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Downes, Stephen

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From Individual to Community: The Learning Is in the Doing

Stephen Downes
March 19, 2016



WORLD CONGRESS ON CONTINUING PROFESSIONAL DEVELOPMENT

Advancing Learning and Care
in the Health Professions

March 17-19, 2016 • San Diego, CA



worldcongresscpd.org

1. Learning is Personal



Alejandro Jadad, yesterday. Cover hummingbird photo: Nathan Rupert, <https://www.flickr.com/photos/nathaninsandiego/11106714545/>

Knowledge Translation

CIHR – “CIHR, knowledge translation (KT) is defined as a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians.”

CIHR, <http://www.cihr-irsc.gc.ca/e/39033.html>

Campbell Collaboration - knowledge base for decisions

<http://www.campbellcollaboration.org>

Reasonable Doubts

1 CHOOSE A POLITICAL PARTY

Republicans Democrats

2 DEFINE TERMS

Which politicians do you want to include?

- Presidents
- Governors
- Senators
- Representatives

How do you want to measure economic performance?

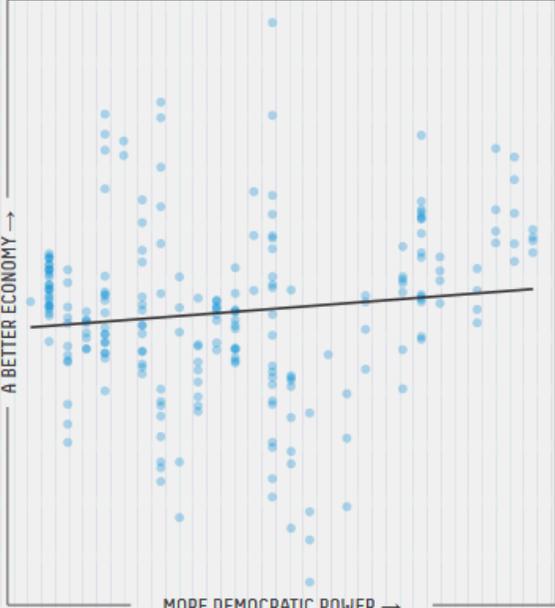
- Employment
- Inflation
- GDP
- Stock prices

Other options

- Factor in power
Weight more powerful positions more heavily
- Exclude recessions
Don't include economic recessions

3 IS THERE A RELATIONSHIP?

Given how you've defined your terms, does the economy do better, worse or about the same when more Democrats are in power? Each dot below represents one month of data.



4 IS YOUR RESULT SIGNIFICANT?

If there were no connection between the economy and politics, what is the probability that you'd get results at least as strong as yours? That probability is your p-value, and by convention, you need a p-value of 0.05 or less to get published.



Result: Almost

Your **0.06** p-value is close to the 0.05 threshold. Try tweaking your variables to see if you can push it over the line!

If you're interested in reading real (and more rigorous) studies on the connection between politics and the economy, see the work of Larry Bartels and Alan Blinder and Mark Watson.

Data from The @unitedstates Project, National Governors Association, Bureau of Labor Statistics, Federal Reserve Bank of St. Louis and Yahoo Finance.

The crisis can't be wished away, nor can the basic lack of reproducibility be whitewashed.

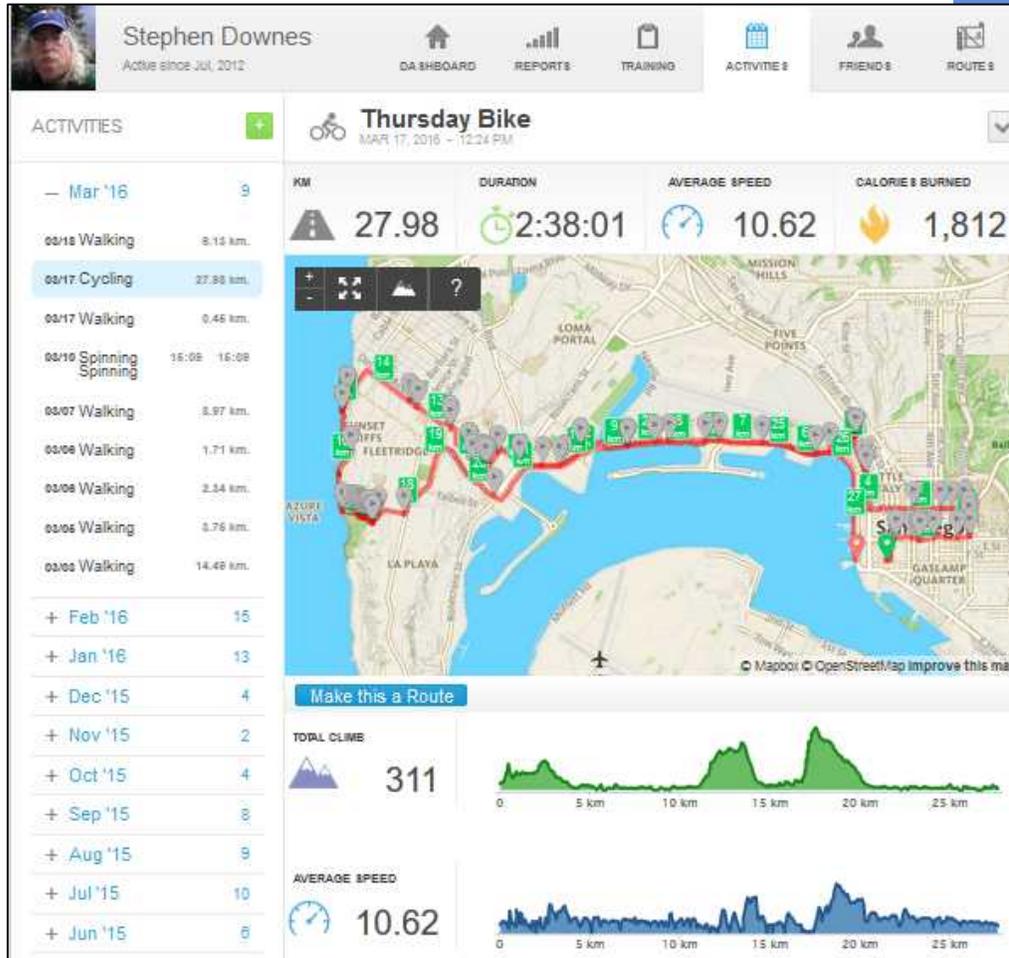
<http://www.downes.ca/post/65131>

<http://fivethirtyeight.com/features/science-isnt-broken/#part2>

Criticisms...

- “research should move beyond a narrow focus on the ‘know–do gap’ to cover a richer agenda...”
 - situation-specific practical wisdom (phronesis)
 - tacit knowledge shared among practitioners (‘mindlines’)
 - complex links between power and knowledge; and
 - macro-level knowledge partnerships

Exploring, not Following



The Hackathon...



<http://www.hackathon.io/events>

The EduCamp



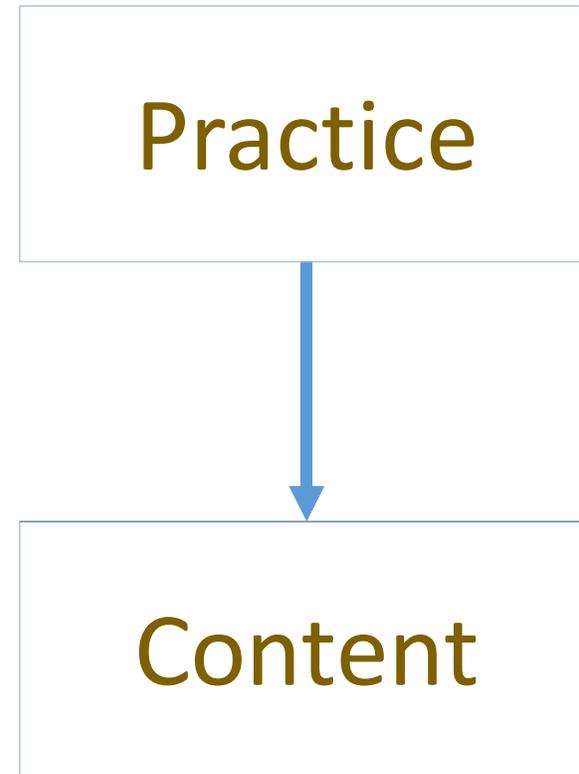
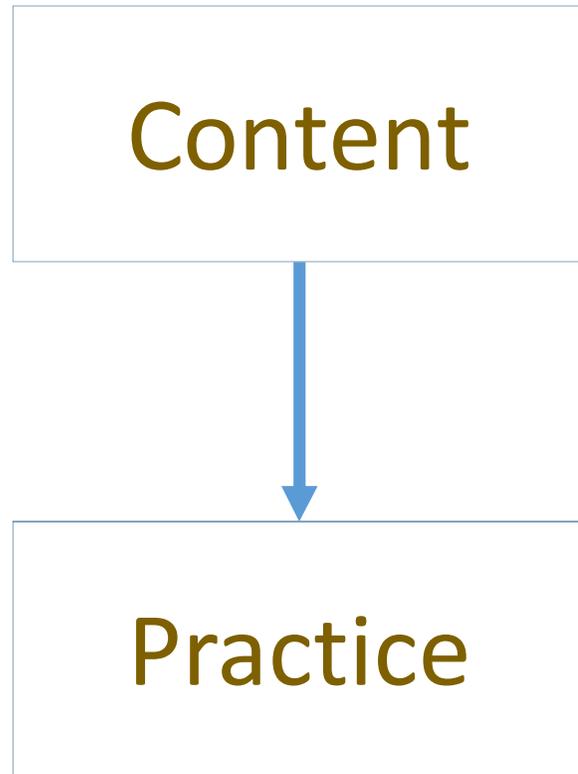
<http://pertinenciaeducativa09.blogspot.ca/2009/10/educamp-colombia-aprendizaje-en-un.html>



<http://www.flickrriver.com/photos/qadmon/3106848811/>

<http://www.irrodl.org/index.php/irrodl/article/view/884/1677>

2. Two Approaches...



Two Approaches...

Defines an ideal state

Content



Practice

TEST

Person tests you

Defines a desired state

Practice

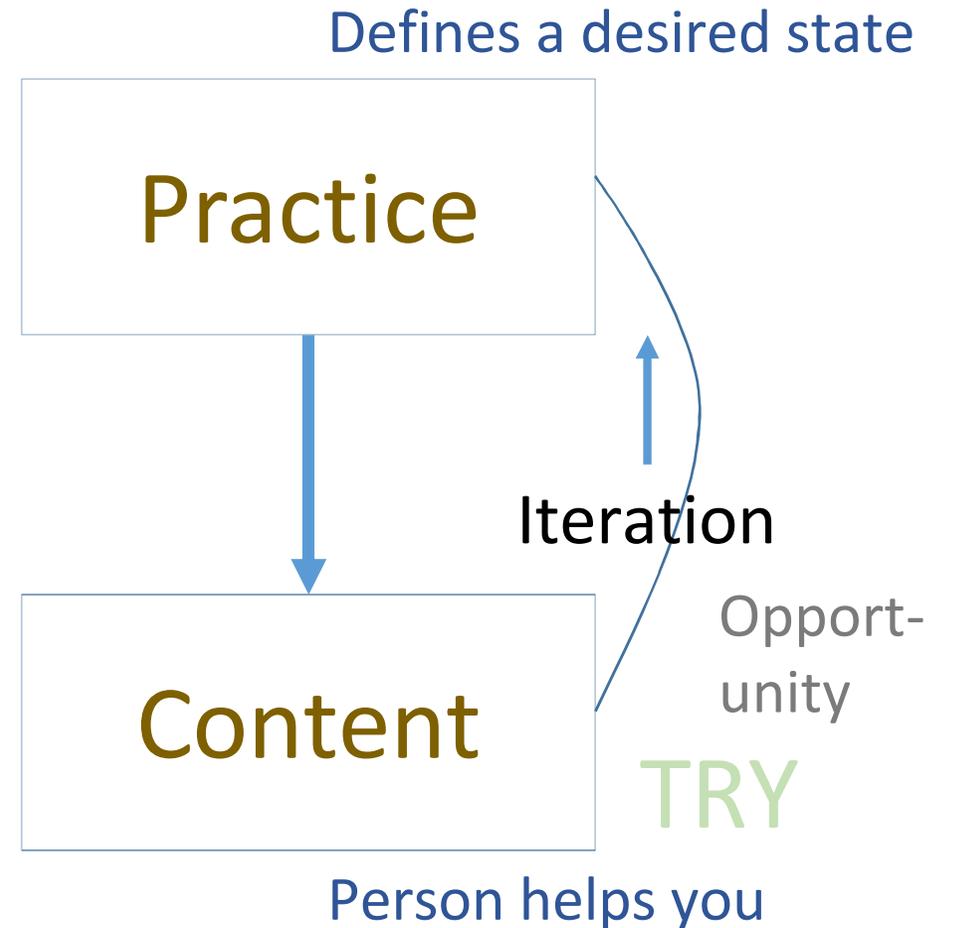
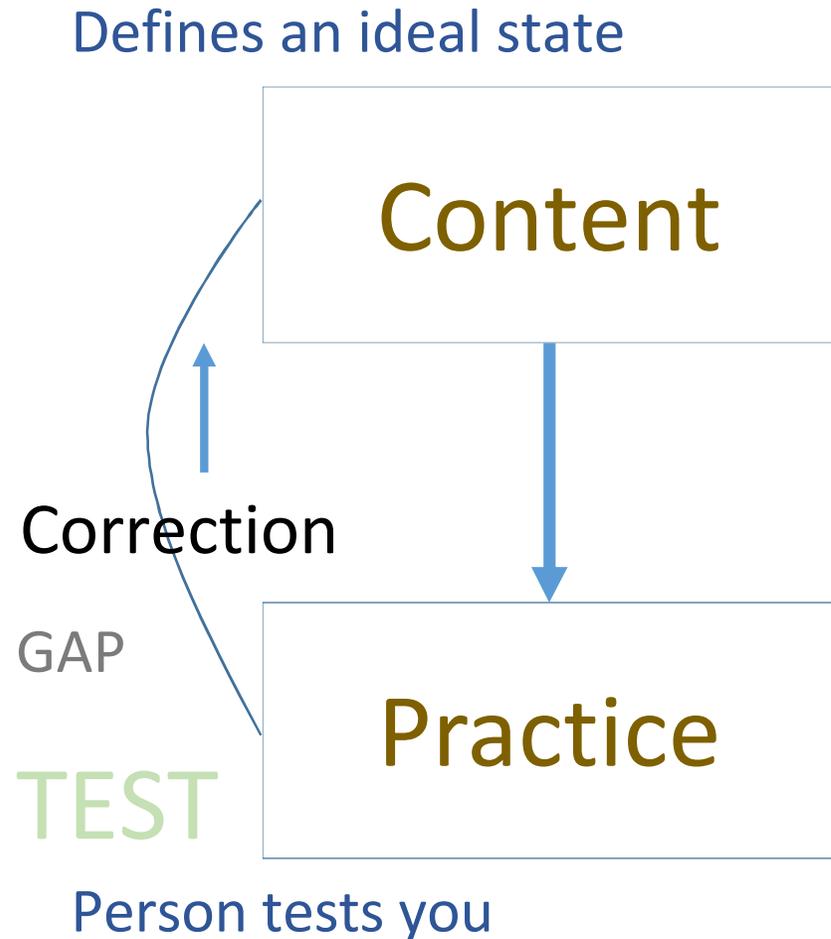


Content

TRY

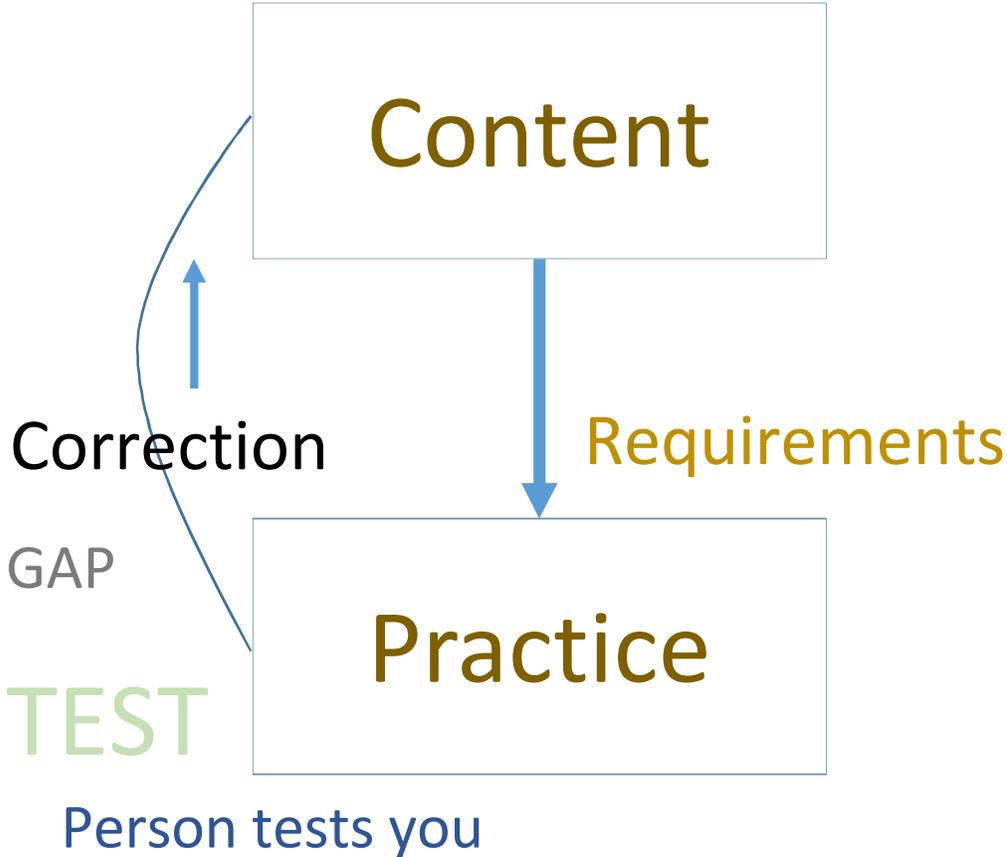
Person helps you

Two Approaches...



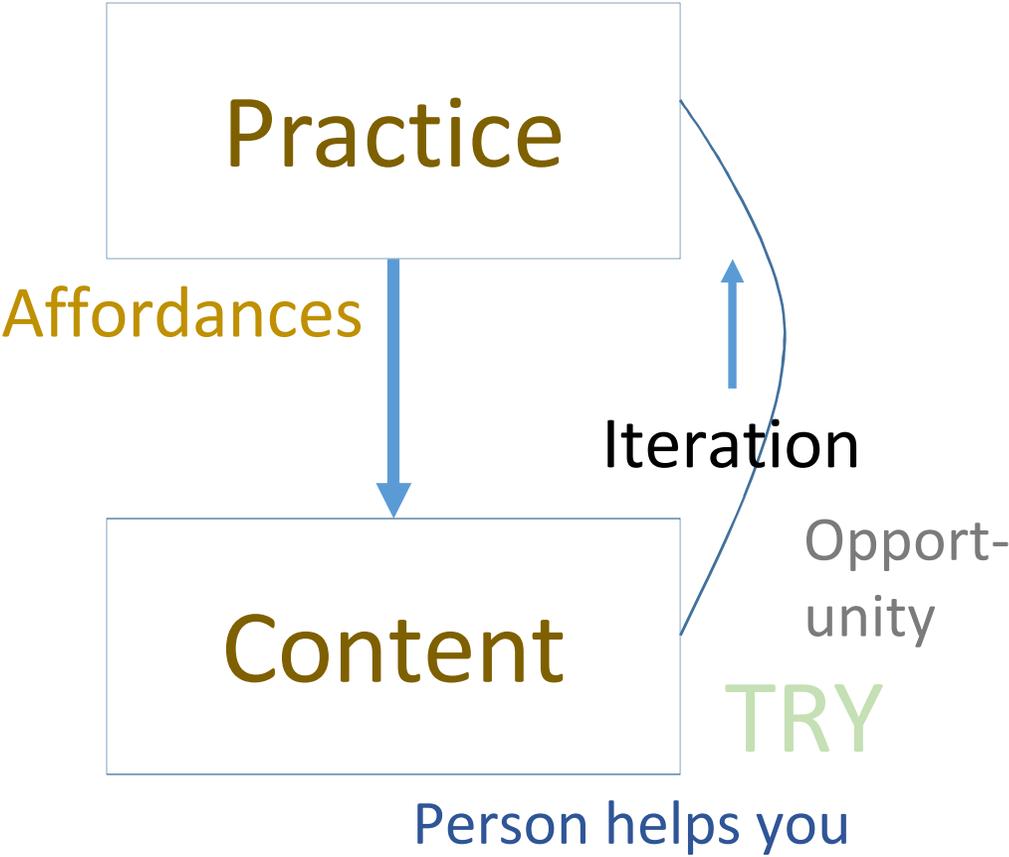
Library

Defines an ideal state



Environment

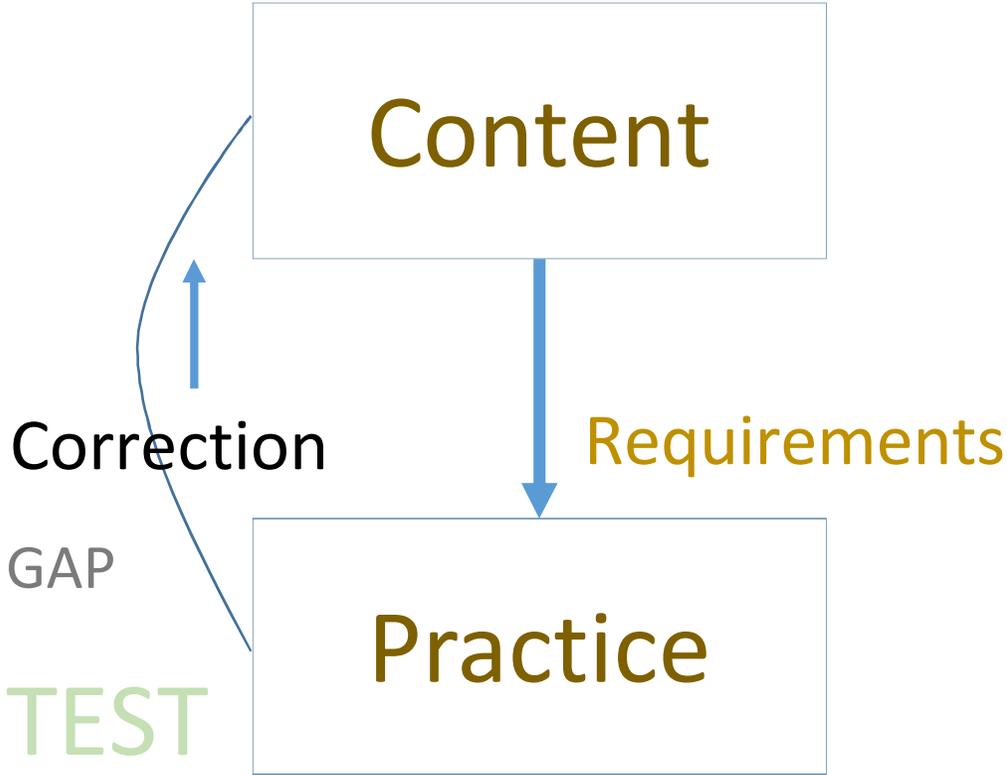
Defines a desired state



Personalized

We do for you

Defines an ideal state

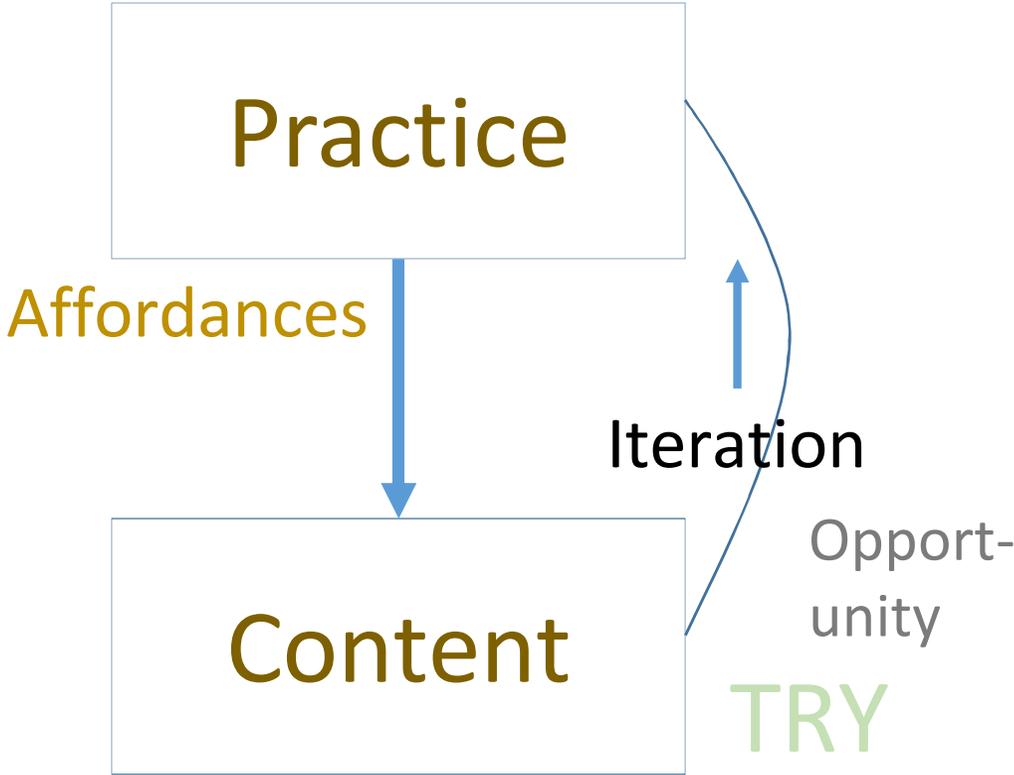


Person tests you

Personal

You do for yourself

Defines a desired state



Person helps you

Personal vs. Personalized

- Compare between:
 - Personalized health care (something the National Health Service or Health Management Organization provides)
 - Personal health care (something you do for yourself)
- Personal goals versus institutional goals
- Practice versus content

3. Learning Through Practice



Medical Simulations



<http://www.army.mil/article/127148/>



<http://www.83degreesmedia.com/features/camls011012.aspx>

Flight Simulators



<http://www.cae.com/World-s-first-AW189-full-flight-simulator-ready-for-training/>



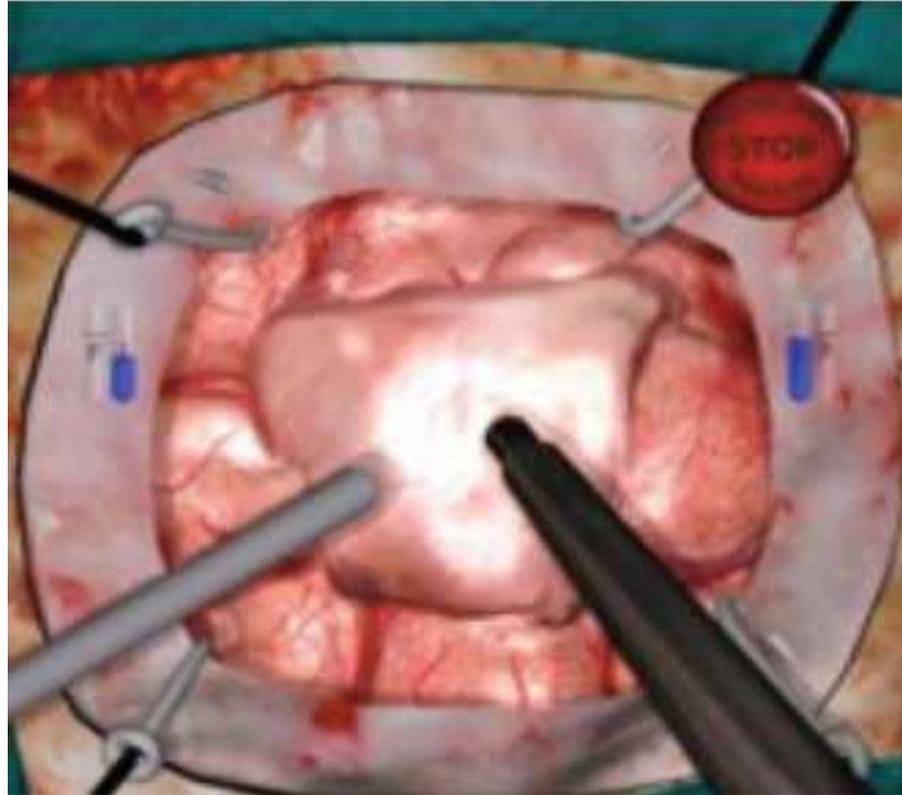
<http://www.aiac.ca/canada-aerospace-industry/success-stories/cae-nh90-helicopter-simulator/>

MINT - Mobile INteractive Trainer



<http://www.downes.ca/post/59876>

NeuroTouch Simulator



Sim-Welding



Auscultation



<http://www.cardionics.com>

Personal Learning – The Concept



Combining Experiences

One place for all learning experiences

The image displays a web-based simulation learning interface. On the left is a dark sidebar menu titled "Simulation Learning Space" with a "Simul:" label. It lists several categories: Instrument Handling (with a close 'x' icon), Suction (with a plus '+' icon), Ultrasonic Aspirator (with a close 'x' icon), Ultrasonic Aspirator 102 (with a close 'x' icon), and two dates: "2015-02-11 13:40:33" and "2015-04-10 15:52:12". Below these are "Bipolar" (+), "Microscissors" (+), "Fundamental Skills" (+), and "Spine Surgery" (+). A grey arrow points from the "Suction" category in the sidebar to the main content area.

The main content area is a browser window titled "Simulation Learning Space" with a navigation bar containing "Simulators", "Home", "Scenarios", and "NT Account". The user is logged in as "admin". The main content is divided into two panels:

- Scenarios' History:** Shows details for "Exercise: Suction 101" by user "admin" on "May 25 12:37:30 2015", with a "Previous Attempt" on "May 25 10:23:08 2015". It includes a "Image Not Found" placeholder, an "Overall Score History" line graph showing a score of 50% on two attempts, and a table of metrics.
- Recommendations:** A section titled "Recommendations" with a sub-header "Recent Track Completion" and a small image of a person in a simulation environment.

Metrics	Value	Grade
Blood remaining	0.14 cc	0%
Tissue removed	0.0 cc	0%
Time LH excessive force	0.0 s	0%
Time RH excessive force	4.02 s	50%

Overall Score: -50/100

All performance results no matter where and when they were carried out

4. Learning Communities - the cMOOC

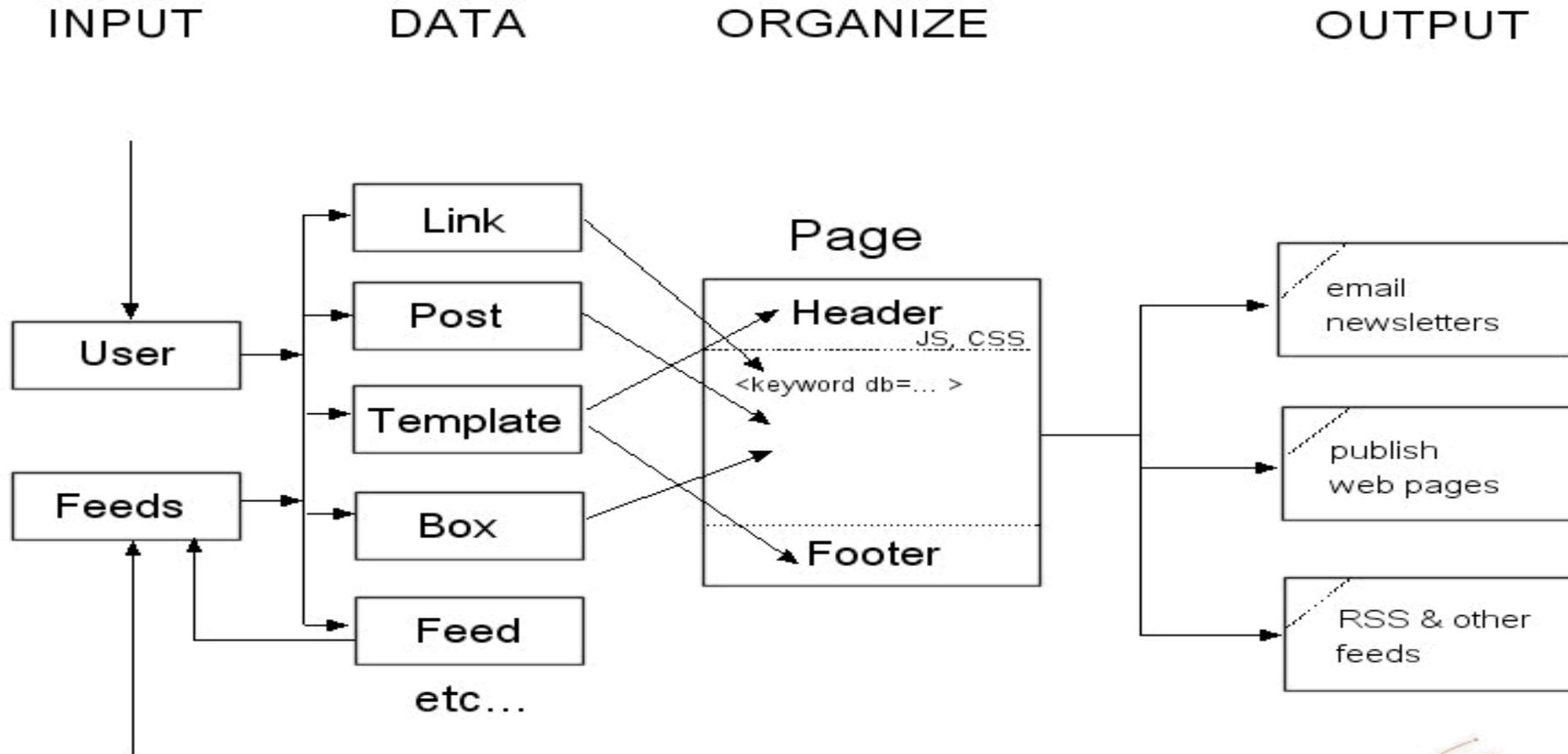


MOOC Design

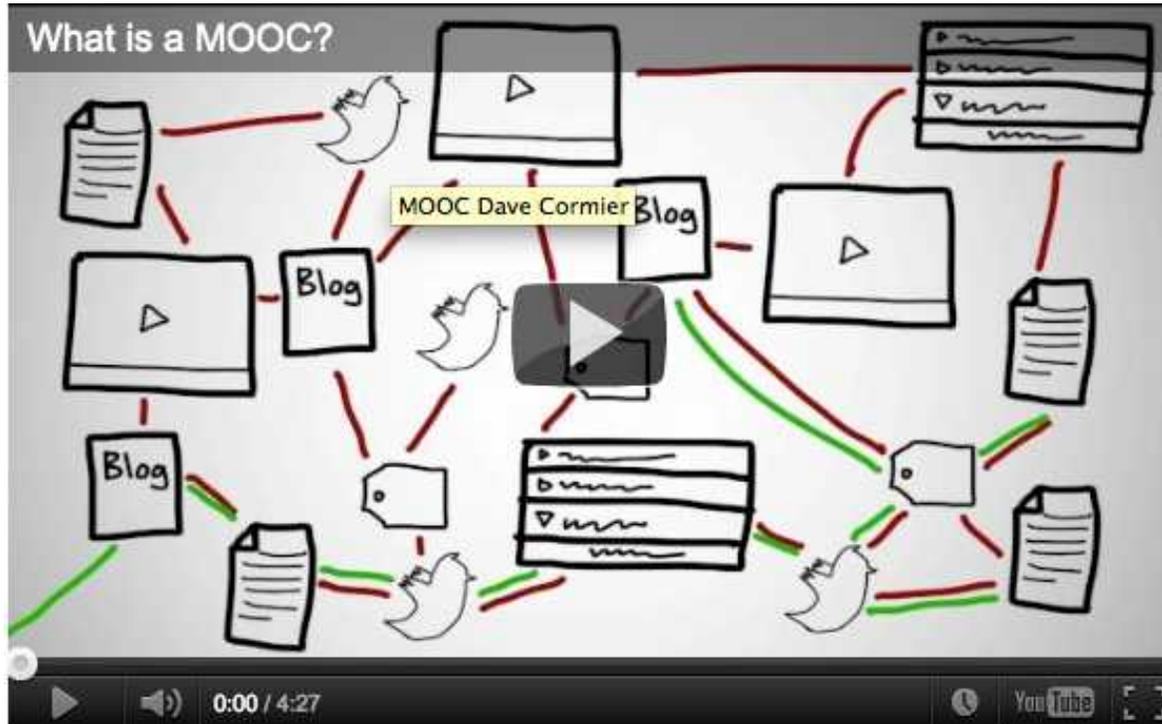
- Course structure – a series of topics
 - The instructors will not ‘teach’ the topics, they ‘investigate’ or ‘work through’ the topics (model and demonstrate)



gRSShopper



How to Learn in a cMOOC

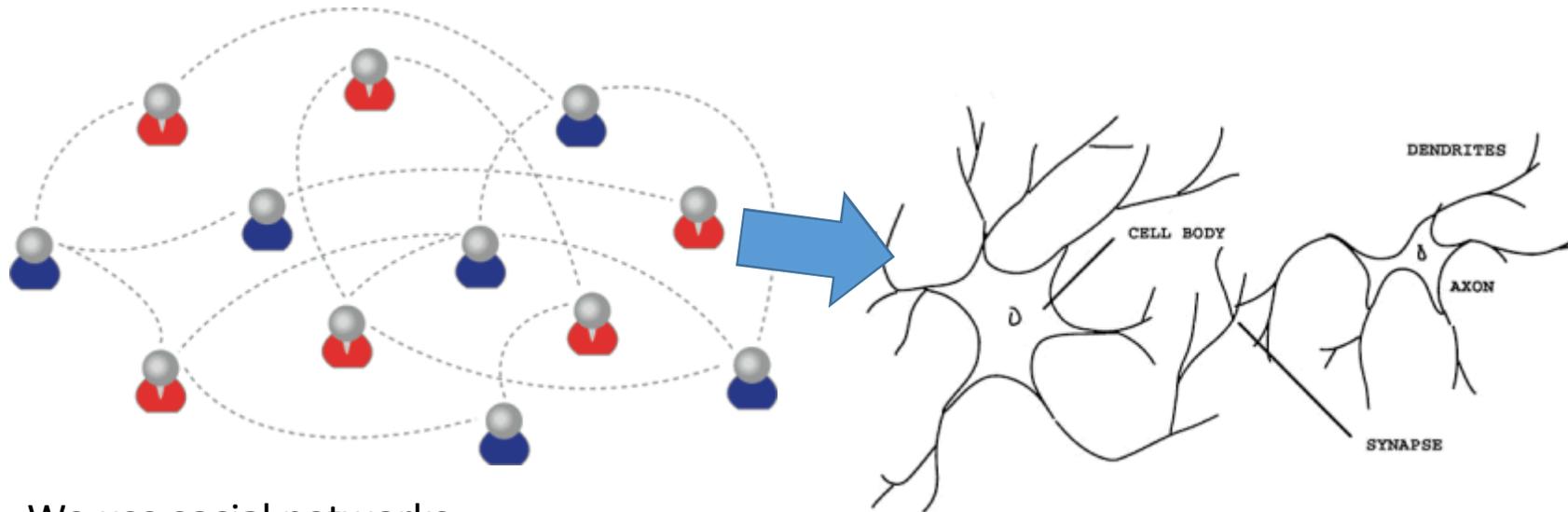


Learning is a process of immersion into a knowing community

<http://www.tonybates.ca/2012/03/03/more-reflections-on-moocs-and-mitx/>

How to Create a Learning

- It's like creating a network
- Don't centralize
- Concentrate on the creation of links



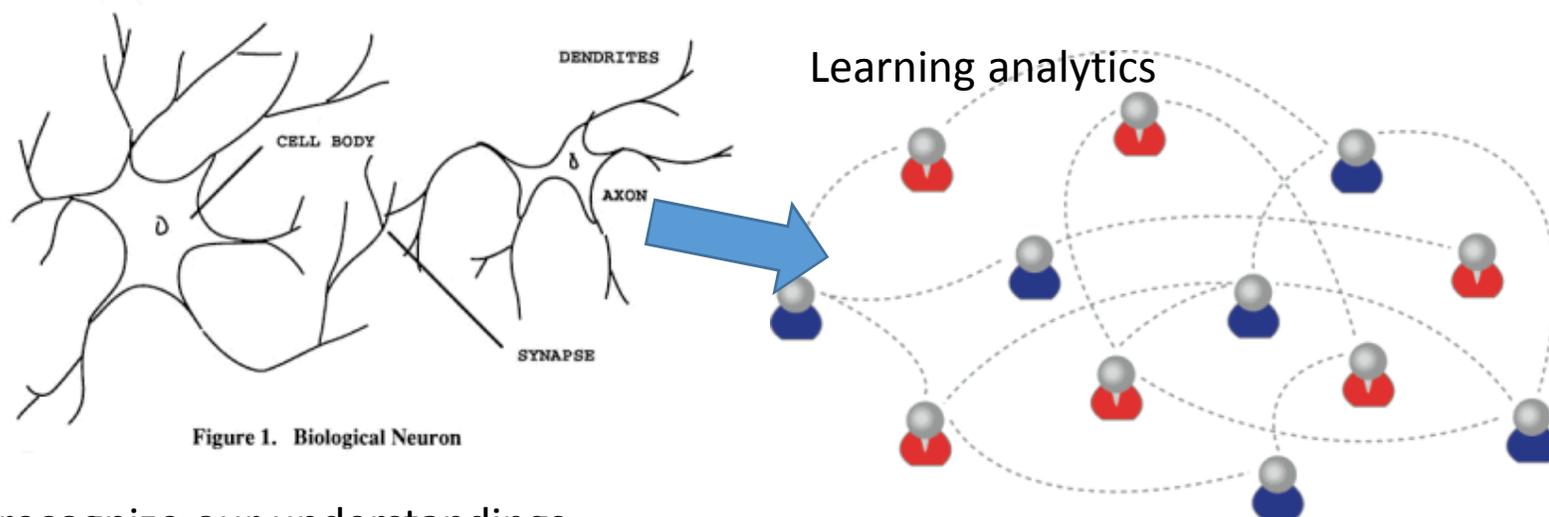
We use social networks...

Figure 1. Biological Neuron

... to create personal knowledge

How to Evaluate Learning

- Learning is not possession of a collection of facts, it's the expression of a capacity
- Learning is recognized by a community of experts in a network



We recognize our understandings...

...by the way we use them in our social network

xLearning vs cLearning



contents

engagement

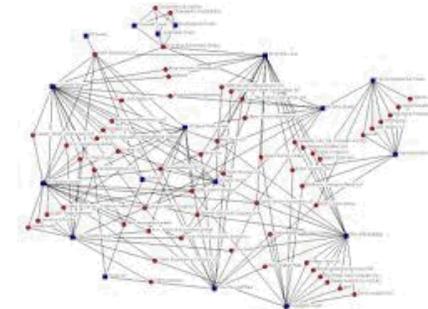
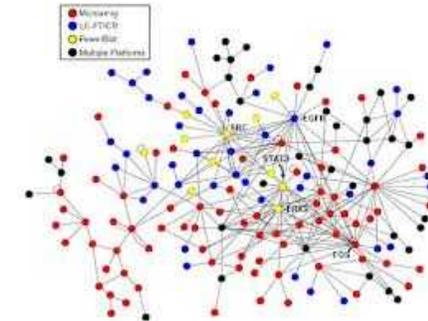
networks



<http://www.corestandards.org/>



<http://www.magnet.edu/>

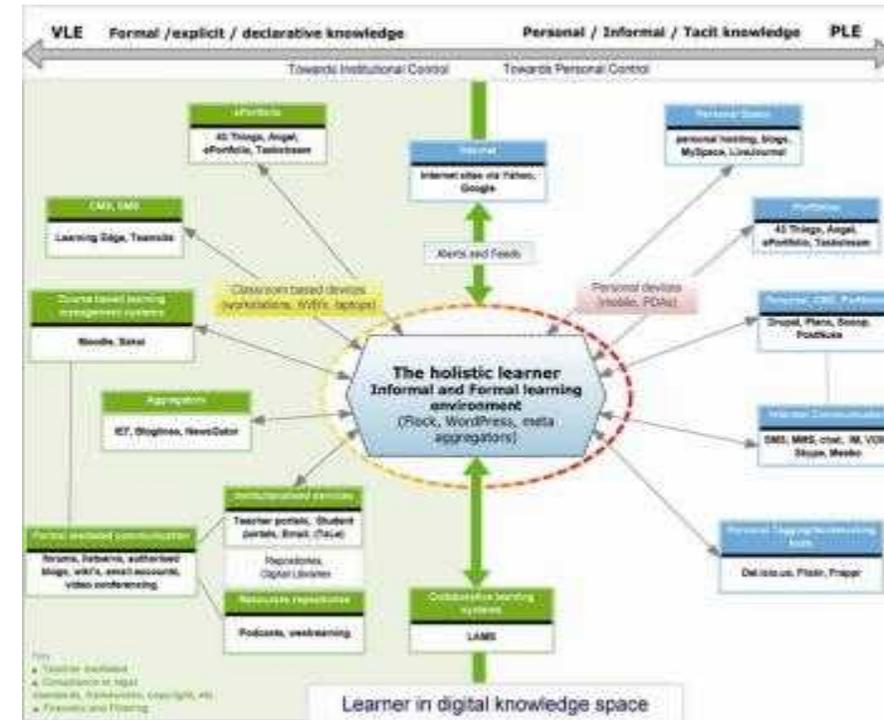
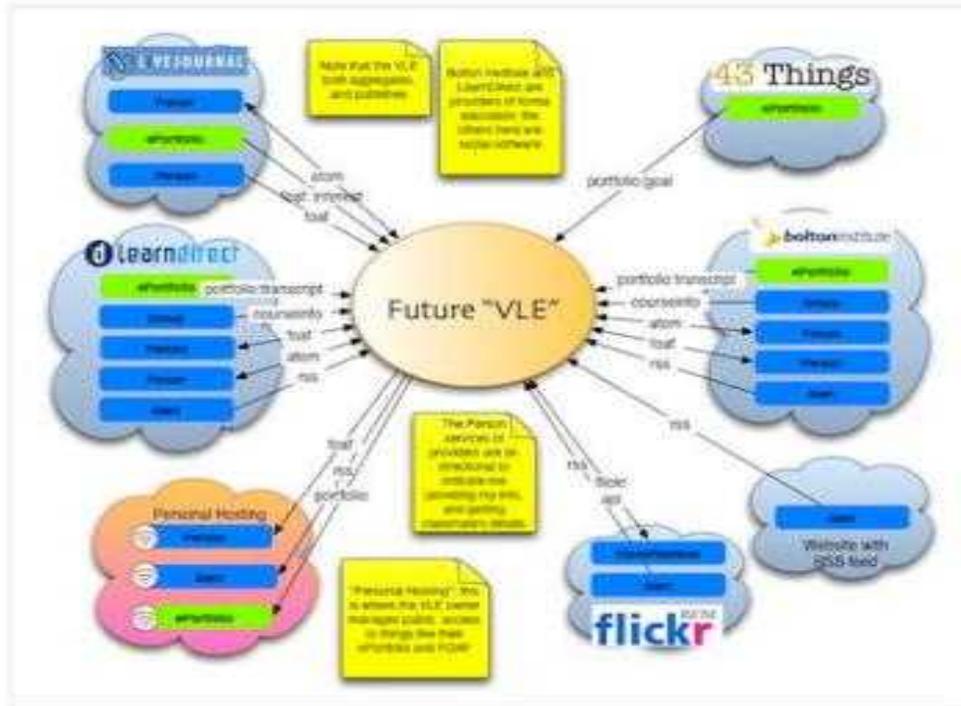


<http://lisahistory.net/wordpress/2012/08/three-kinds-of-moocs/>

5. Personal Learning Environments



The design is based on putting the learner at the centre

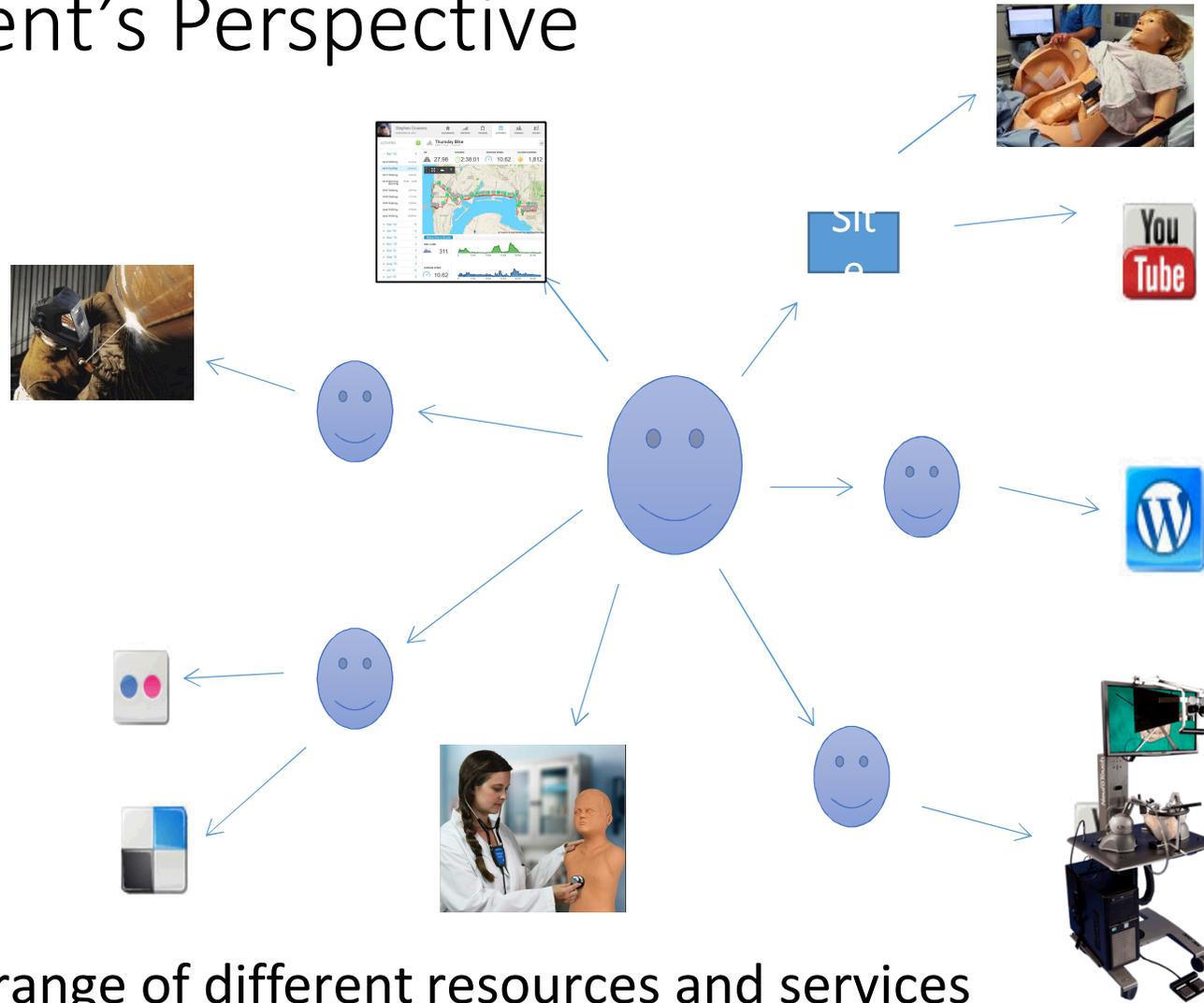


Scott Wilson (left), Tim Hand (right)

<https://www.google.com/search?q=ple+diagrams>

http://www.edtechpost.ca/ple_diagrams/index.php/mind-map-3

The Student's Perspective



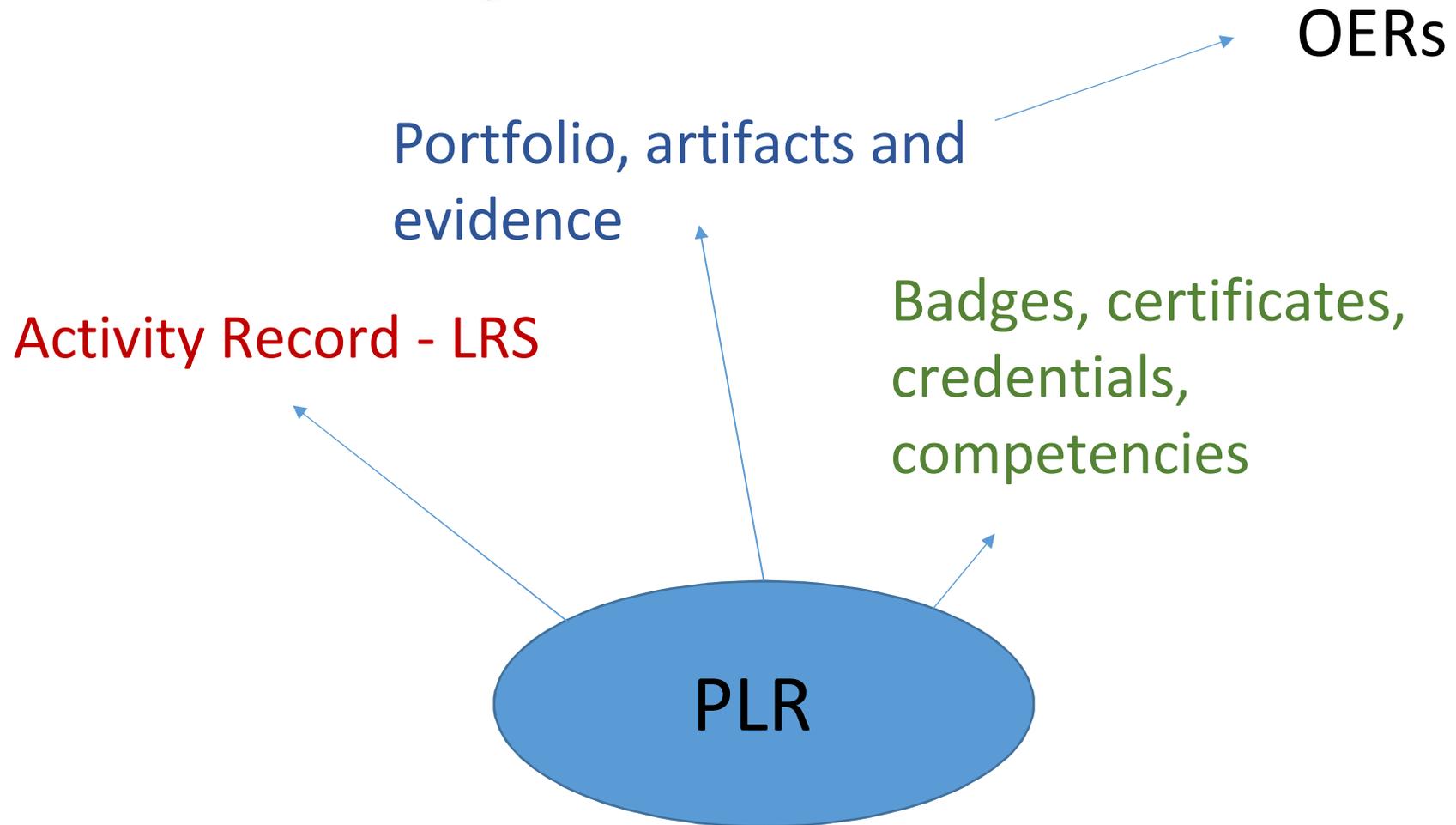
A range of different resources and services

Personal Learning Record

The Personal Learning Record – data owned by the individual, shared only with permissions



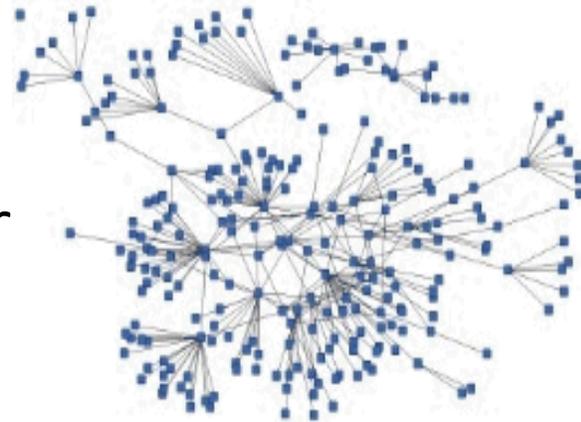
Personal Learning Record



LPSS is Built Around the Personal Learning Record

This is a *new* type of data – we call it the *personal graph*.

Each person has their own *private* personal graph.

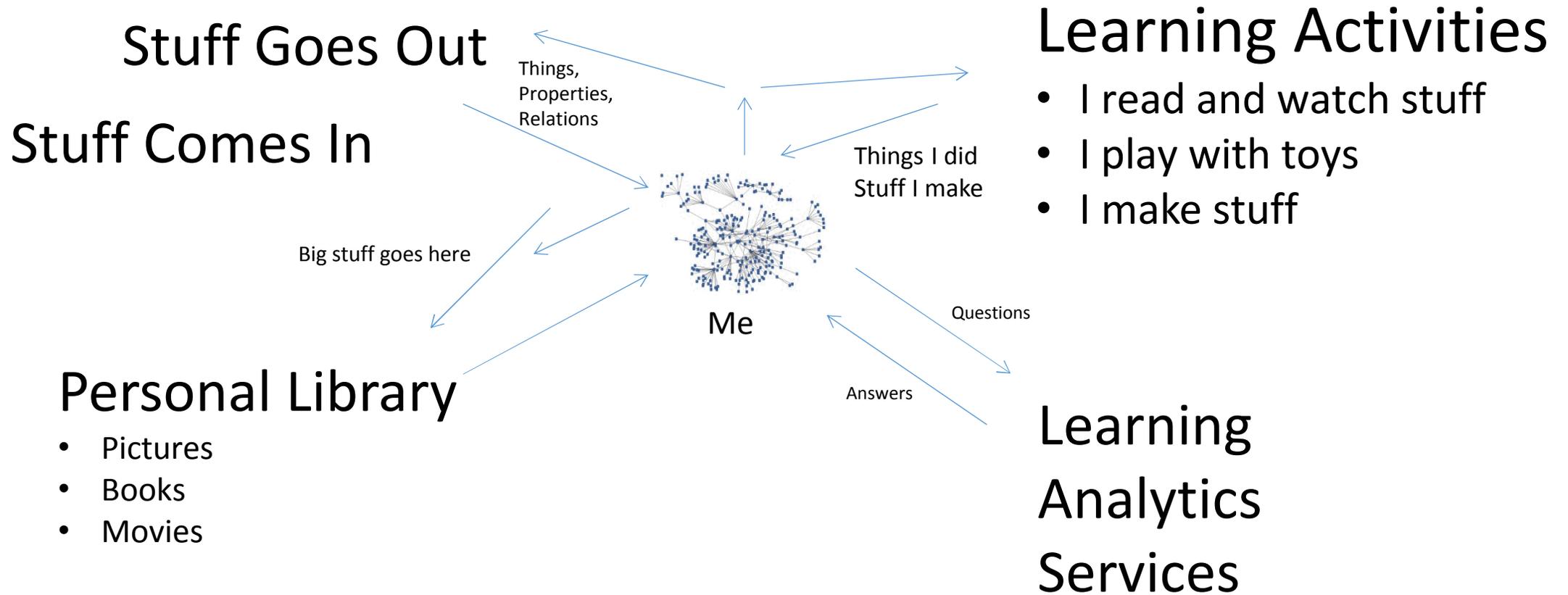


Me

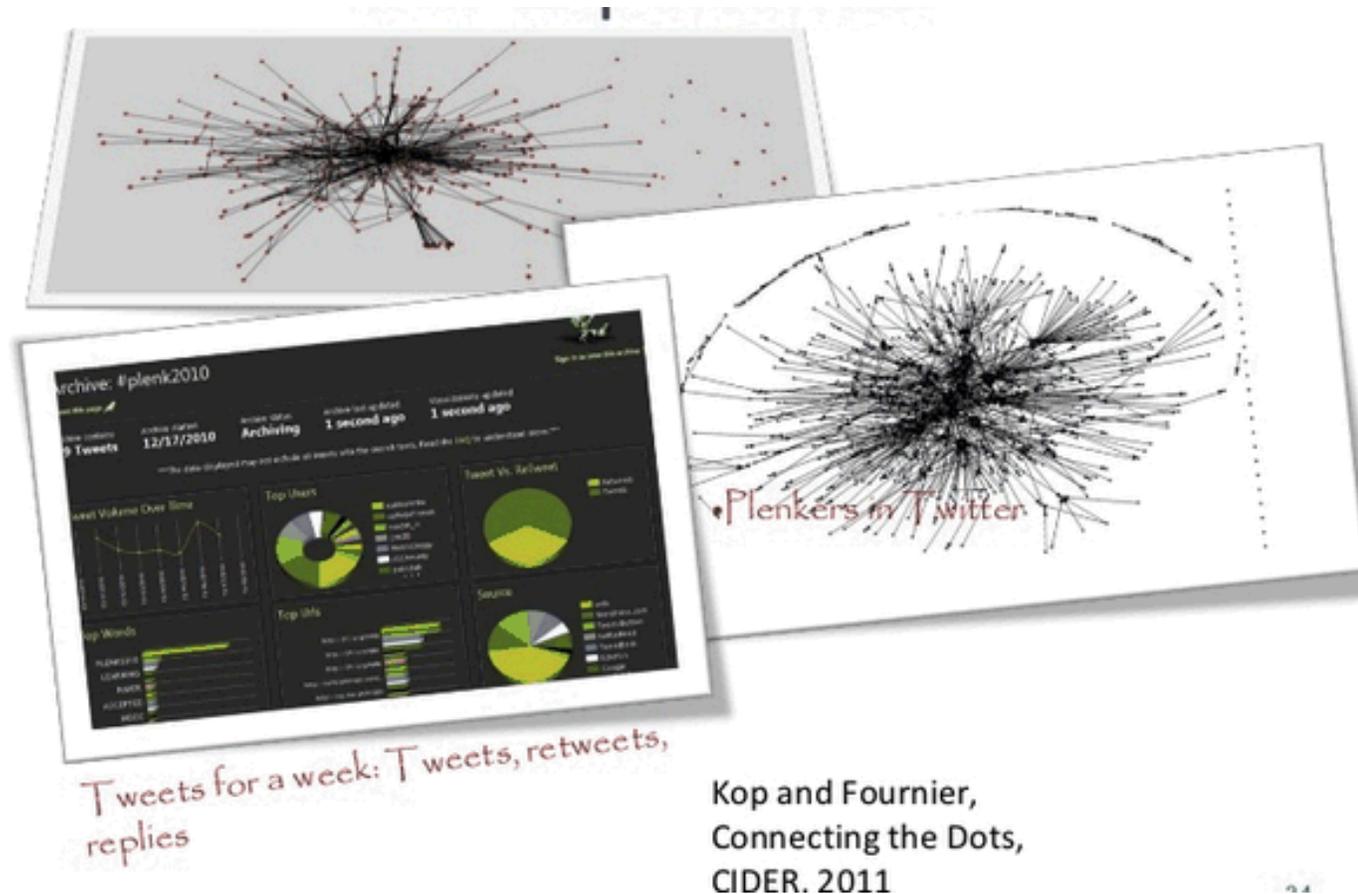
The PLR contains all a person's learning records, including:

- certificates, badges and credentials
- activity records, test results, scores
- Assignments, papers, drawings, things they create

LPSS is Built Around the Personal Learning Record



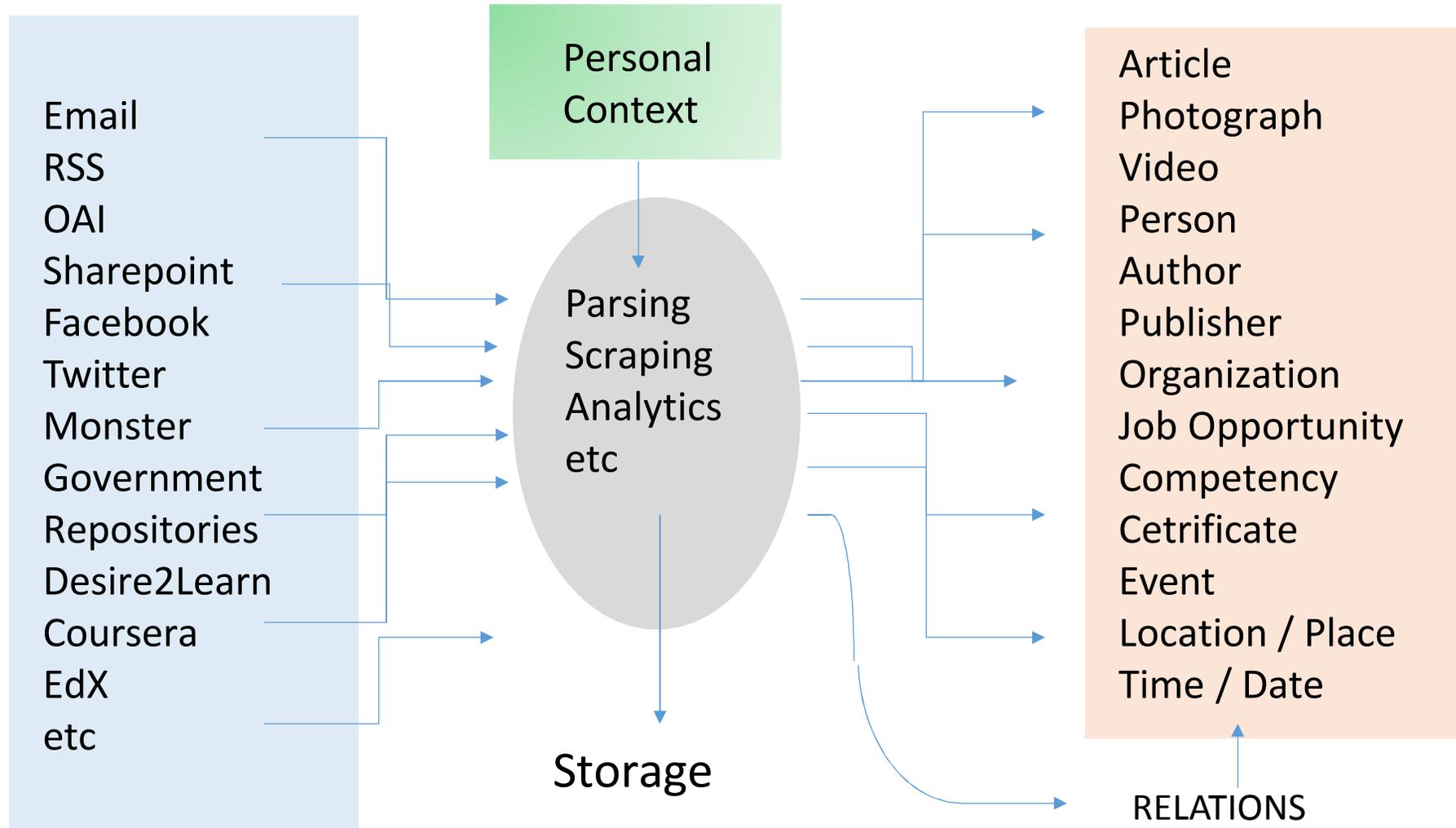
Plearn – Importance of the Graph



<http://www.slideshare.net/Downes/after-moodle>

<http://www.slideshare.net/Ritakop/kopfourniercanadianinstitutedistanceeducationresearchple>

Graph Aggregation and Storage



Future Projects...

- OERs, Repositories, Marketplaces
- Badges, Credentials, Recognition
- Simulations & Workplace Support
- Matching People to Opportunities



