A Model of Personal Learning

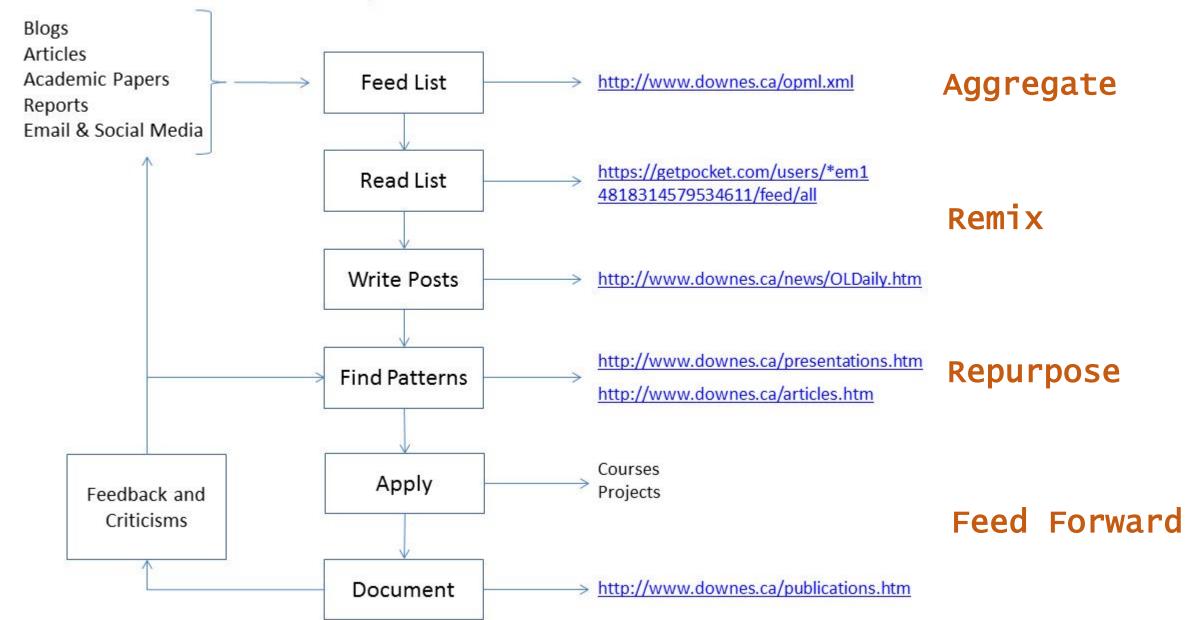


Three Decades of Enquiry...

- 1986 Models and Modality
- 1993 The Network Phenomenon
- 1997 Online Learning Environment (Ole)
- 1998 The Future of Online Learning
- 1998 Content Syndication and Online Learning
- 2000 Learning Objects
- 2001 Knowledge, Learning, Community
- 2001 From Virtual to Reality
- 2002 The Learning Marketplace
- 2003 E-Learning 2.0
- 2004 Horse and Palm Tree / Reading the Signs / "We are But Stewards"
- 2004 Connectivism and Connective Knowledge
- 2006 Models for Sustainable OER
- 2006 Groups and Networks / The Semantic Condition
- 2007 Personal Learning Environment

- 2007 Personal Learning Environment
- 2008 Massive Open Online Courses / Open Instructon
- 2009 Speaking in LOLcats
- 2010 Role(s) of the Educator
- 2010 Critical Literacies
- 2011 Knowledge as Recognition
- 2012 Learning and Performance Support
- 2014 Collaboration vs Cooperation
- 2014 Personal Learning
- 2014 The Personal Graph
- 2015 Design vs Environment (Outcomes vs Affordances)
- 2016 Change Drivers and Attractors / Transformation

Stephen Downes Research Workflow



A Note About Models

- With models, the answers are determined before the system or simulation is ever run...
- Eg. "Carnegie Melon University received a two-year grant for research on and development of MOOCs platforms 'intelligent enough to mimic the traditional classroom experience'."

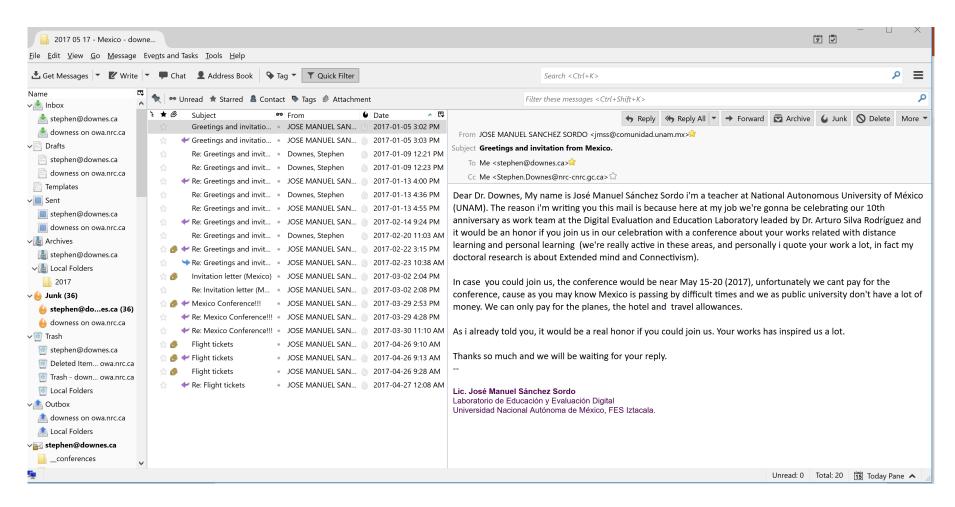


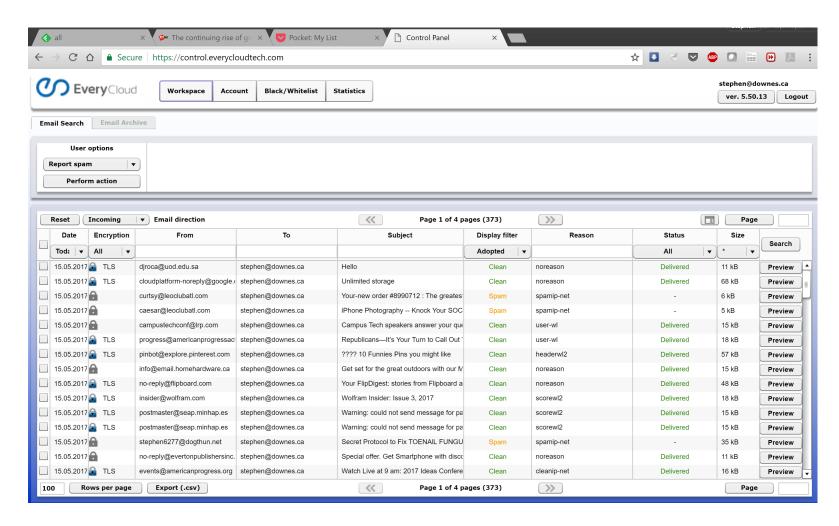
http://unescochair.blogs.uoc.edu/blog/2014/06/25/a-goal-for-google-and-carnegie-mellons-mooc-research/

What's missing in the standards-based models-based approach is what we used to think of as BAD



- Bricolage the doesn't allow or cater for bricolage.
- Affordances leverage the technology to improve learning and teaching.
- **D**istribution implications for the institutional practice of elearning."

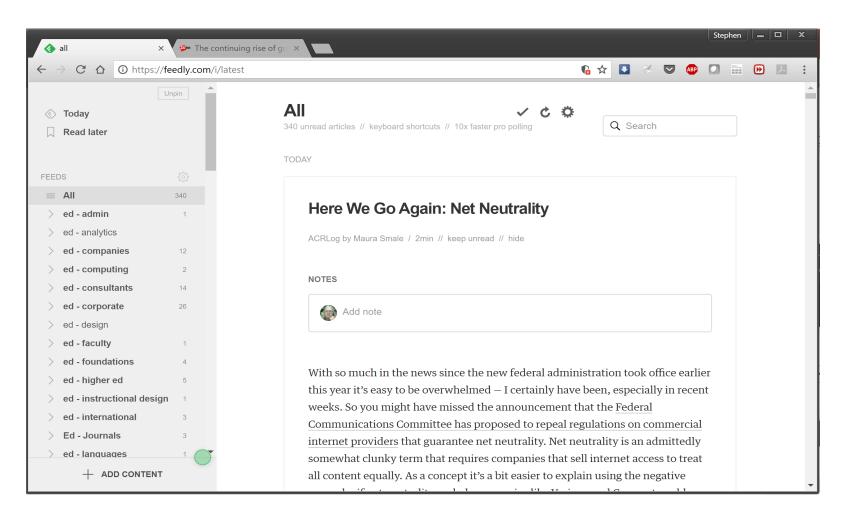


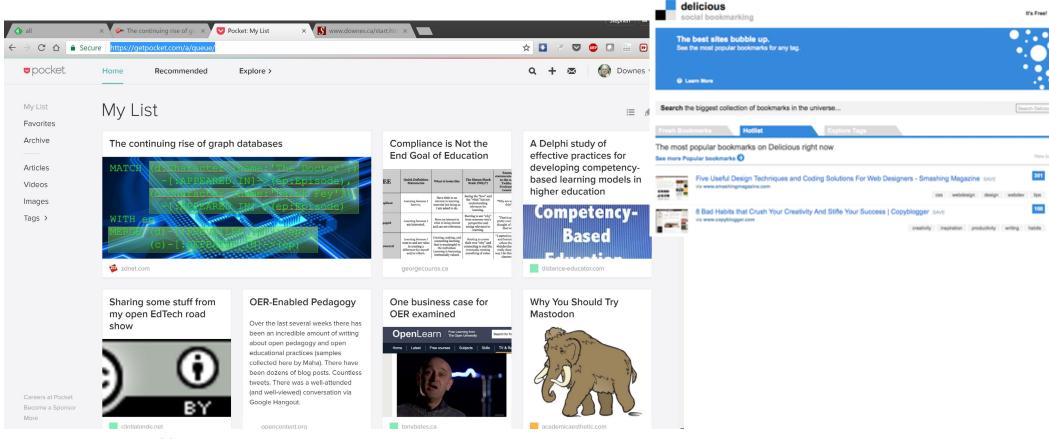


Yes this is my start page

Downes	Audio	Photos	Social	MLB	Video	NRC
NewPost	Google Music	Camera Roll	Google Plus	Games	Live - Watch	Wiki-ICT
ListPosts	CBC Radio	Albums	Medium	Scores	Live- Create	Wiki-LPSS
Presentation	Jamendo	Let's Make Art	Twitter	Standings	My Channel	Zone
Pages	SoundCloud	OneDrive Photos	Twitter Activity	Blue Jays	YouTube	SAP
Admin	Ed Radio			Banter	Netflix	Service
						GCcollab
Services	Travel	News	Email	Slides	Blog	Intellexir
Bank	Expedia	Weather	OWA Email	Slideshare	Half an Hour	FedScience Library
Maps	Air Canada	Google News	Everycloud	Upload Slides	NewBlog Post	GCCampus
Translate	Lufthansa	Feedly			Drive	
Unix Date		Pocket				

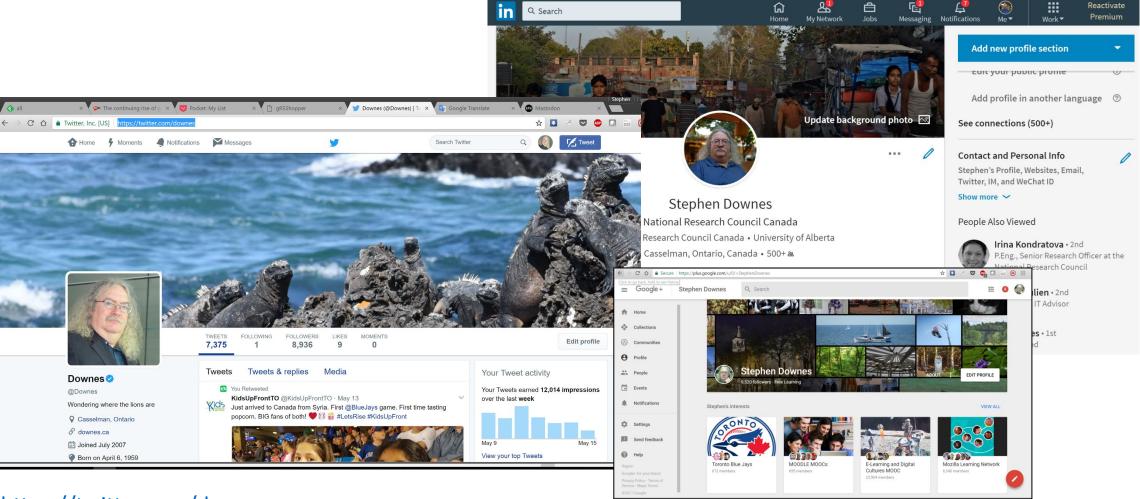
http://www.downes.ca/start.html



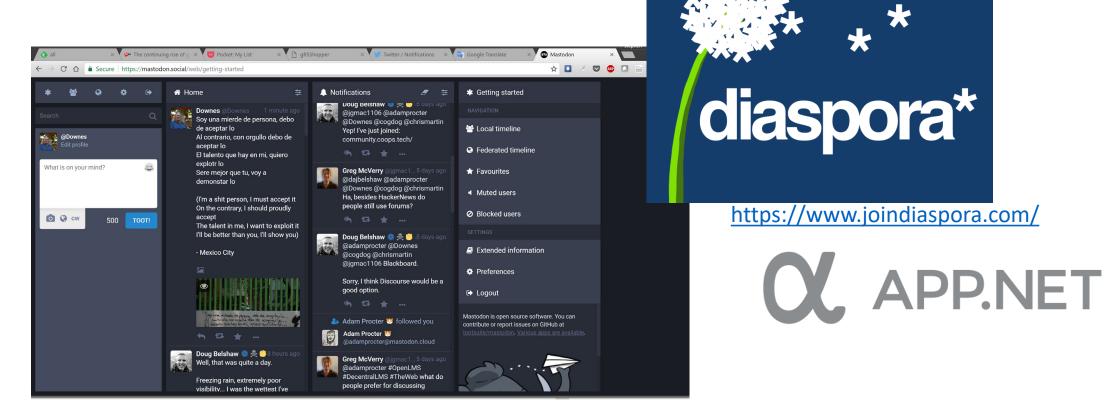


https://getpocket.com

https://www.linkedin.com/in/stdownes/

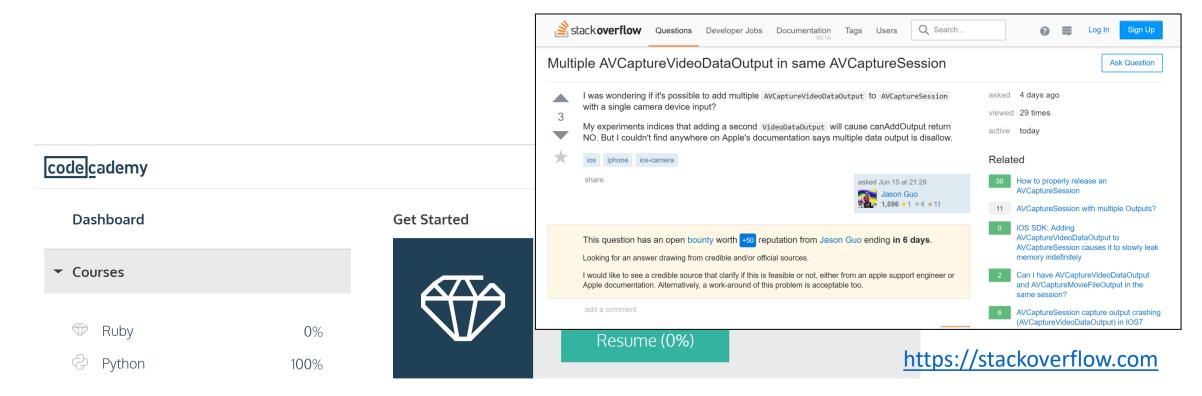


https://twitter.com/downes



https://mastodon.social/@Downes

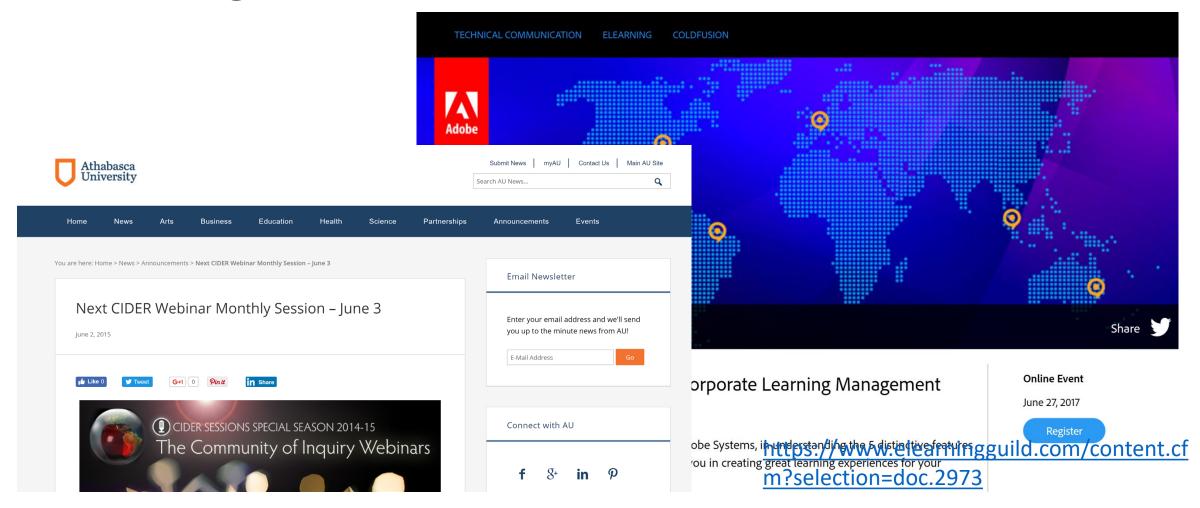
Learning



Continue where you left off in Ruby. Next up is Introduction to Ruby.

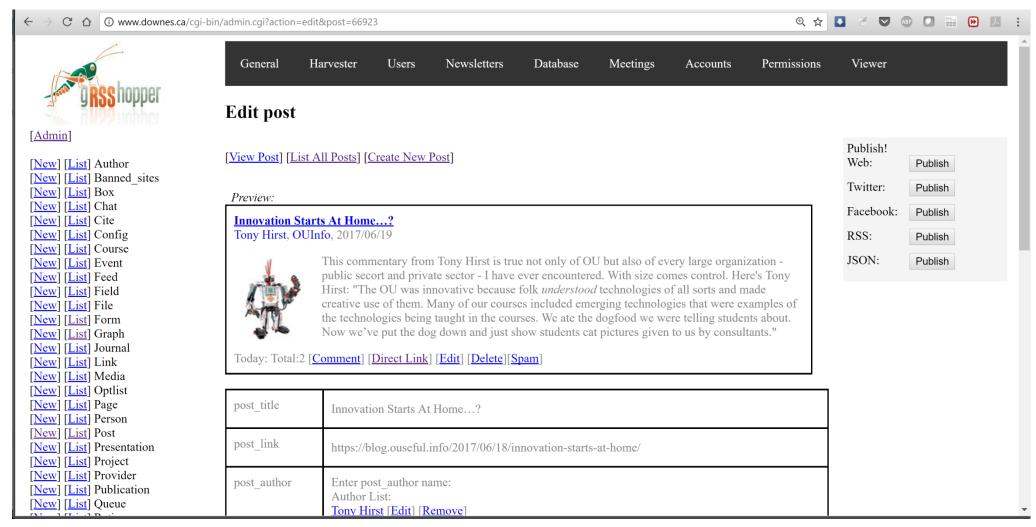
https://www.codecademy.com/learn

Learning



http://news.athabascau.ca/news/next-cider-webinar-monthly-session-june-3/

Saving



Post List

```
1 -- article, 22 Jun 1995 -- Moo? No, this is a MAUD
2 -- article, 22 Feb 1996 -- Censorship My Way
3 -- article, 26 Apr 1996 -- Logical Fallacies: Index
4 -- article, 6 May 1996 -- On-Line Conferencing
5 -- article, 18 Dec 1996 -- Use META to add sound
6 -- article, 22 Dec 1996 -- Practical Solutions
7 -- article, 23 Dec 1996 -- Part One : Not My Religion
8 -- article, 23 Dec 1996 -- Part Two: Christmas Marketing Style
9 -- article, 3 Jan 1997 -- Existing Virtual Communities
10 -- article, 3 Jan 1997 -- Almost Correct?
11 -- article, 7 Jan 1997 -- <u>'Trees' and other Putative 'Facts'</u>
12 -- article, 17 Feb 1997 -- I Support Universal Access
13 -- article, 4 Mar 1997 -- <u>Electronic Textbooks</u>
14 -- article, 10 Mar 1997 -- 'Professional' Web Course Design
15 -- article, 26 May 1997 -- Katz is Right, but for the Wrong Reasons
16 -- article, 9 Jun 1997 -- Looking for the Better Side
17 -- article, 9 Jun 1997 -- 'Channeling'
18 -- article, 8 Jul 1997 -- Multimedia, Teaching and Learning
19 -- article, 23 Jul 1997 -- Distance Ed Instructional Designer
20 -- article 24 Iul 1997 -- Geek Movie? Absolutely
```

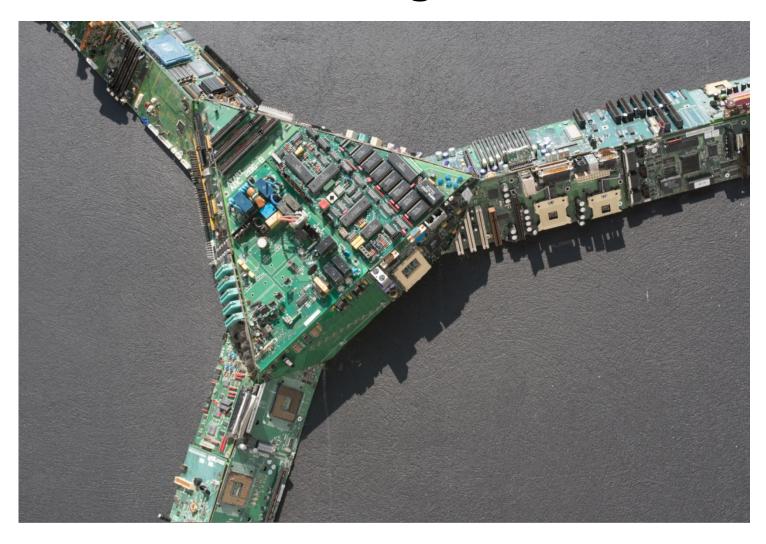
```
28461 -- link, 9 May 2017 -- Experiential Learning: It's been happening for
28462 -- link, 9 May 2017 -- Fait Accompli: Agentive Tech Is Here
28463 -- link, 10 May 2017 -- Educational Technology and Education Conf
28464 -- link, 10 May 2017 -- Google Chrome won't be allowed on Window
28465 -- link, 10 May 2017 -- A Plan to Kill High School Transcripts ... an
28466 -- link, 10 May 2017 -- Email is the new RSS (or a Factotum is Born
28467 -- link, 10 May 2017 -- Unsplashing
28468 -- link, 11 May 2017 -- Emotions are not hardwired but learned in ou
28469 -- link, 11 May 2017 -- Auto-Annotating News Articles To Scaffold
28470 -- link, 11 May 2017 -- Learning's Role in Innovation
28471 -- link, 11 May 2017 -- Globalization at a Crossroads
28472 -- link, 12 May 2017 -- I So Want Try a Docker/Kitematic Container
28473 -- link, 12 May 2017 -- An Algorithm Summarizes Lengthy Text Sur
28474 -- link, 12 May 2017 -- Spotlight On Adea 2017 Triennial and Its Ke
28475 -- link, 12 May 2017 -- Open Distribution of Virtual Containers as a
28476 -- link, 12 May 2017 -- New post
```

28477 -- link, 12 May 2017 -- <u>Some thoughts on Keybase, online security, a</u> 28478 -- link, 12 May 2017 -- <u>How to Become a Coach or Consultant After</u>

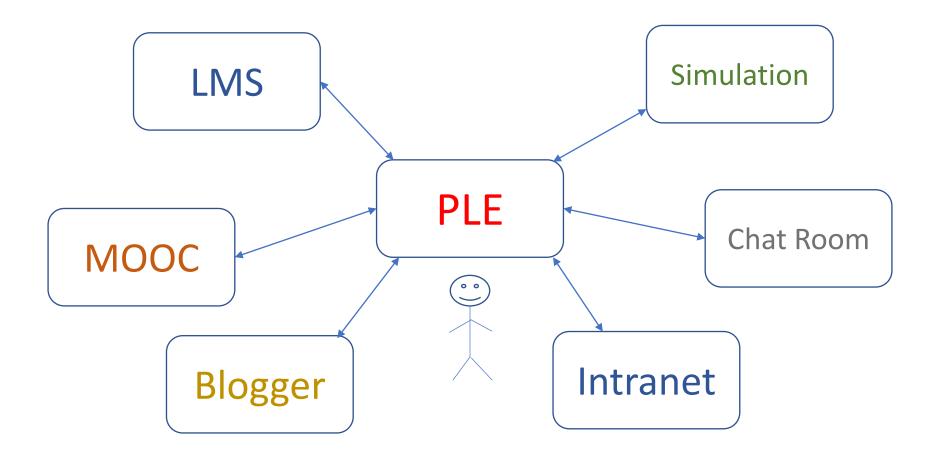
28460 -- link, 9 May 2017 -- This is How Google will Collapse

http://www.downes.ca/post_list.html

The Personal Learning Environment

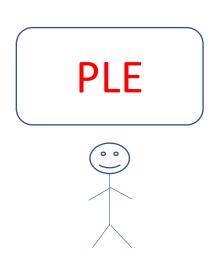


Overview of the Concept of PLEs



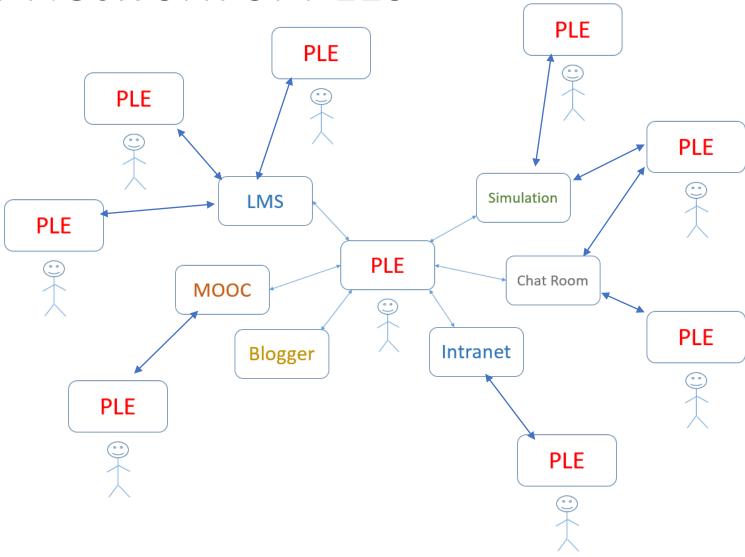
Access to many services in one personal environment

Properties of the PLE...

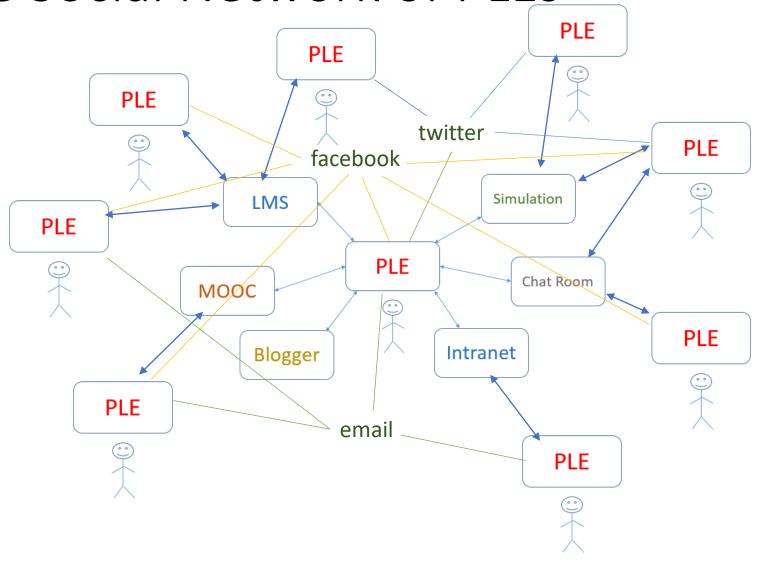


- What information should it record?
- Who owns the data? How private is it?
- What should it do?
- What would a person do with it?
- Where, exactly, is a PLE located?

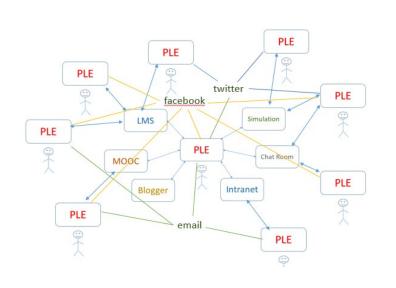
The Network of PLEs



The Social Network of PLEs



Properties of the Network...



- How do people find each other? Services?
- How do they communicate? What do they share?
- How does a single PLE work with services?
- Do we need centralized registries?

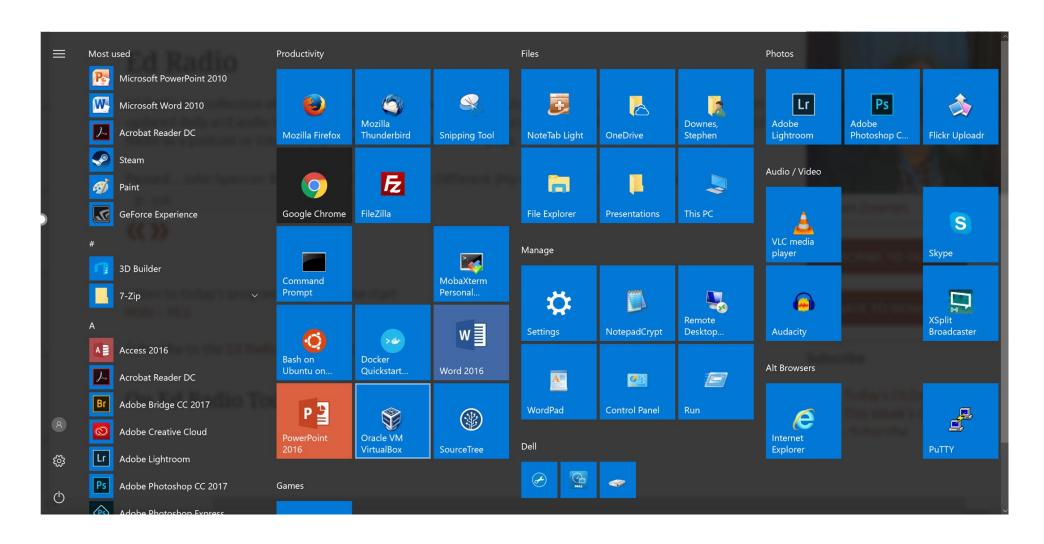
Why a personal learning environment?

- What is the *value proposition* for a PLE?
 - Note: value isn't what you can do, it's how you benefit
 - This is usually stated in financial terms (earn more, cost less)
 - Can also be stated in terms of quality: faster, bigger, better
 - And can be non-financial goods: satisfaction, happiness, memories



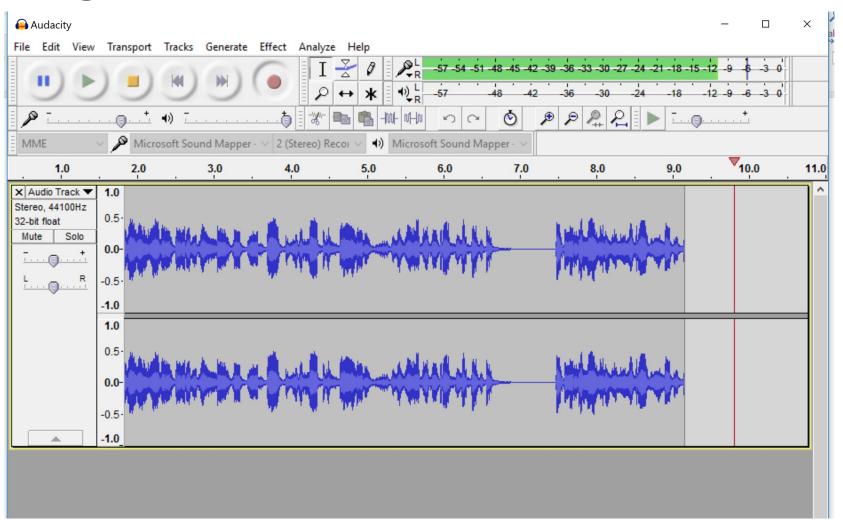
Education is not a search problem



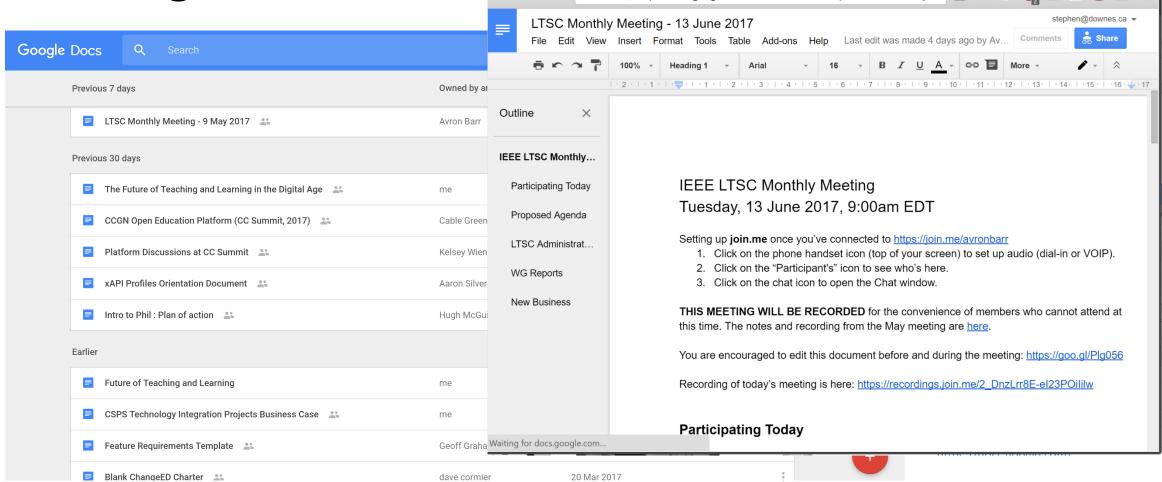




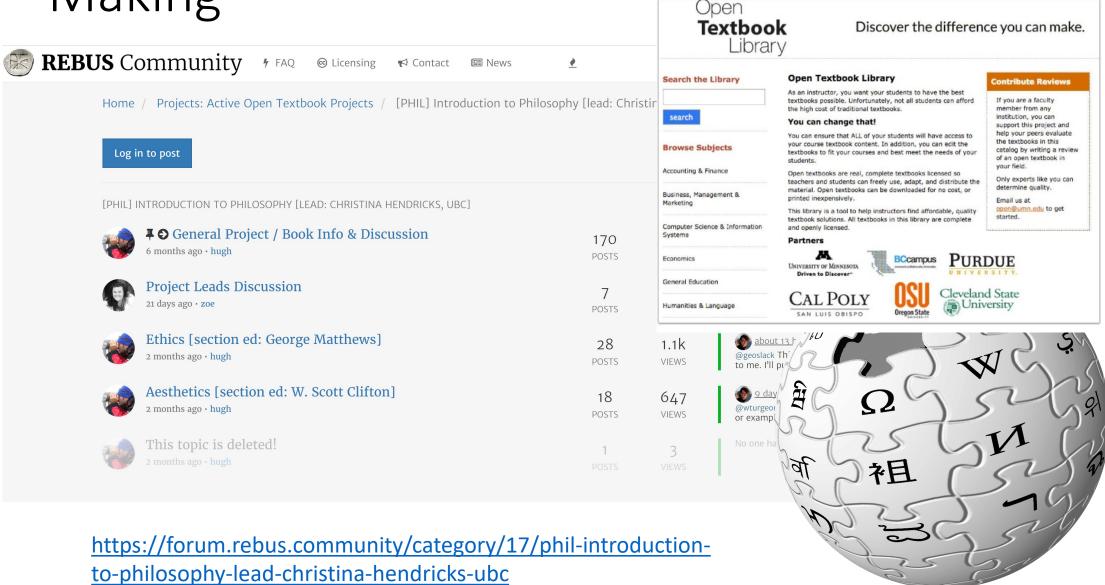
https://lightroom.adobe.com/

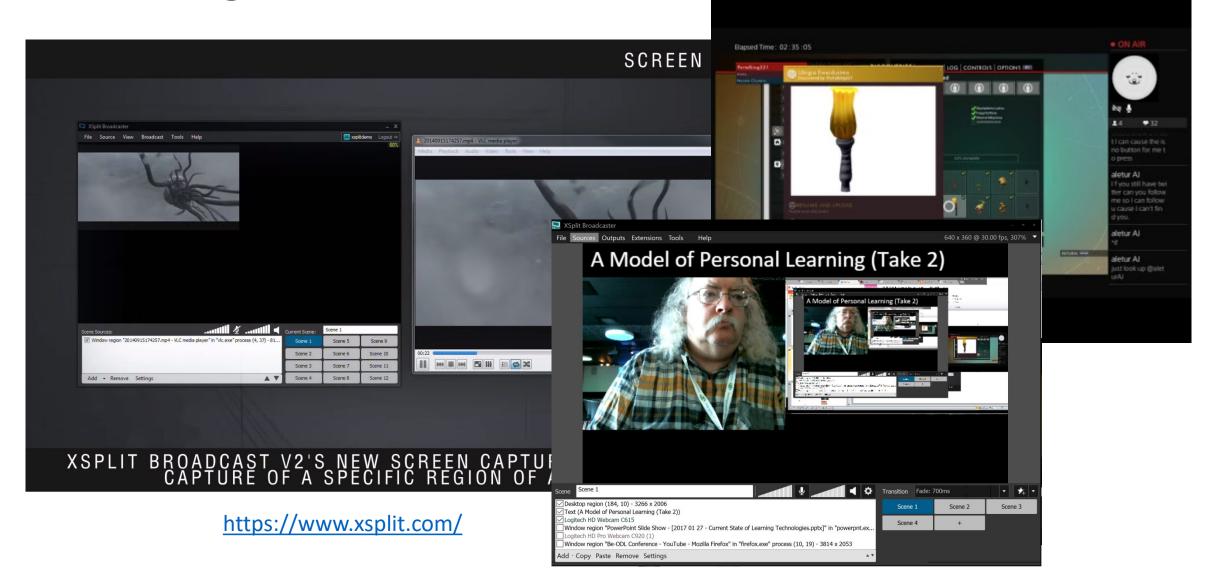


http://www.audacityteam.org/download/



https://docs.google.com/









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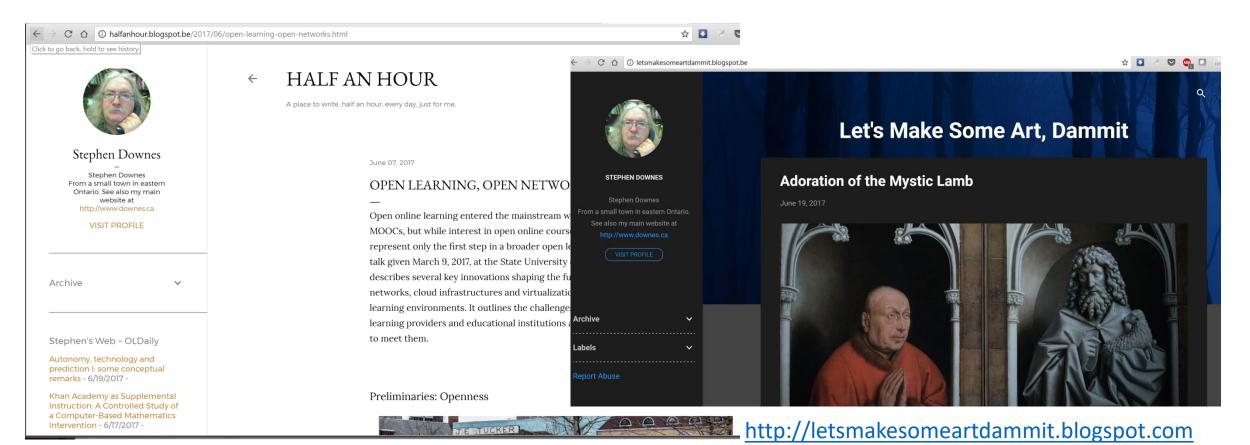
Stephen Downes

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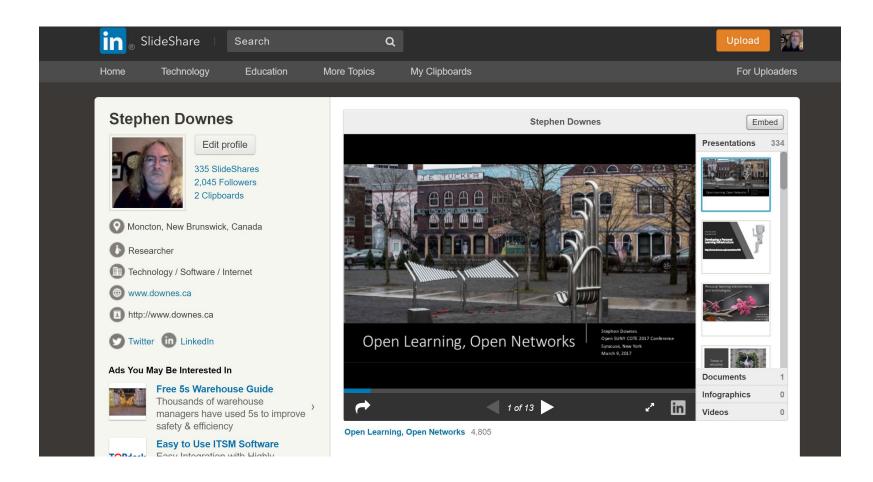
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http://halfanhour.blogspot.com



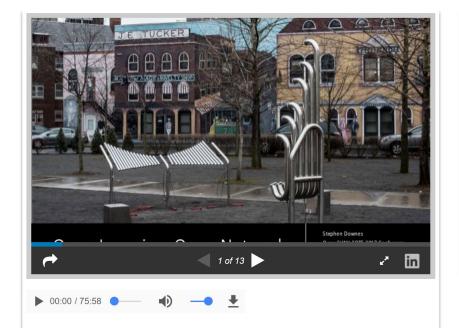
https://www.slideshare.net/Downes

Toward Personal Learning





Open Learning, Open Networks



SUNY Open COTE 2017, Syracuse, New York, .

Open online learning entered the mainstream with the growth and popularity of MOOCs, but while interest in open online courses has never been greater MOOCs represent only the first step in a broader open learning infrastructure. In this keynote Stephen Downes will describe several key innovations shaping the future of open learning: distributed social networks, cloud infrastructures and virtualization, immersive reality, and personal learning environments. The talk will outline the challenges this evolving model will pose to learning providers and educational institutions and recommend policies and processes to meet them. Link to hosted video.

Q

Keynote, Mar 09, 2017.

Downloads: [Slides] [Audio] [Conference Link]

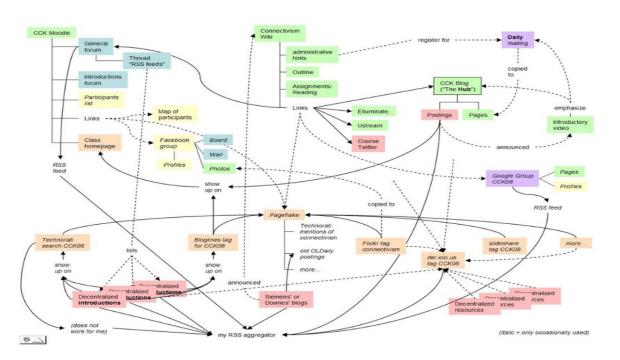
http://www.downes.ca/presentation/468

New learning Paradigms

Path	Field		
Course	Curriculum (as in 'mapping')		
Sequence / Prequisite	Core / periphery / foundation		
Movement / covered	Inquiry / Discovery / Gaps		
Threshold / Levels	Coverage / Construction		
Positioning – first / last	Grouping / Clustering		
Objective / target	Serendipity / emergence		
Leading / Led	Centred		

Carrie Paechter, Metaphors of Space in Educational Theory and Practice http://www.tandfonline.com/doi/pdf/10.1080/14681360400200202

The Connectivist MOOC (cMOOC) Design



A MOOC is a Web, not a Website



Instead of seeing a course as a series of contents to be presented, a course is a network of participants who find and exchange resources with each other

- An initial structure is developed and 'seeded' with existing OERs
- Participants encouraged to use their own sites to create or share resources
- A mechanism (gRSShopper) is employed to connect them

Personalization

Recognition Networks The "what" of learning



Affective Networks The "why" of learning



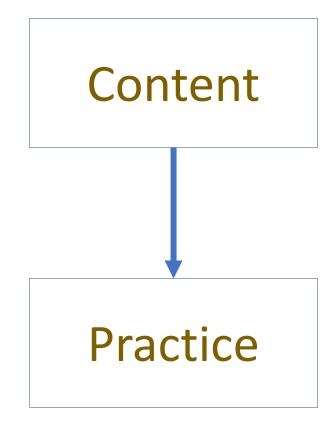


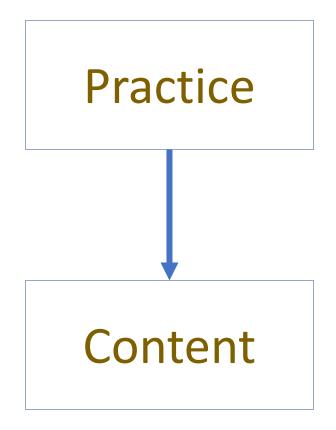


- What we learn
- How we Learn
- Why we learn

- Rules-Based Events (like notifications)
- User Models
- Adaptive Learning

Two Approaches...





Two Approaches...

Defines an ideal state

Content Practice **TEST**

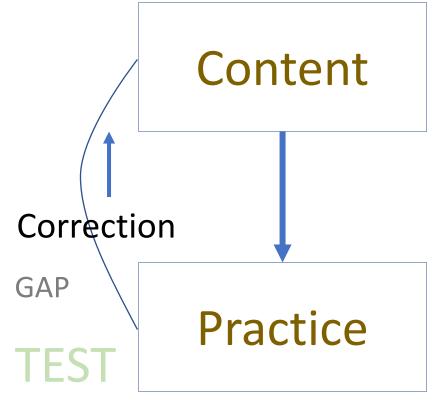
Person tests you

Defines a desired state



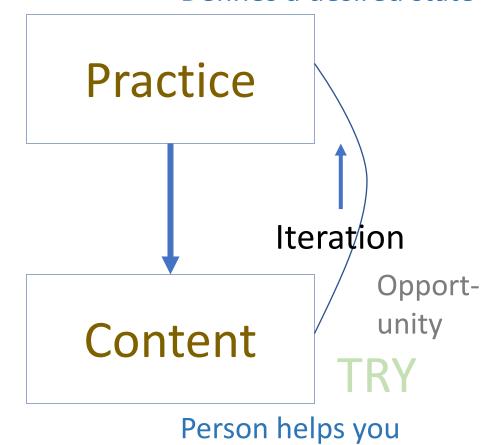
Two Approaches...

Defines an ideal state



Person tests you

Defines a desired state



Library

Environment

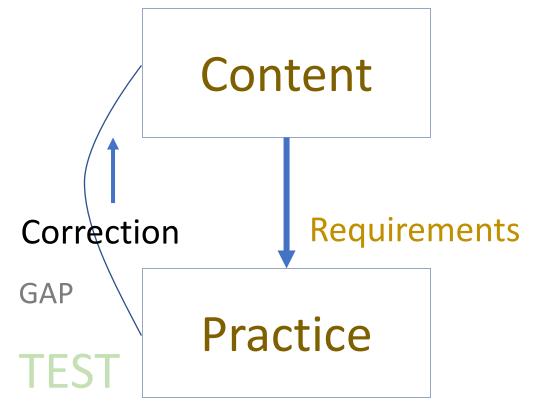
Defines an ideal state Content Requirements Correction **GAP** Practice Person tests you

Defines a desired state Practice Affordances **Iteration** Opportunity Content Person helps you

Personalized

We do for you

Defines an ideal state

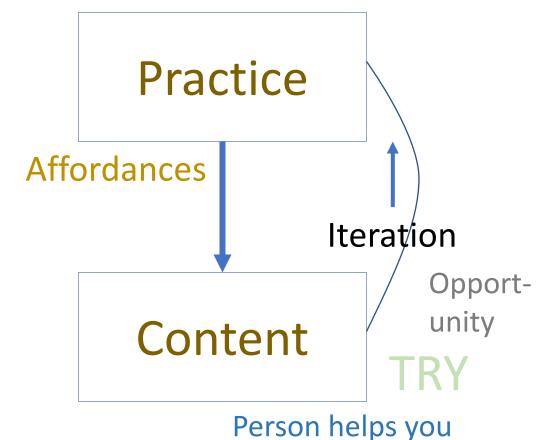


Person tests you

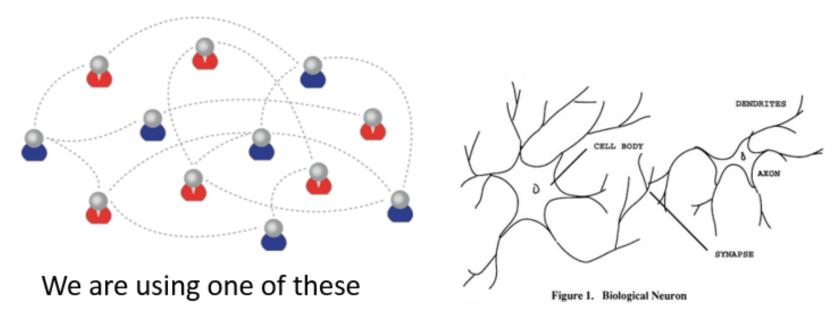
Personal

You do for yourself

Defines a desired state



Learning Outcomes



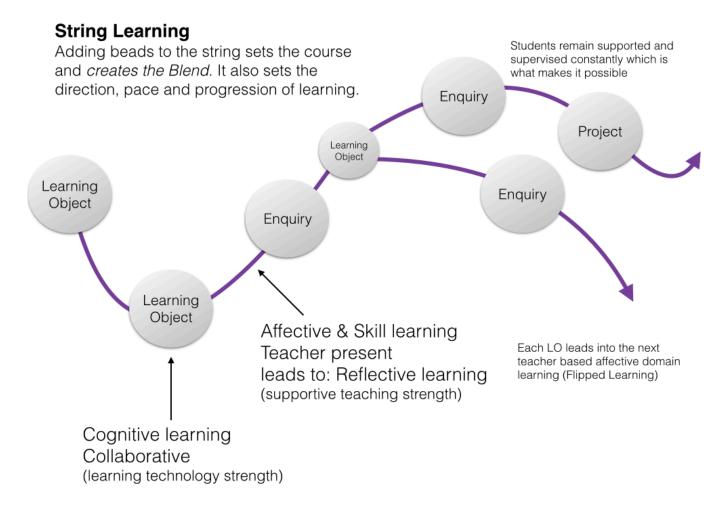
To create one of these

- Learning a discipline is a total state and not a collection of specific states
- It is obtained through immersion in an environment rather than acquisition of particular entities
- It is expressed functionally (can you perform 'as a geographer'?) rather than cognitively (can you state 'geography facts' or do 'geography tasks'?)

Extended Cognition

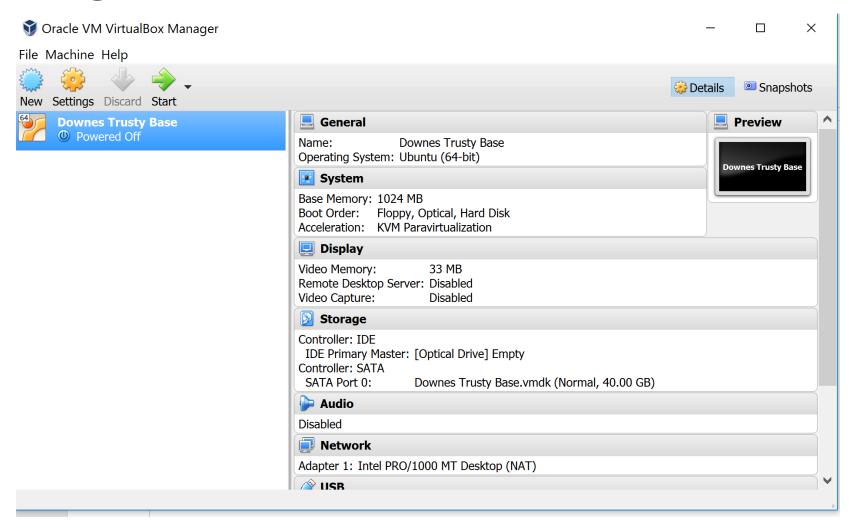
- More than neural networks?
 - Embodied learning, stigmergy, extended memory (Andy Clark)
- Is my library a part of my cognition?
 - Which books?
- The problem of explanation

Cloud Environments



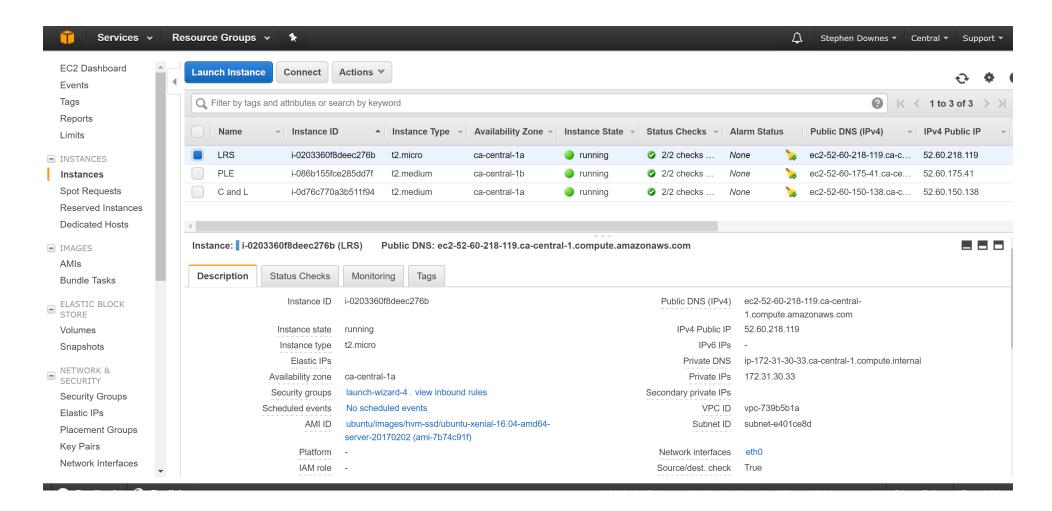
https://www.linkedin.com/pulse/string-learning-blend-objects-geoff-rebbeck?articleId=6932346018329088240

Making



https://www.virtualbox.org/

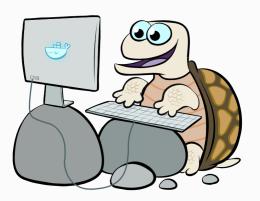
Cloud Environments



Cloud Environments

A Better Way to Build Apps





ESCAPE THE APP DEPENDENCY MATRIX

Eliminate the "it works on my machine" problem once and for all. Package dependencies with your apps in Docker containers for portability and predictability during development, testing, and deployment.

WORKS WITH ANY STACK

Deploy both microservices and traditional apps anywhere without costly rewrites. Isolate apps in containers to eliminate conflicts and enhance security.

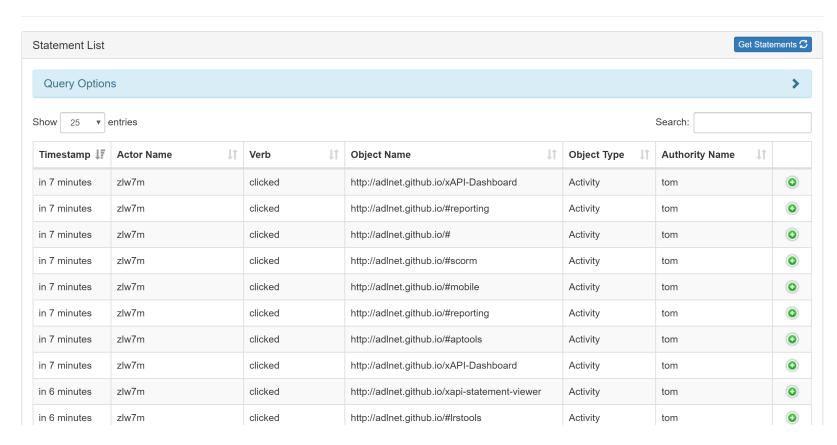
BETTER TEAM COLLABORATION

Streamline collaboration between developers and operators and get features and fixes into production faster. Productive developers doing frequent releases unleashes creativity to build awesome software.

https://www.docker.com/

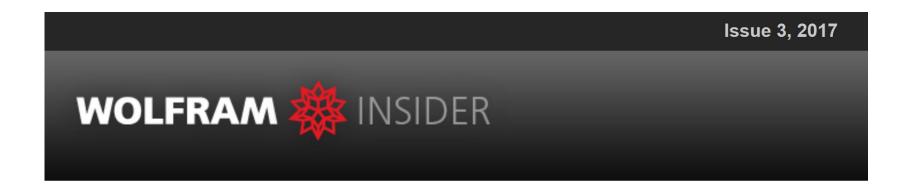
Learning Record Store

XAPI Statement Viewer



http://adlnet.github.io/xapi-statement-viewer/

Cloud Services





JUST RELEASED

Wolfram Data Repository »

Building on the Wolfram Data Framework and the Wolfram Language, the Wolfram Data Repository provides a uniform system for storing data and making it immediately computable and useful. It is built to be a global resource for public data and data-backed publication.



Read Stephen Wolfram's Data Repository blog.

https://datarepository.wolframcloud.com/

Stephen Downes http://www.downes.ca



http://www.downes.ca/presentation/389