



Open Learning, Open Networks
Online Learning in 2020

Stephen Downes
Numérique2020
November 3, 2020

<https://www.downes.ca/presentation/533>



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<https://bit.ly/34R00Qn>
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A Time of Challenges

- The usual: famine, war, etc., plus:
 - Climate Change <https://climate.nasa.gov/>
<https://www.fire.ca.gov/incidents/>
 - Democracy in crisis
<https://www.cnn.com/2020/10/02/world/freedom-house-covid-democracy-intl-hnk/index.html>
 - Poverty & Inequality
<http://www.oecd.org/social/inequality-and-poverty.htm>
 - Social Media
<http://www.npr.org/2016/11/08/500686320/did-social-media-ruin-election-2016> <https://shatteredmirror.ca/>
 - Pandemic
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
 - Economic Crisis
https://en.wikipedia.org/wiki/COVID-19_recession



Redbubble -
<https://www.redbubble.com/shop/four+horsemen+stickers>

Current Work

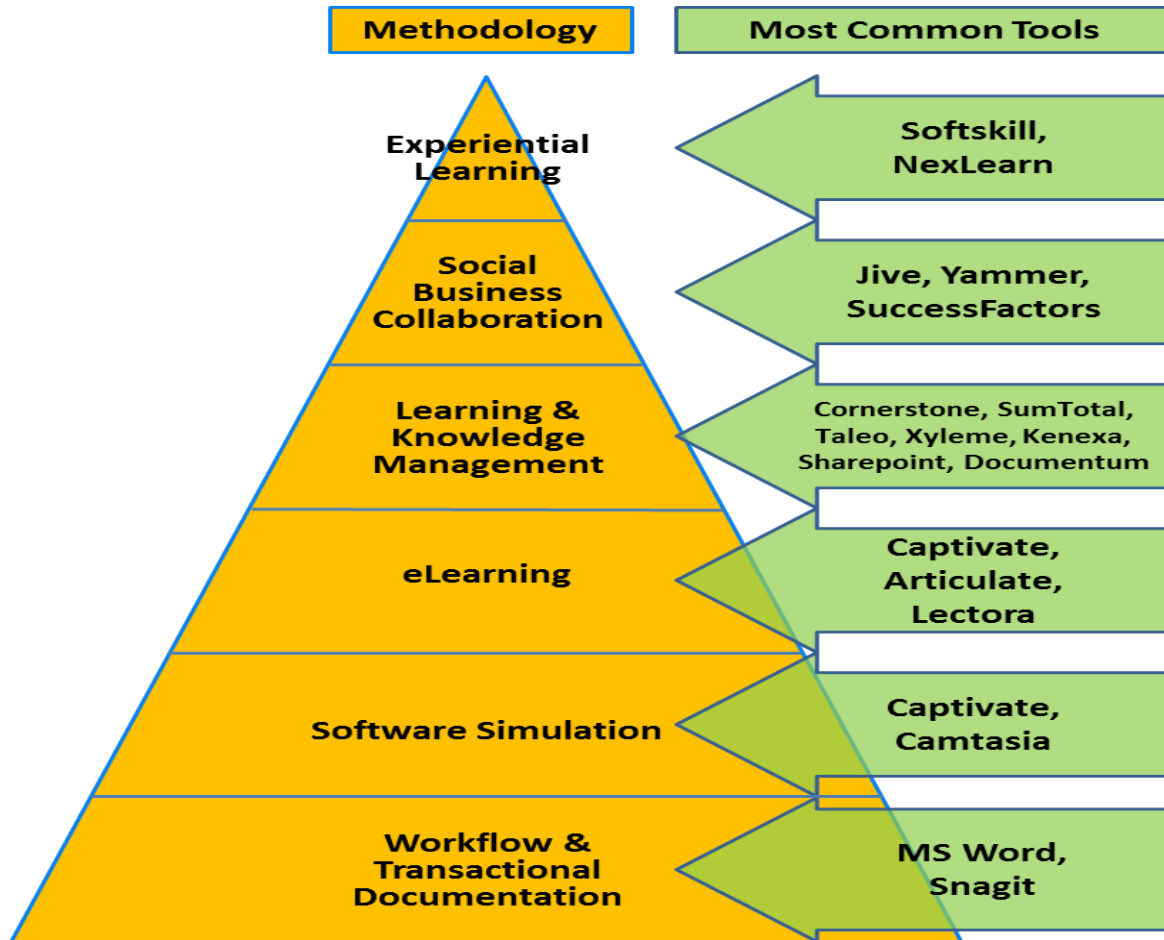
<https://www.downes.ca/now>

- Covid Response
- eXtended Reality Training for Transportation
Emergency And Management)
- Data Literacy
- Ethics, Analytics and the Duty of Care
- Personal Learning Environments

Covid Response

- Inside NRC:
 - Expanded VPN
 - Adopted Zoom Meetings
 - Set Up Slack for Quick Messaging
 - Longer Term: MS Teams
 - Issues to consider:
 - Cloud services
 - Security
 - Processes (eg., onboarding)
 - Long-term Impact

Covid Response



<http://epiloguesystems.com/about/>

Covid Response

- Quick Tech Guide:
 - <http://bit.ly/quicktechguide>
 - Constraints:
 - Needed to be web-based
 - Needed to be free/open access
 - Up Slack for Quick Messaging
 - Set up as Google Doc / Open editing
 - Also set up calendar service, which failed
 - Issues to consider:
 - Long-term Impact
 - Expansion to include pedagogy, subject-specific resources

Covid Response

- MOOCs

- True History of the MOOC

- <https://sites.google.com/site/themoocguide/home>

- cMOOC and xMOOC

- <http://www.tonybates.ca/2014/10/13/comparing-xmoocs-and-cmoocs-philosophy-and-practice/>

- Personal Learning

- <http://www.downes.ca/presentation/380>

Covid Response

- CovidEA:
 - International Science Council expert panel
 - <https://www.foggs.org/covidea/>
 - Constraints:
 - High-level discussion for policy-makers
 - Addresses what we need to learn, pedagogy, technology

Moving Forward

- Moving Forward
 - Competencies? Vs. Capabilities
<http://www.downes.ca/post/64879>
 - Badges? Vs. Evidence <https://openbadges.org/>
 - Classes Vs. Performance Support
<http://www.nrc-cnrc.gc.ca/eng/solutions/collaborative/lpss.html>
 - Microlearning? Vs. Spaced Learning - <https://www.td.org/Publications/Blogs/Science-of-Learning-Blog/2015/01/Spaced-Learning-an-Approach-to-Minimize-the-Forgetting-Curve>
 - Course Libraries? Vs. Subscription-based Learning - <http://www.downes.ca/news/OLDaily.htm>

Immersive Reality



- What is 'Immersive' – a VR helmet?
- Key element of immersion: belief
 - (authentic) applications that matter
 - social presence (cognitive presence, teaching presence) -
https://www.mnsu.edu/its/academic/isalt_social_presence_theory.pdf
 - multi-modality – cognitive + kinesthetic, etc. -
<https://www.slideshare.net/jtholden/the-learning-styles-revelation-research-from-cognitive-science>
- Games and Gamification?

eXtended Reality Training

- XR – eXtended Reality (or Augmented Reality)
 - Eg. HUD, QR codes
- VR – Virtual Reality
 - Platforms:
 - Unity - <https://unity.com/> - initially released for Mac OS X
 - Unreal - <https://www.unrealengine.com/en-US/> (Epic Games)
 - Headsets:
 - HTC Vive - <https://www.vive.com/ca/> (\$1.3K)
 - Hololens - <https://www.microsoft.com/en-us/hololens> (\$4.7K)
 - Oculus - <https://www.oculus.com/> (\$0.6K + Facebook account)

eXtended Reality Training

- for Transportation Emergency And Management



- Image: <https://hackernoon.com/vr-is-changing-the-energy-sector-here-is-how-ei1a325u>
- <https://www.gti.energy/training-events/emergency-response-virtual-reality-vr-training-module/>

eXtended Reality Training

- Being There: What Presence Means in a Digital World
 - <https://www.downes.ca/presentation/526>
 - Community of Inquiry (CoI)
 - Other types of presence (interface, learning, autonomy, agency, affective, competitive, immanent)
 - Creating presence
 - Presence and AI
 - The feeling of presence (what changes in the digital world are not the modalities of presence but how they're produced)

Data Literacy

- <http://bit.ly/downes-data-literacy>
 - Data Literacy Models:
 - Data stewardship
 - Science and research
 - Information literacy
 - Analytics and decision-making
 - Measurement Frameworks
 - Self-assessment vs objective assessment
 - Individual vs collective data literacy
 - Mapping literacy to values and benefits
 - Studies:
 - <https://dalspace.library.dal.ca/handle/10222/64578>
 - <https://www150.statcan.gc.ca/n1/pub/11-633-x/11-633-x2019003-eng.htm>

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Data Literacy

- Challenges to Learning Providers
 - Content Knowledge Vs. Literacies
 - Not just reading and writing...
 - <http://www.downes.ca/presentation/369>
 - Employment skills Vs. Education
 - Courses Vs. Performance Support
 - Authority Vs. the Wisdom of Crowds
 - Autonomy, Diversity, Openness, Interactivity
 - Social Proof? https://en.wikipedia.org/wiki/Social_proof
 - Credentials Vs. Learning Vs. Connections -
<http://er.educause.edu/articles/2015/3/credentialing-in-higher-education-current-challenges-and-innovative-trends>

Data Literacy

Literacies

Comprehension, understanding and communication

Skills
Abilities, habits, competencies

	Syntax	Semantics	Context	Use	Cognition	Change
Aggregate						
Remix						
Repurpose						
Feed Forward						

Values

Autonomy
Diversity
Openness
Interaction

Ethics, Analytics and the Duty of Care

- Open Recognition Networks
 - <https://www.downes.ca/presentation/532>
 - Competencies and stackable credentials
 - Badges and blockchain
 - A proliferation of certificates
 - How do we evaluate credentials
 - Forms of recognition
 - Peer recognition
 - Knowing as recognition
 - Recognition networks
 - Challenges in human activity recognition

Ethics, Analytics and the Duty of Care

- Committees and Councils
 - AIPCoP - eLearning and AI Working Group
 - GoC working group
 - <https://gccollab.ca/discussion/owner/84765>
 - Data Equity Working Group
 - Digital Technologies internal working group

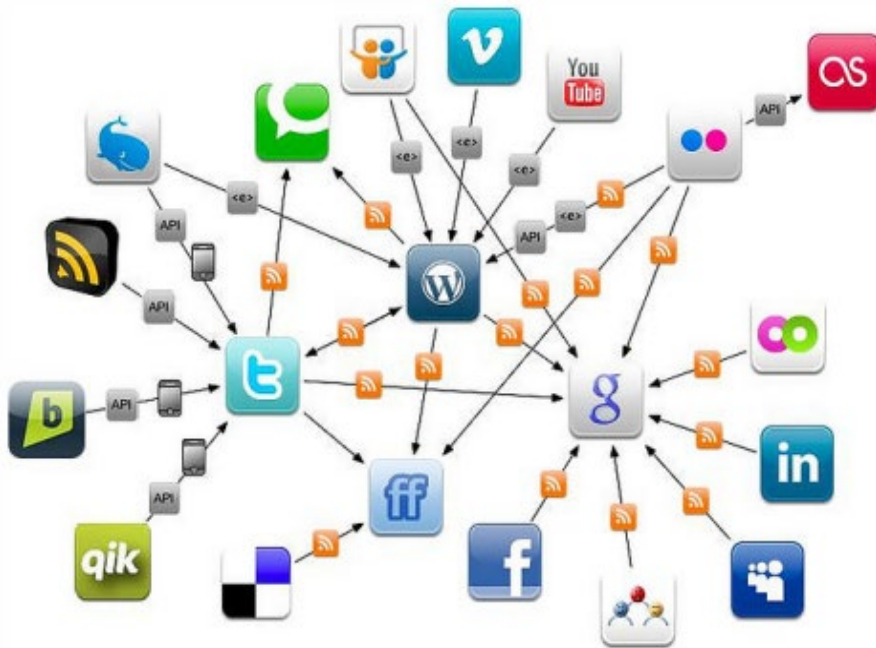
Ethics, Analytics and the Duty of Care

- <http://bit.ly/downes-ethics-analytics>
 - Applications of AI & Analytics
 - Ethical Issues and Controversies
 - Ethical Codes and Review Boards
 - The Duty of Care
 - The Decisions We Make in Analytics
 - Ethical Practices and Harmony

Personal Learning Environments

- E-Learning 3.0
 - <https://el30.mooc.ca>
 - Data – Graph – Cloud
 - Identity – Resources – Recognition
 - Experience – Community – Agency

Personal Learning Environments



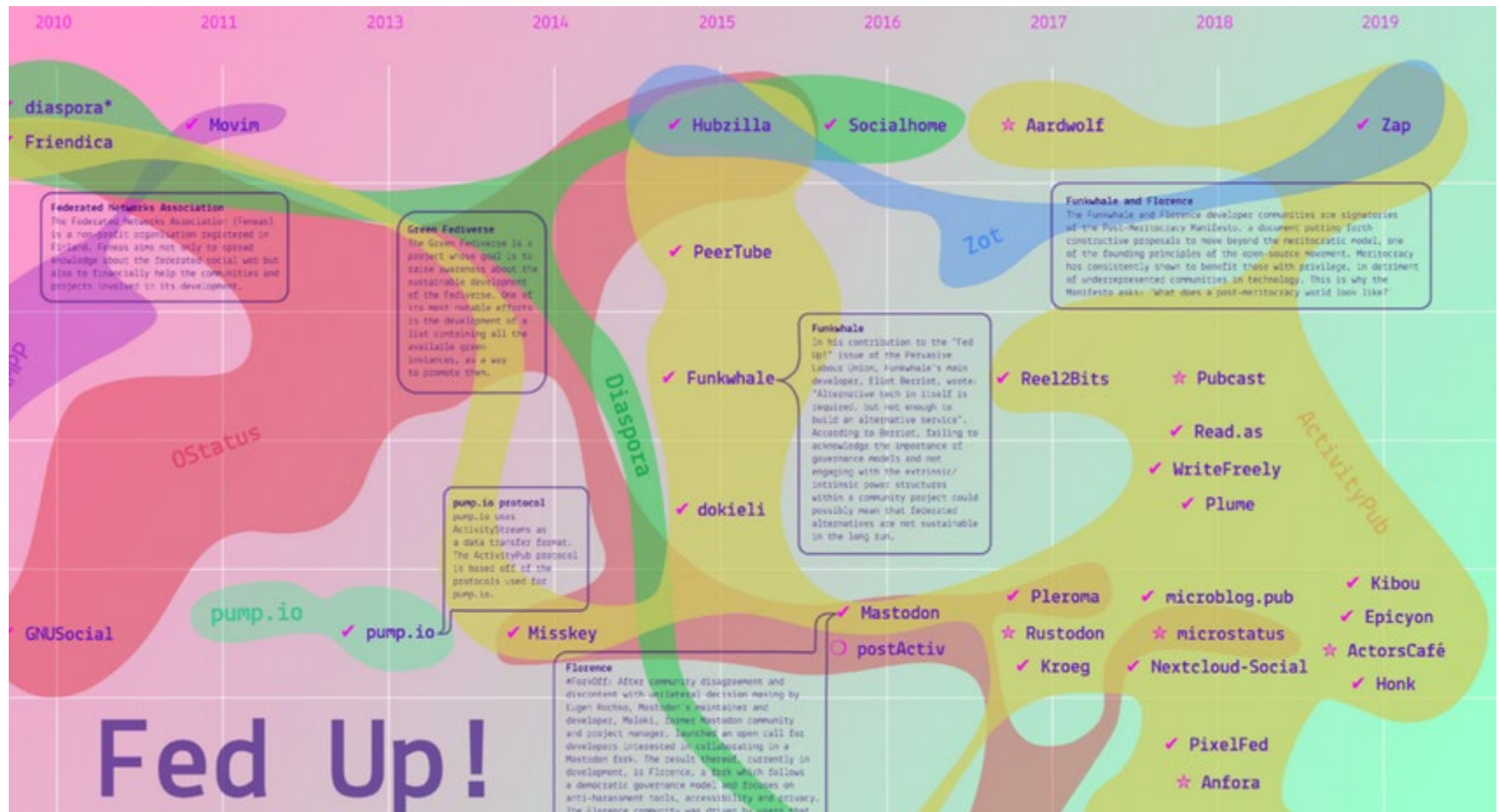
Anne Helmond, May 2009

Personal Learning Environments

- Distributed Social Networks

- Opera Unite - <http://mashable.com/2009/06/15/opera-unite/>
- Mozilla OS - <https://www.npmjs.com/package/fxos-web-server>
- Diaspora - <https://www.joindiaspora.com/>
- Solid - "social linked data" - <https://solid.mit.edu/>
- Keybase - <https://keybase.io/>
- InterPlanetary File System (IPFS) - <https://ipfs.io/>
- Mastodon / Fediverse - <https://mastodon.social/>

Personal Learning Environments



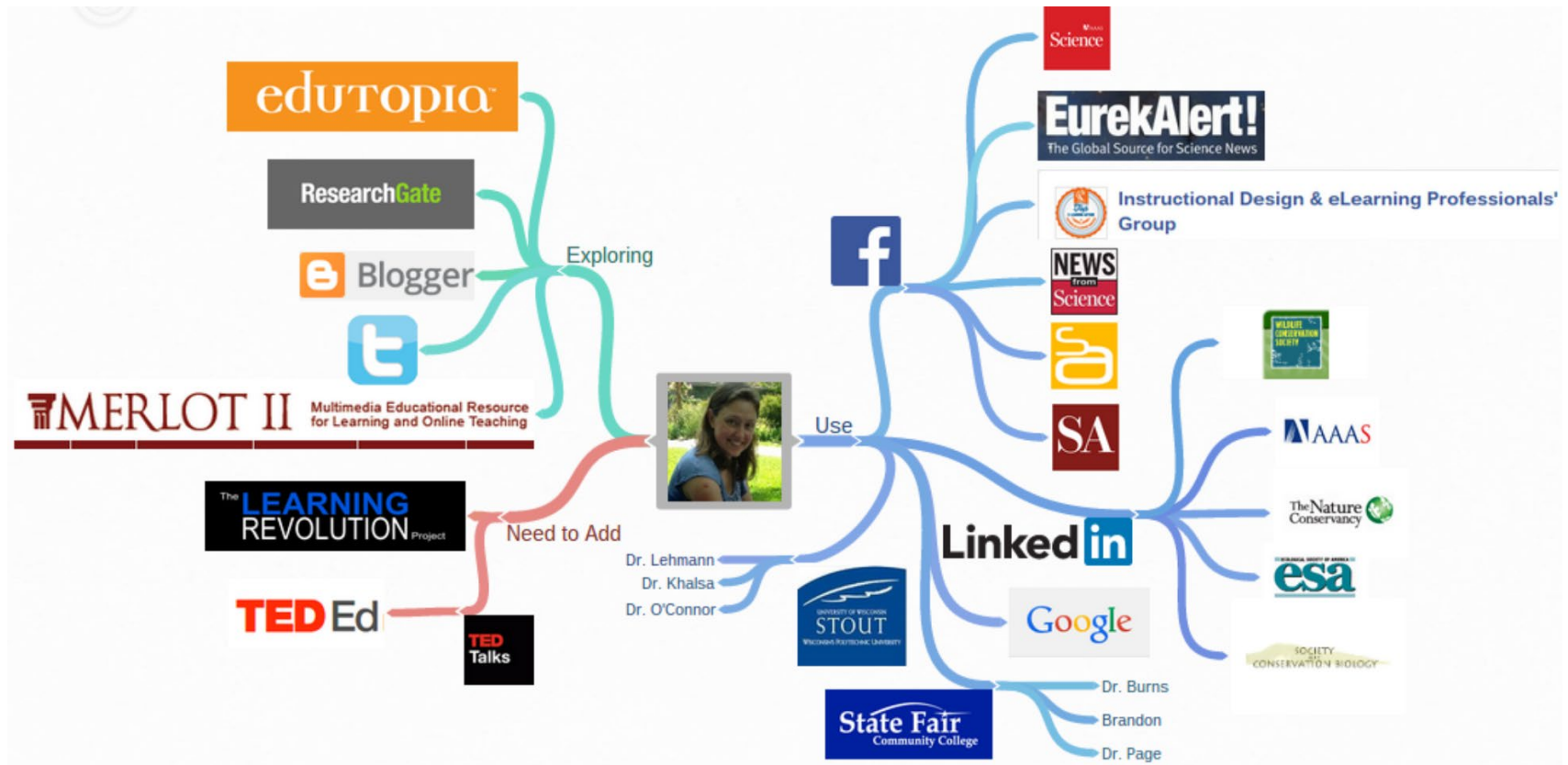
Personal Learning Environments

- gRSShopper in a Box
 - <https://grasshopper.downes.ca>

Personal Learning Environments

- Cloud Infrastructures
 - Environments: [VMWare Fusion](#), [VirtualBox](#)
 - Provisioners: [Docker](#), [Vagrant](#)
 - Configuration: Chef, Puppet
 - Providers: [AWS](#), [MS Server](#)
 - Services: [MS Cognitive](#), [Wolfram Alpha](#), [Segment](#)
 - Serverless CMS - <http://www.downes.ca/post/66459>

Personal Learning Environments



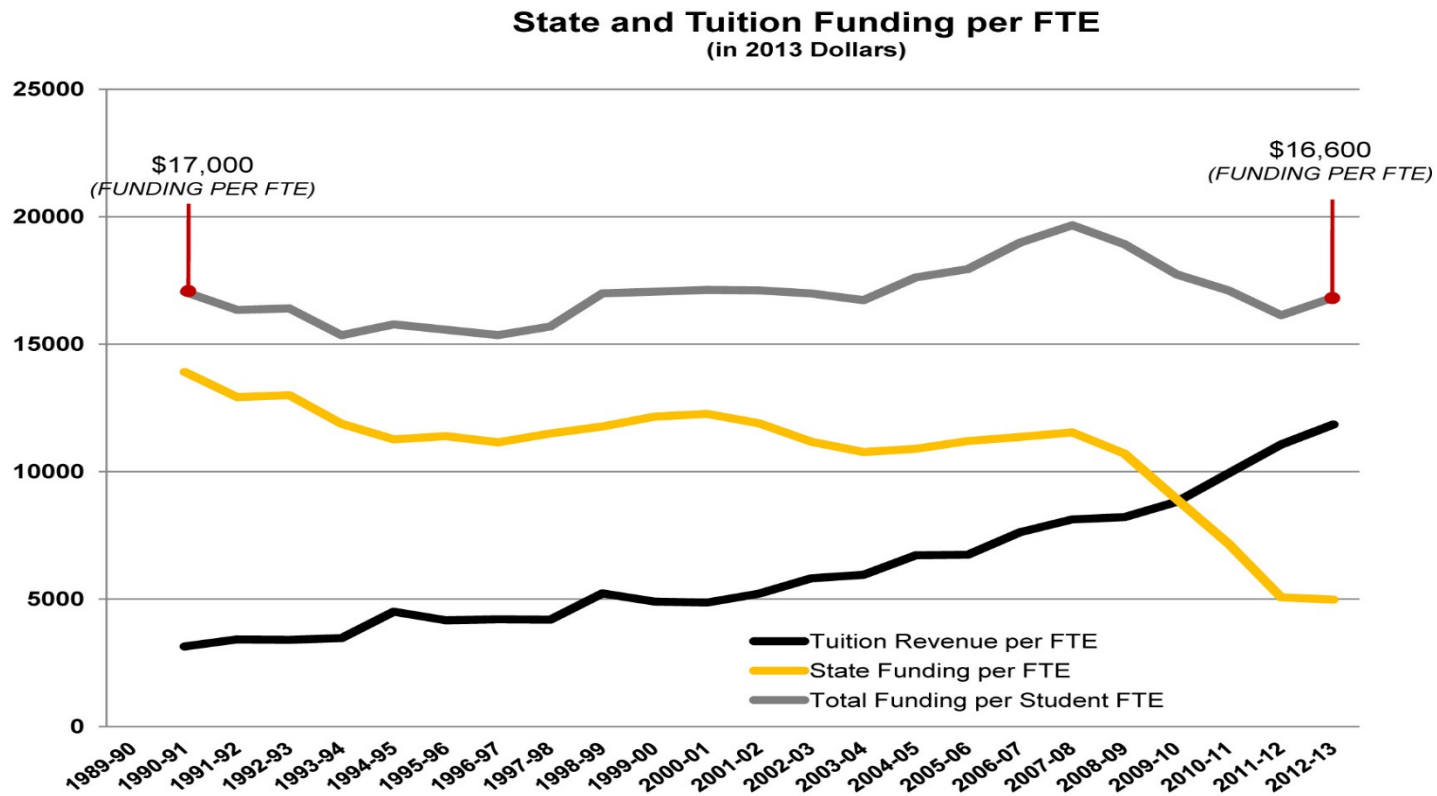
Heather Taft <http://taftportfolio.blogspot.com/p/personal-learning-environment-ple.html>

Personal Learning Environments

- Resource Repository Network (Aggregation)
 - http://ec.europa.eu/ipg/standards/markup/web-content-syndication/index_en.htm
- Personal Cloud – Dropbox, NextCloud, etc.
 - <https://nextcloud.com/>
- Personal Learning Record – Learning Record Store (xAPI)
 - <https://www.adlnet.gov/tla/>
- Personal Learning Assistant
 - like Siri? Alexa?
- Distributed Intelligence – MLaaS
 - <https://www.slideshare.net/KarlSeiler/mlaas-machine-learning-as-a-service>

Challenges to Educational Institutions

BURDEN SHIFTED TO STUDENTS AND FAMILIES

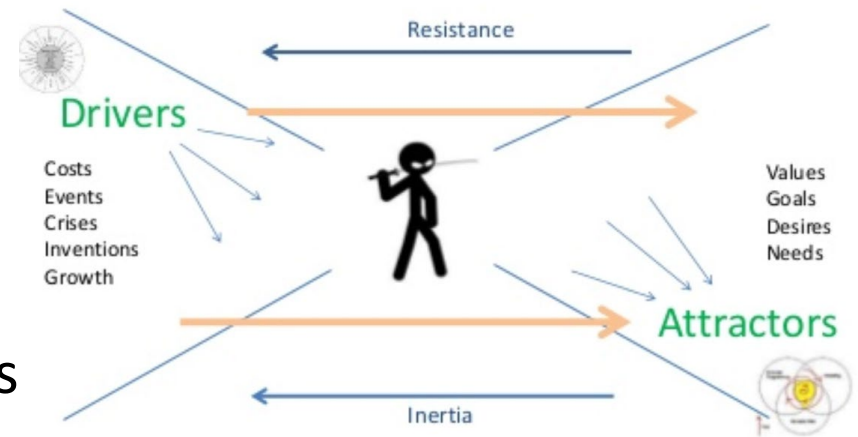


Challenges to Educational Institutions

- Public Education Vs. Private Sector
- Funding: Tuition, Grants, Research....?
- Enterprise Vs. Distributed?
- Federated Vs. Open? (Social signon Vs. Single Signon Vs. ??)
- Transcripts Vs. Blockchain Vs. ??
 - <http://blockgeeks.com/guides/what-is-blockchain-technology/>

Doing the Right Thing

- Who are your clients?
 - The state? The governor?
 - Technology companies?
 - Your department? Your ins



<https://www.slideshare.net/Downes/disruptive-innovations-in-learning>



<https://www.vinylcafe.com/>

- What are you Building?
 - Drivers Vs. Attractors
 - Empowerment Vs. Dependence?
- How does the story end?