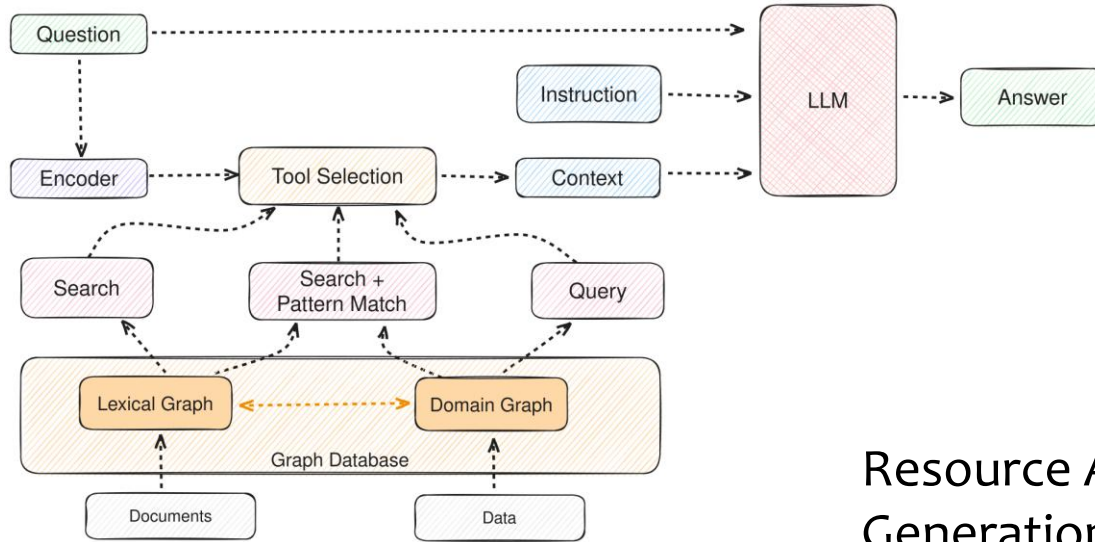
Eg. For ChatGPT

<https://chatgpt.com/share/67870f6a-39c0-8006-920c-5b695fc0b01b>

See Carl T. Bergstrom, Jevin D. West. 2025. Autocomplete in Overdrive. <https://thebullshitmachines.com/lesson-1-autocomplete-in-overdrive/>

Advances in Artificial Intelligence

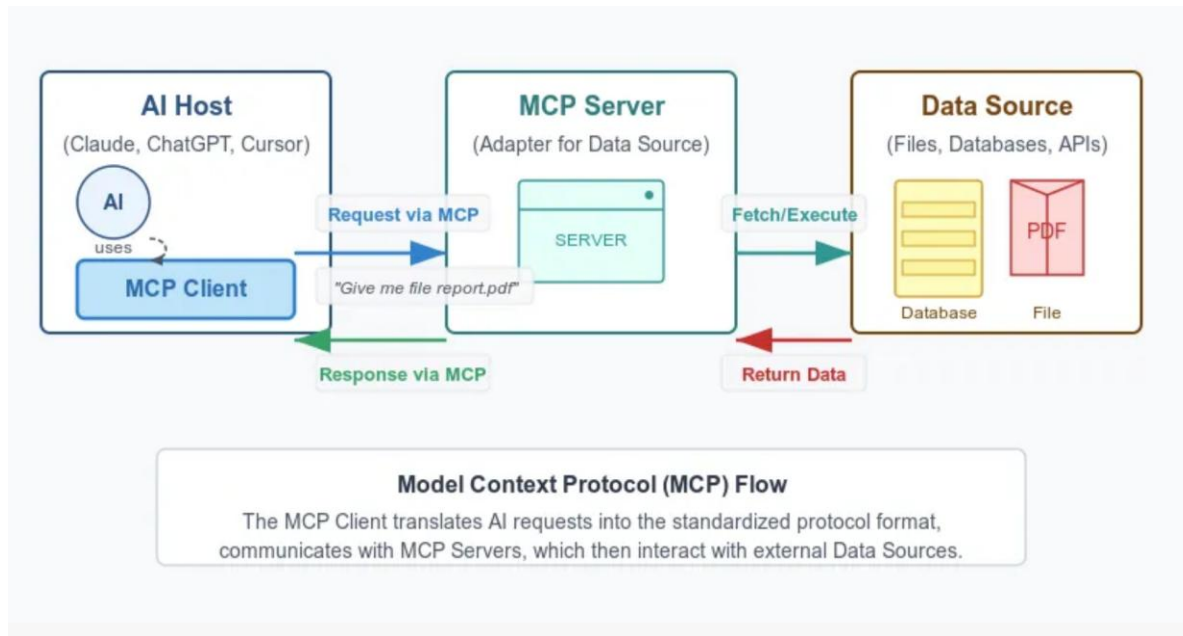
RAG, MCP, A2A



Resource Augmented
Generation

Advances in Artificial Intelligence

RAG, MCP, A2A



Model Context Protocol

Anthropic. 2024. Introducing the Model Context Protocol. <https://www.anthropic.com/news/model-context-protocol>

Advances in Artificial Intelligence

Veo

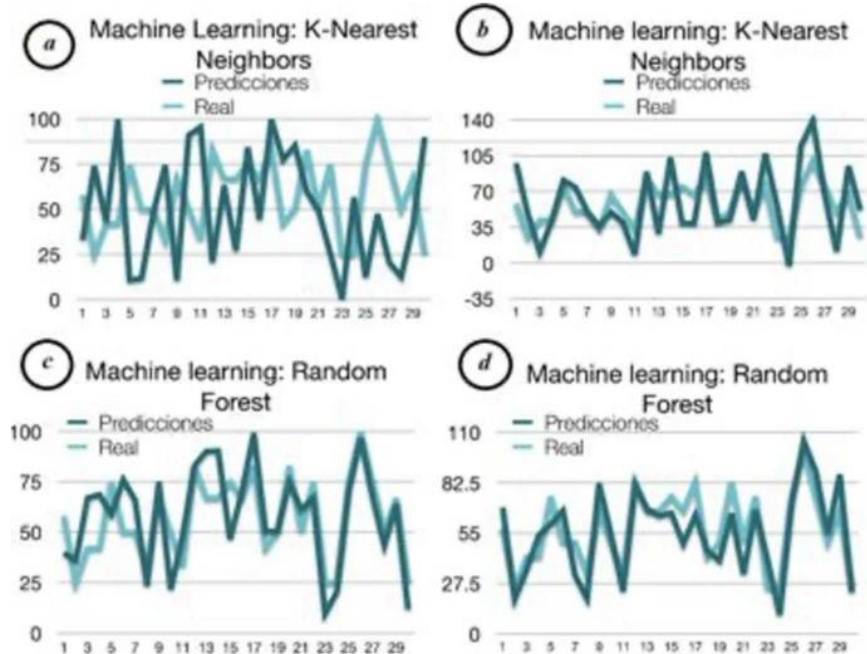


Google. 2025. Veo 3 in Gemini is now in the UK. <https://www.youtube.com/watch?v=ecTqFLS-9mg>

Advances in Artificial Intelligence

more than online instruction
and adaptive learning

more than open content and
automated assessment



How We Understand Ourselves

We Are Interactive

Human-AI Interaction (HAX)

- Collaborative decision-making, virtual assistants, personalized recommendation

Human-AI-teaming (HAT): Redefining collaboration in the digital era

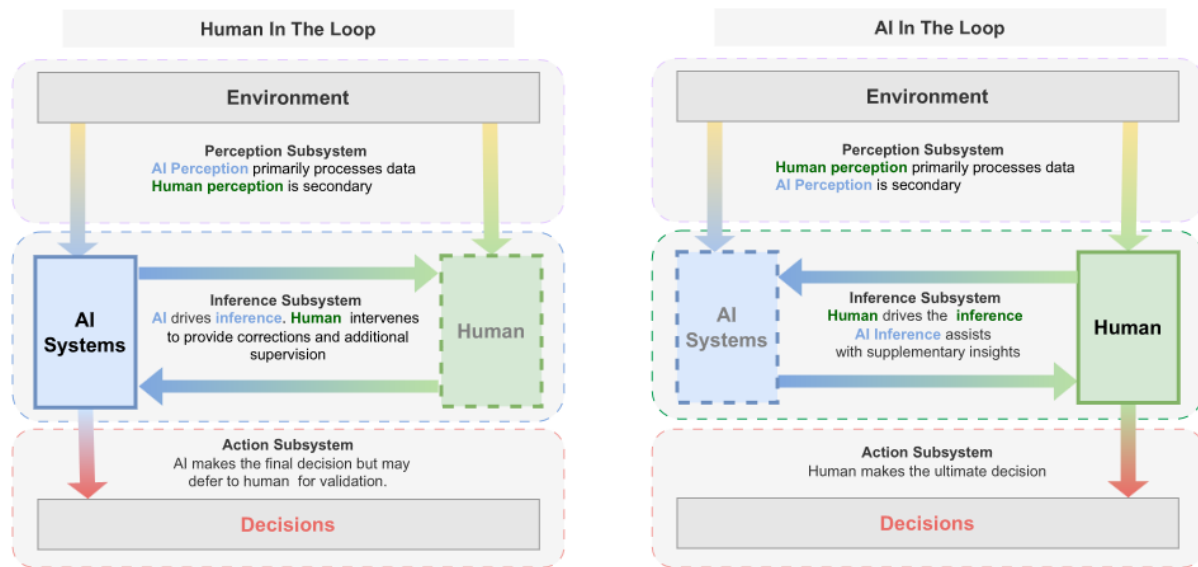
- Emergent states, trust, shared cognition

Interaction Design Foundation. 2025. Human-AI Interaction (HAX). <https://www.interaction-design.org/literature/topics/human-ai-interaction>

Jan B. Schmutz, Neal Outland, Sophie Kerstan, Eleni Georganta, Anna-Sophie Ulfert. 2024. AI-teaming: Redefining collaboration in the digital era. Current Opinion in Psychology, Volume 58, 2024. <https://www.sciencedirect.com/science/article/pii/S2352250X24000502>

How We Understand Ourselves

Decision-Making Processes



How We Understand Ourselves

Using AI to Support Staff Diversity at Institution P

<https://www.downes.ca/presentation/582>

Recruitment	Job descriptions, openings, application data, requirements
	Match role to credentials and experience required
	How long it takes to fill, likely quality of applicants
	Assess and pre-screen incoming applications
	Match openings with potential applications and invite
	Create job profiles, define screening criteria

Recruit

Onboarding	New staff, credentials, role descriptions
	Match with special interest groups, teams
	Project length of employment, career path
	Recommend training materials, forms, policies, goals
	Create personal welcome, list of contacts, expectations
	Define new onboarding practices

Connect

Registration	List of registration data collected, transcript data, counts
	Application success rates, registrar demographics
	How many next year, where from, success rate
	How to improve success rate, change demographics
	Create new registration forms
	Redefine acceptance logic, recommend target groups

Enrol

Course Materials	Count words, word frequencies, how many reads, updates
	Classify, identify topics, extract keywords, rate quality
	Assess readability
	Content recommendations, learning path planning
	Create novel content, images, videos, custom content
	Define what content is needed, best pedagogical method

Adapt

Testing	List of test questions, scores, grading curve
	Classification of responses, automated grading
	Projected success rate for a given assessment
	How to improve success rate, change demographics
	Create new tests, assessment rubrics
	Determine what should be assessed

Assess

Tracking	List of attendance, test scores, interaction frequency
	Identify areas of strengths, weaknesses, topic preferences
	Projected program success, projected discipline choice
	Learning path recommendations, career recommendations
	Create resumé or c.v., write letters of recommendation
	What career should this person choose?

Strengths

Digital Interaction	Track messages, contacts, message frequency & time
	Diagnose types of comments; filter harmful comments
	Predicted role in conversation, predicted areas of success
	Identify compatible discussion lists, correspondents
	Autogenerate comments, auto-summarize discussions
	Offer advice on improving social skills

Engage

User Experience	Keyboard logging, eye tracking, task success
	Identify areas of focus, identify disabilities
	Predicted responses to specific experience designs
	Identify optimal presentation styles, digital modalities
	Generate personal user interface design
	Recommend accessibility adaptations

Assist

Data Management	Data contents, types, source, associated metadata
	Classify data according to content, type, function
	Predict incoming data, requirements for data
	Recommend metadata profile, data requirements
	Generate test data
	Define metrics for data trustworthiness

Metrics

Enterprise Integration	List enterprise systems, transit protocols, logs
	Identify data format requirements, orchestration patterns
	Predict incoming requests, demand load
	Recommend external data services, sources of truth
	Generate requests for external services (agents)
	Define ideal network configuration for enterprise

Support

Performance Management	Key performance indicators, performance review data
	Identify areas of strength, weakness
	Project future performance path, issues, staffing needs
	Suggest performance indicators, recommend tasks
	Generate performance assessments, formative training
	Define performance metrics, relevant goals

Recommend

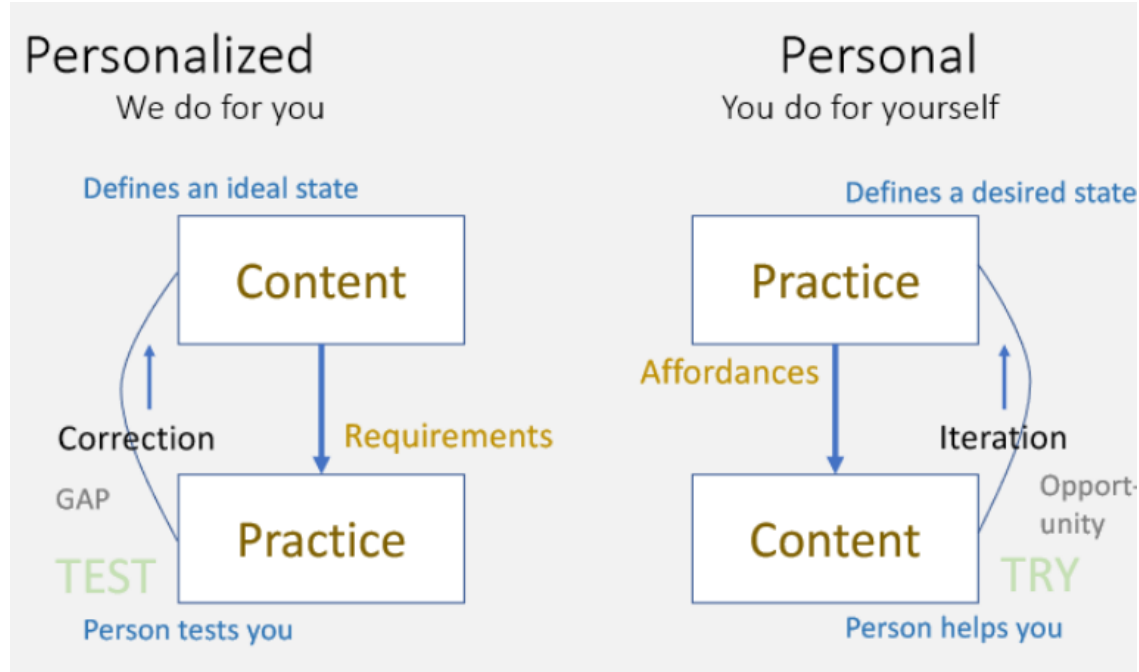
Compensation	Compensation grid, employment data, time or task records
	Rate performance (by results, consistency, etc)
	Project future compensation rates, incentives needed
	Recommend compensation profile for past/future work
	Generate performance assessment reports
	Define new definition of value, create compensation grid

Compensate Fairly

How We Understand Ourselves

Purpose-Based

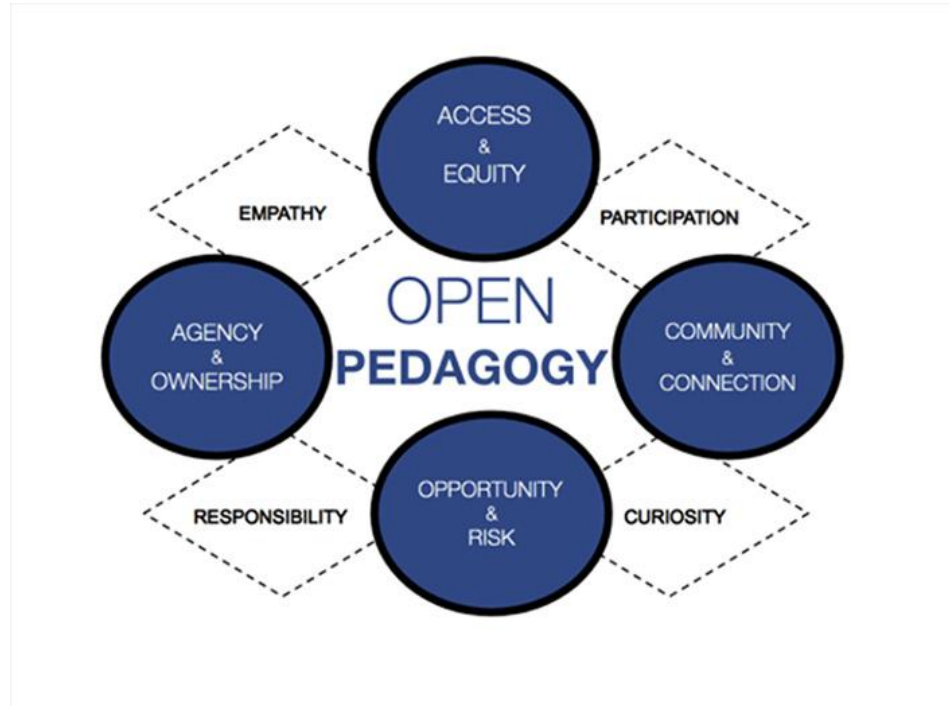
Goal-directed
learning vs
content-based



How We Understand Ourselves

Open Pedagogy

“Open pedagogy is a site of praxis, a place where theories about learning, teaching, technology, and social justice enter into a conversation with each other and inform the development of educational practices and structures.”



How We Understand Ourselves

Open learning
communities

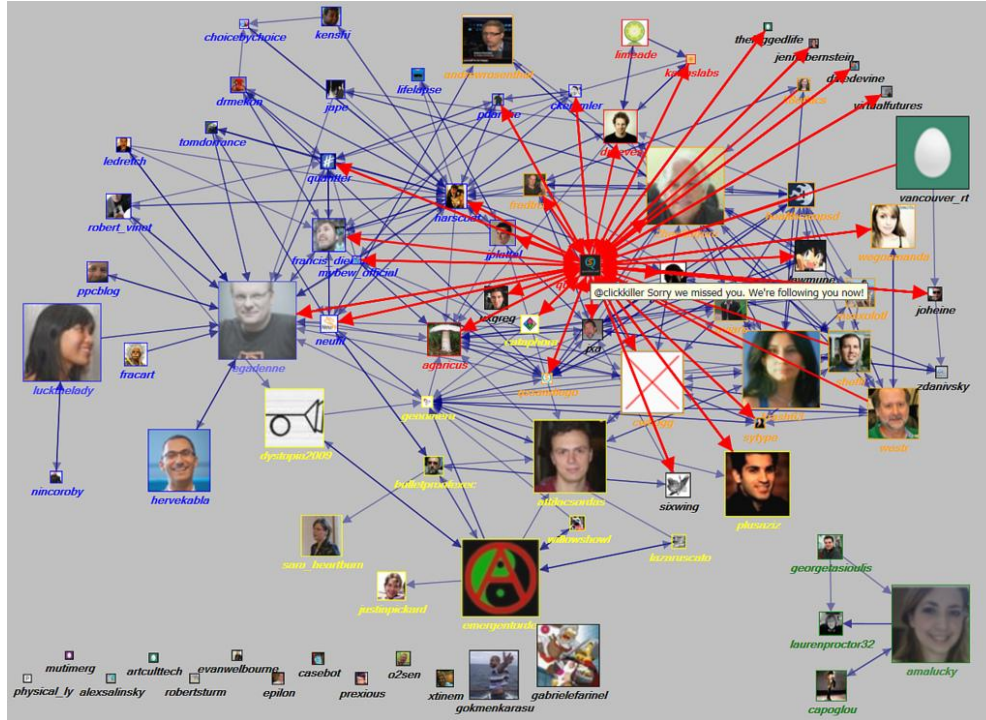
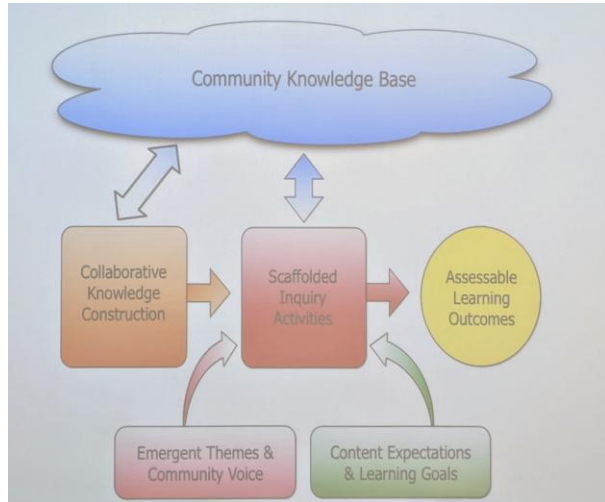


Image: Marc Smith https://www.flickr.com/photos/marc_smith/5373492204

How We Understand Ourselves

Learning communities

- Communities of learners / Communities that learn



Team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations. This is where the rubber meets the road; unless teams can learn, the organization cannot learn.

Peter M. Senge

The Fifth Discipline: The art and practice of the learning organization: Second edition (Century business)

How We Understand Ourselves

Distributed Cognition

“We need more than discursive critique—we need an epistemology capable of accounting for distributed cognition, relational emergence, and the hybrid co-construction of meaning. We need a vision of learning that acknowledges the classroom as a cognitive assemblage, where agency and thought are shared across human and nonhuman nodes. We need to reframe the role of the educator—not as a content manager, but as a relational steward, holding curricular purpose while sustaining epistemic openness and unpredictability.”

J. Owen Matson . 2025. What We (Don't) Talk About When We Talk About AI in Education: A Posthumanist Response to Audrey Watters. Intralation: Culture, Theory, Pedagogy, Jun 01, 2025. <https://intralation-culture-theory-posthuman-pedagogy.ghost.io/what-we-dont-talk-about-when-we-talk-about-ai-in-education-a-posthumanist-response-to-audrey-watters/>

Genuinely Emancipatory Open Learning

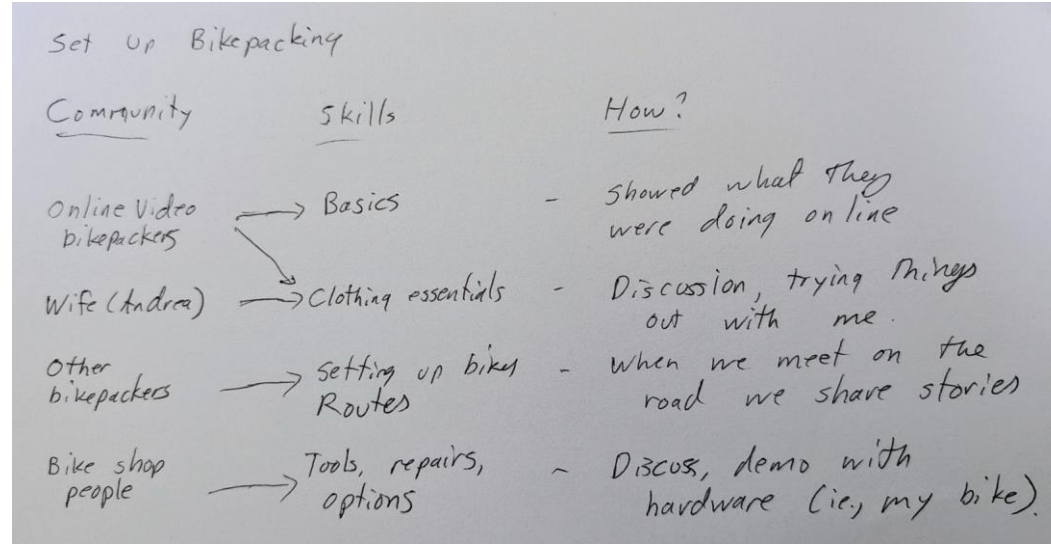
The Open Question

But what needs to be done to realize such a vision? The technology itself offers no guarantee, and critics have already pointed out the many ways AI-based learning technology can undermine, rather than extend, the needs and interests of many people and group

Genuinely Emancipatory Open Learning

Open Pedagogy

Bronwyn Hagerty



Nadia Abu-Zara workshop
Community Mobilization in Crisis - UOttawa

Genuinely Emancipatory Open Learning

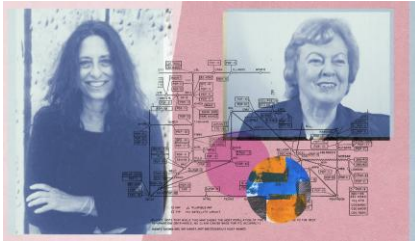
Agency



“Shared activity is distinguished from a mere aggregation of individual acts by a structure of appropriately related participatory intentions across different individuals.” - Abraham Sesshu Roth

Based on ‘What Peace Means to Me’ <https://www.downes.ca/post/68088>
<https://ethics.mooc.ca/cgi-bin/page.cgi?presentation=85>

Care



- Persons are understood to have varying degrees of dependence and interdependence on one another.
- Other individuals affected by the consequences of one's choices deserve consideration in proportion to their vulnerability.
- Situational details determine how to safeguard and promote the interests of those involved.

<https://ethics.mooc.ca/cgi-bin/page.cgi?presentation=47>

Genuinely Emancipatory Open Learning

A framework based on agency and care to work with the new technology to support open online learning community

	Agency	Care
Aggregate	Choose own sources	Evaluate sources, don't take for granted
Remix	Work in your own space	Ensure diversity of voices
Repurpose	Reframe to match your own experience	Create a point of view or perspective, check bias
Feed Forward	To your own communities	Positive contributions

Genuinely Emancipatory Open Learning

genuinely emancipatory open learning for everyone.

- Setting our own direction
- Owning our own data

Thank You

Stephen Downes

<https://www.downes.ca>

