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**Personal learning in the workplace**  
Downes, S.

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A photograph of a long, arched tunnel with a red interior. The tunnel has a white walkway and a red railing. Several people are walking in the distance. The text "Personal Learning in the Workplace" is overlaid in white.

# Personal Learning in the Workplace

Stephen Downes  
AMEE 2015  
Glasgow, Scotland



# 1. Knowledge Translation



# 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>

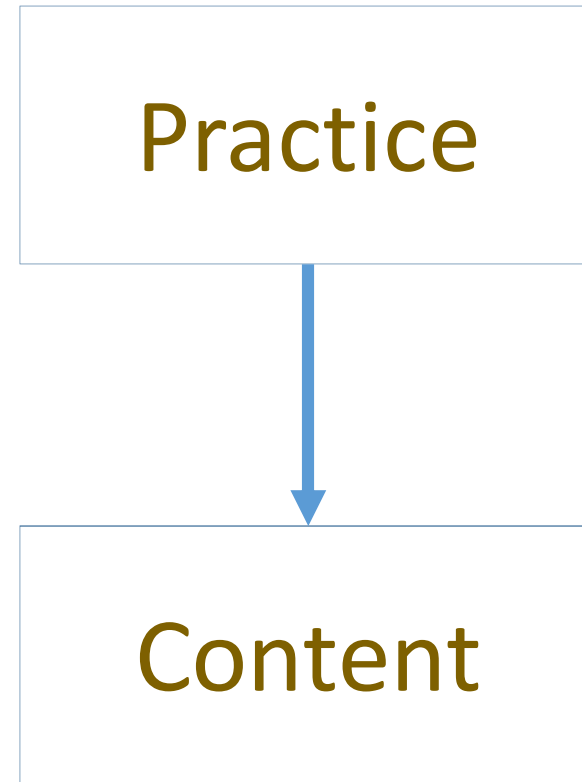
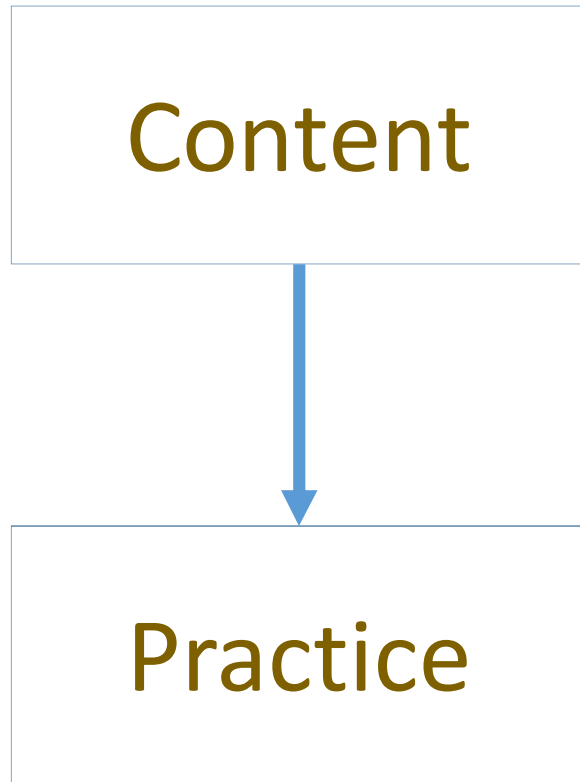
## Criticisms...

- “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

# The Hackathon...



# Two Approaches...



# Two Approaches...

Defines an ideal state

Content



Practice

TEST

Person tests you

Defines a desired state

Practice



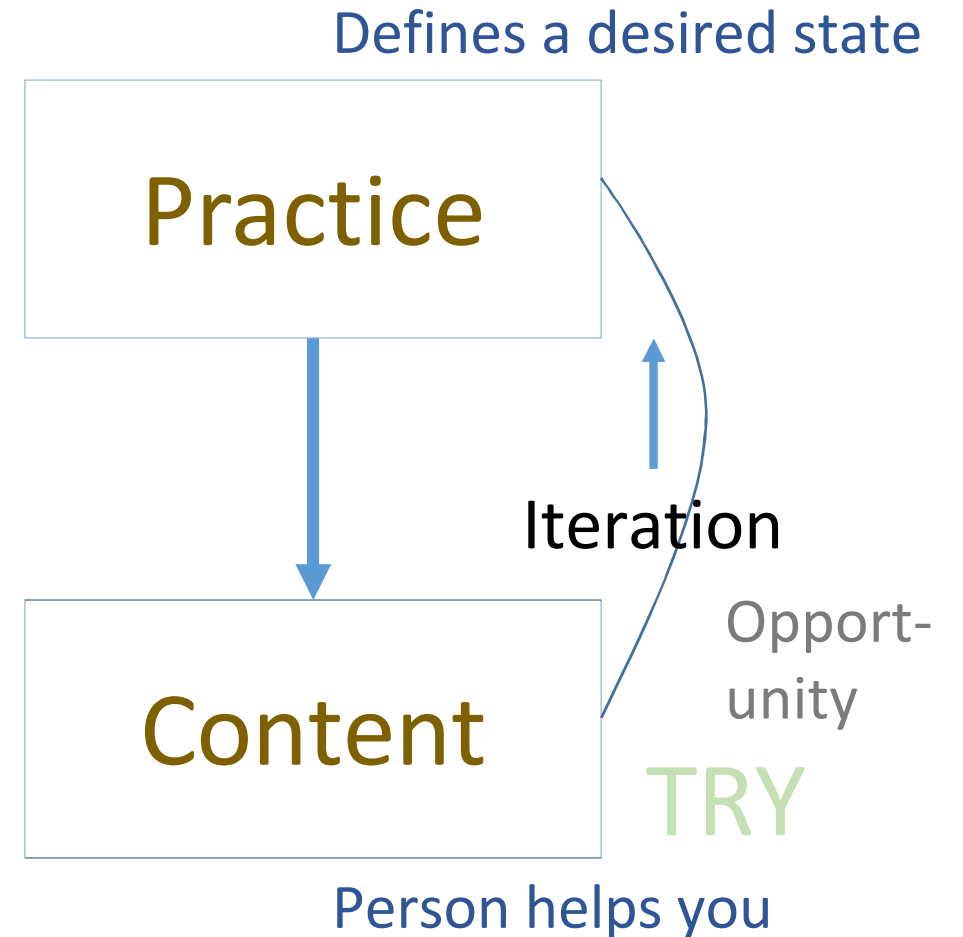
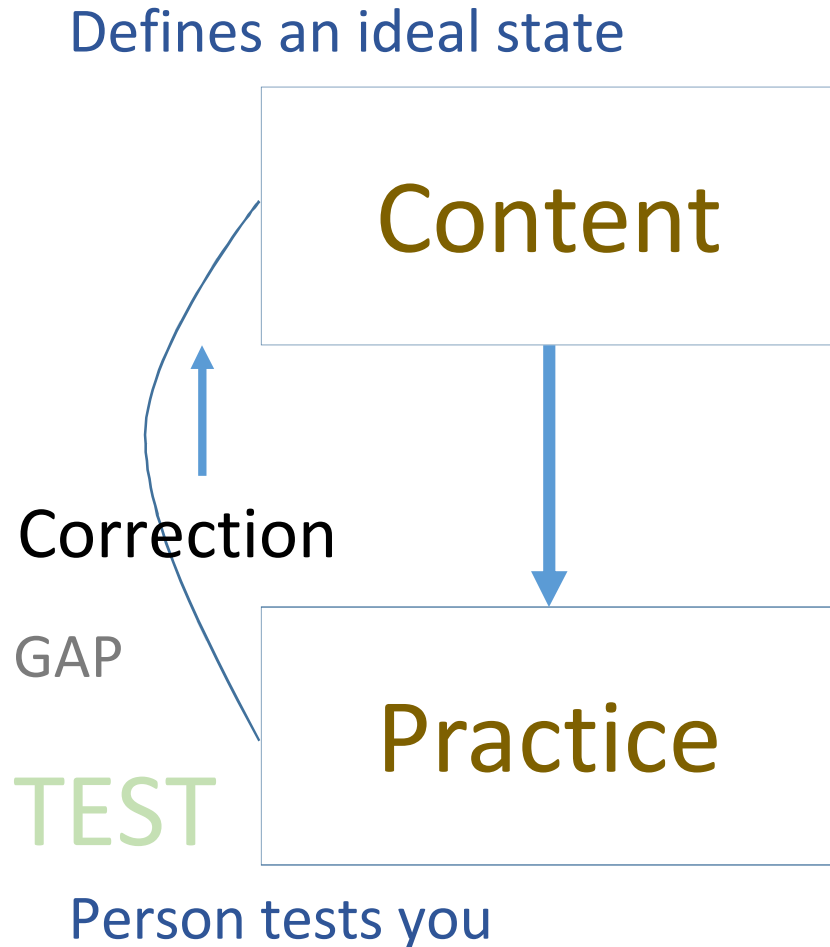
Content

TRY

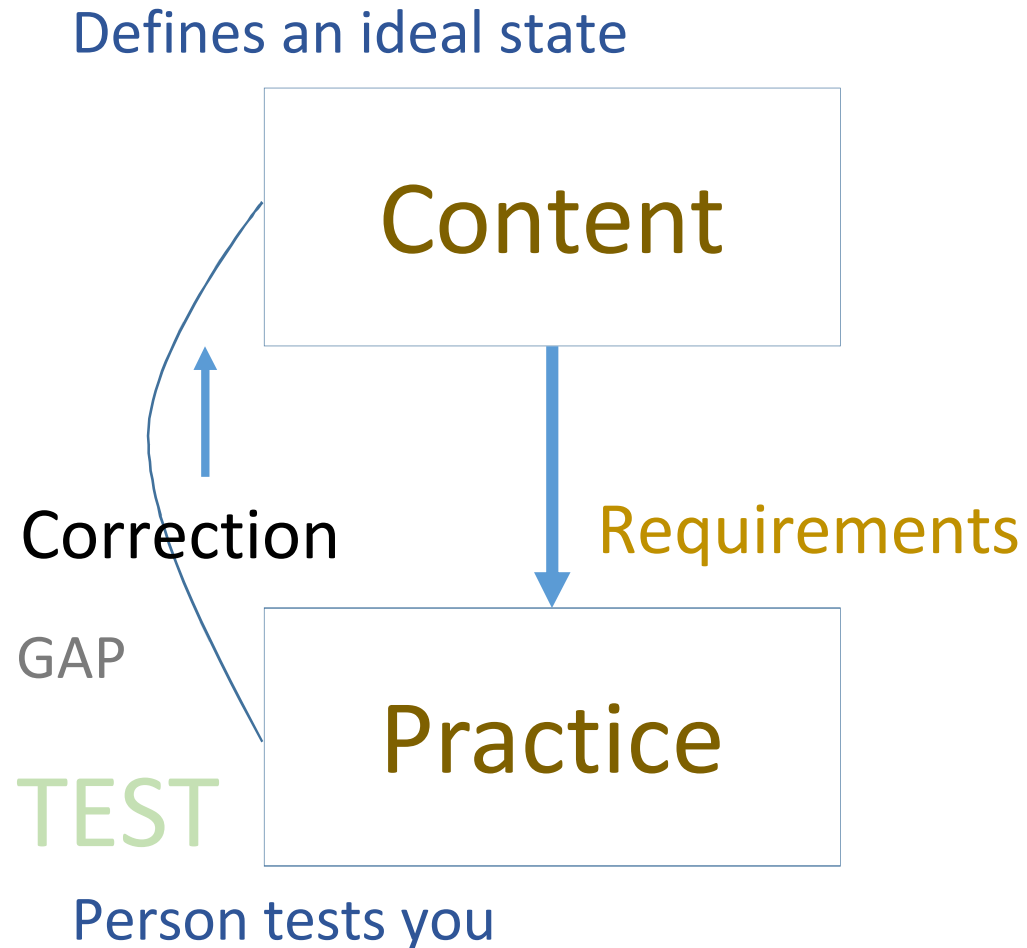
Person helps you



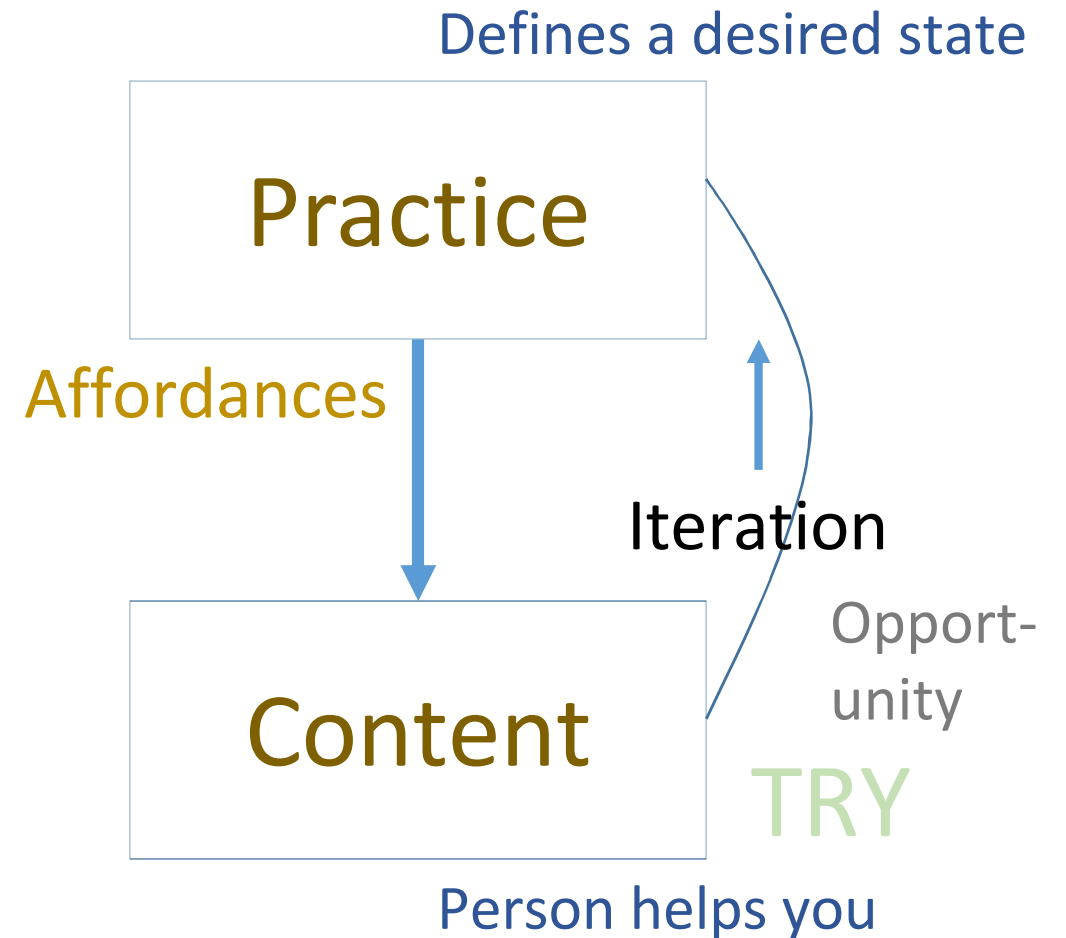
# Two Approaches...



# Library

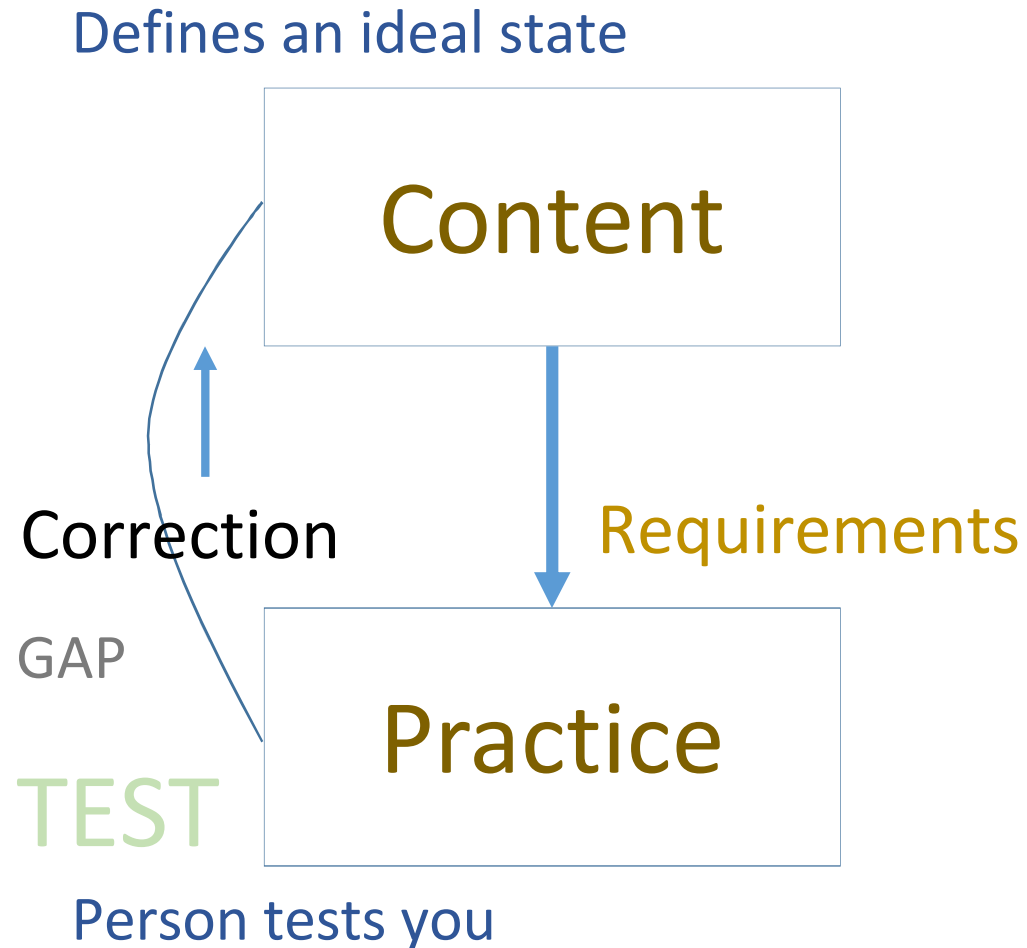


# Environment



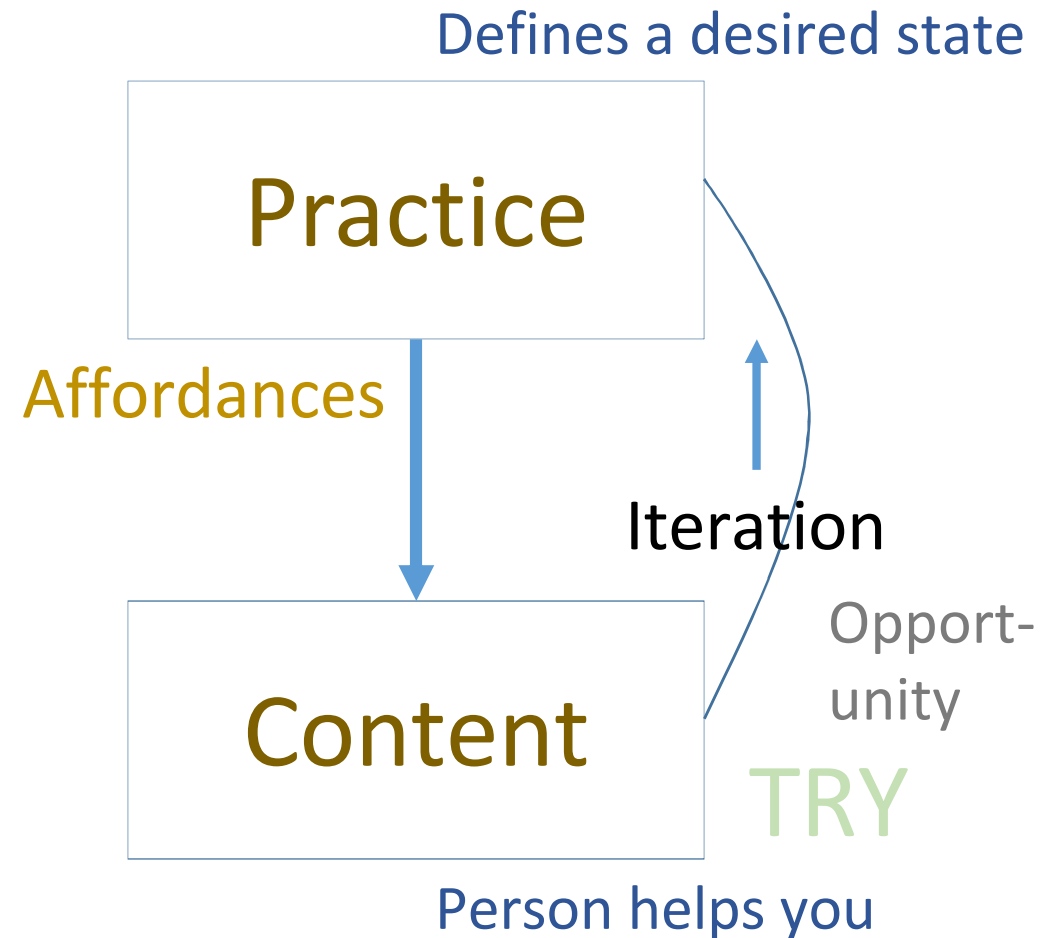
# Personalized

We do for you



# Personal

You do for yourself



# Personal vs. Personalized

- Compare between:
  - Personalized health care (something the National Health Service provides)
  - Personal health care (something you do for yourself)



## 2. 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/>

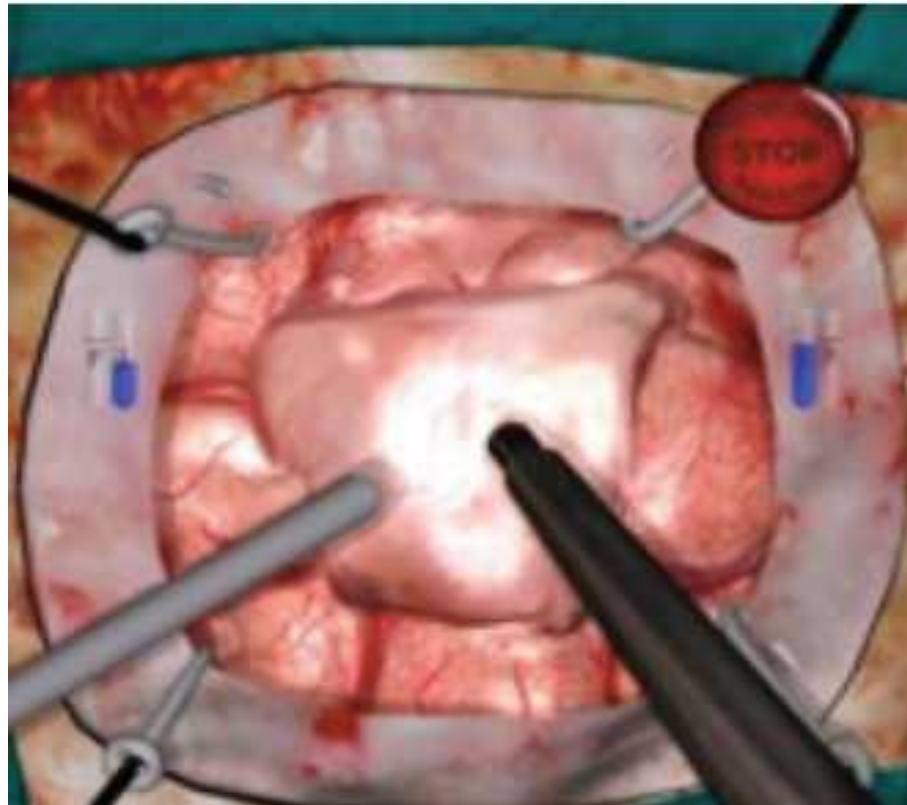
# MINT - Mobile INteractive Trainer



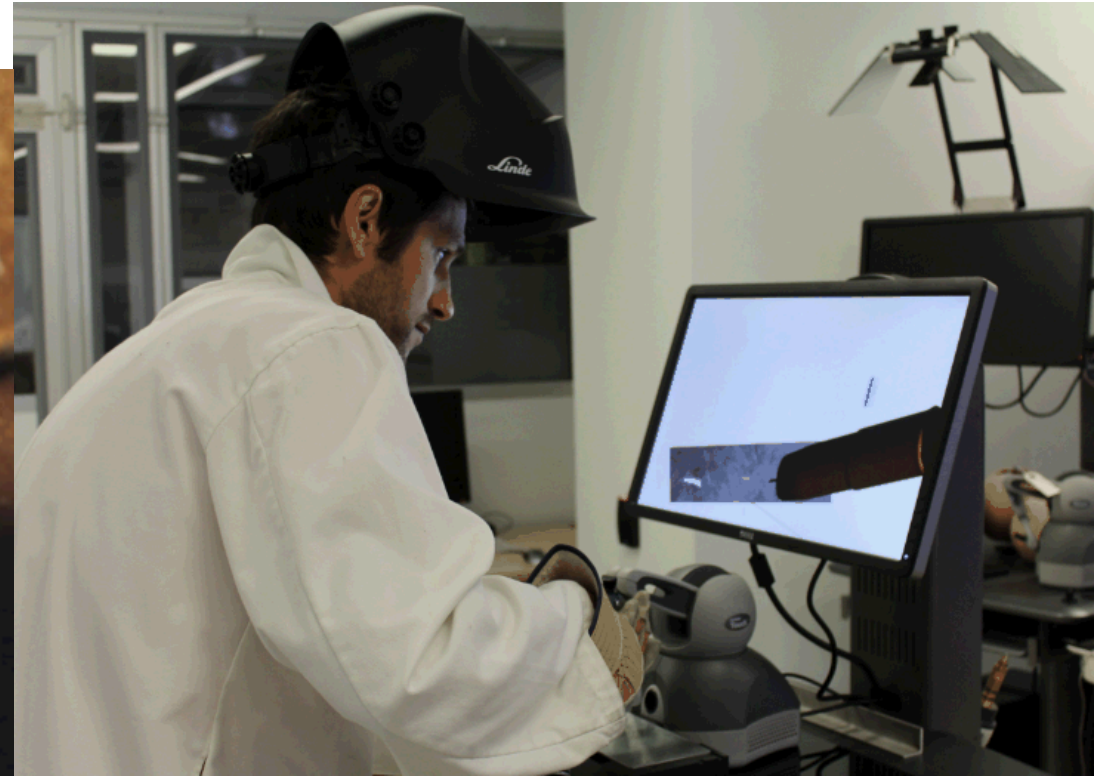
<http://www.downes.ca/post/59876>



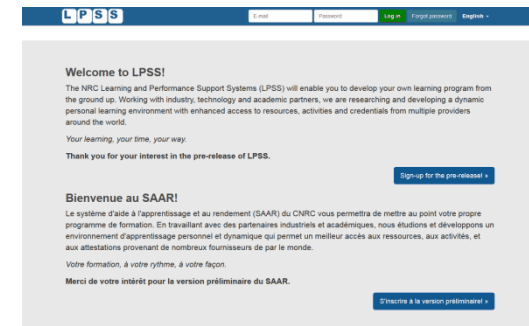
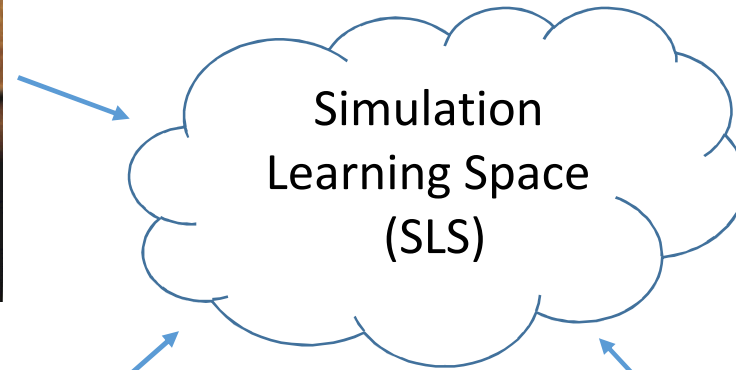
# NeuroTouch Simulator



# Sim-Welding

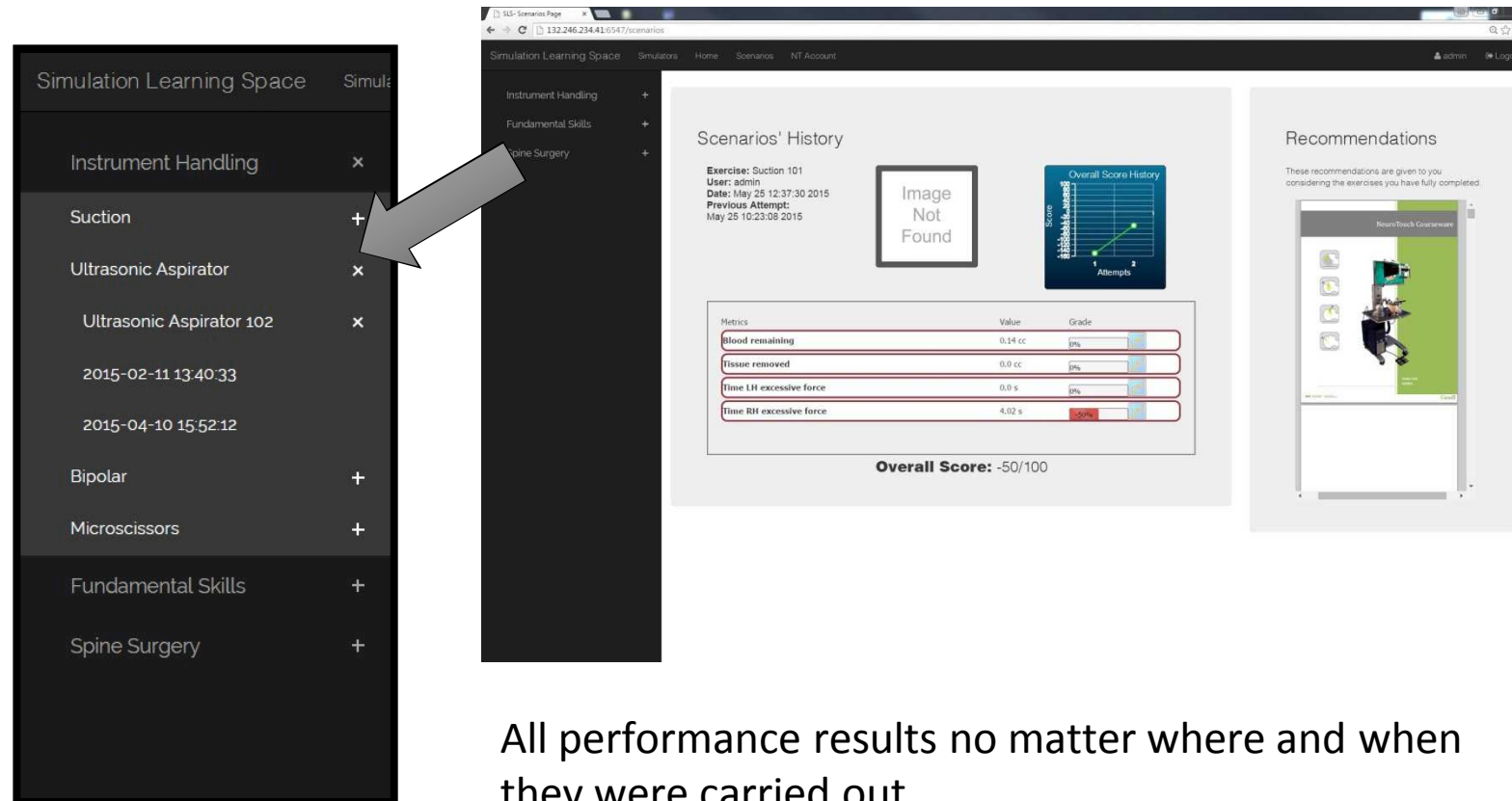


# LPSS-Sim Project Overview



# Combining Experiences

One place for all simulation experience



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

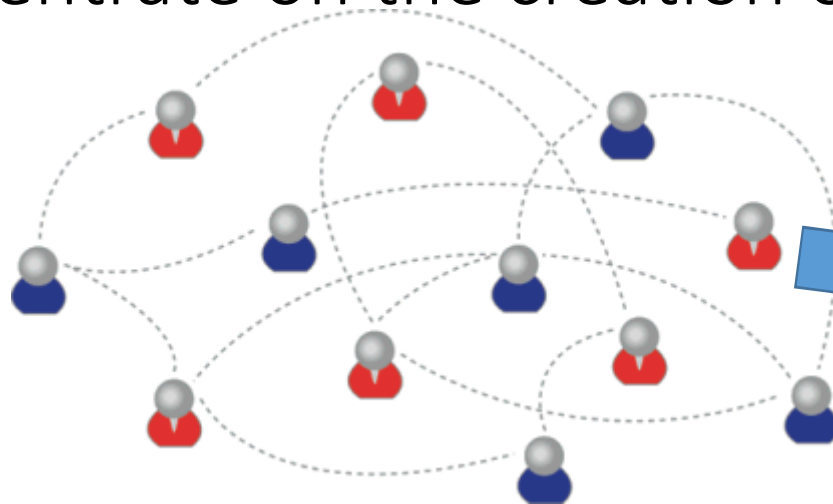


### 3. The Case of the cMOOC



# How to Create a cMOOC

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



We use social networks...

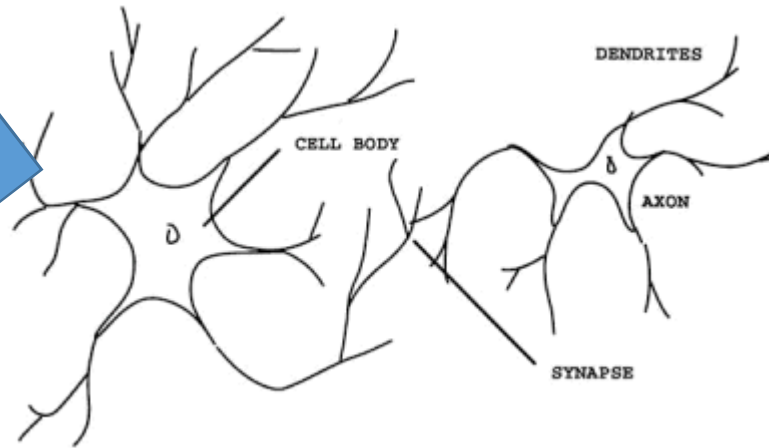
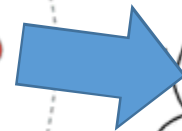


Figure 1. Biological Neuron

... to create personal knowledge

# Primary Course Components

- Wiki – to assist in planning, topics, guests, etc
- Email list – for announcements and mass communications
- Course Blog – for daily posts
- Synchronous Communications + Video

# 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)



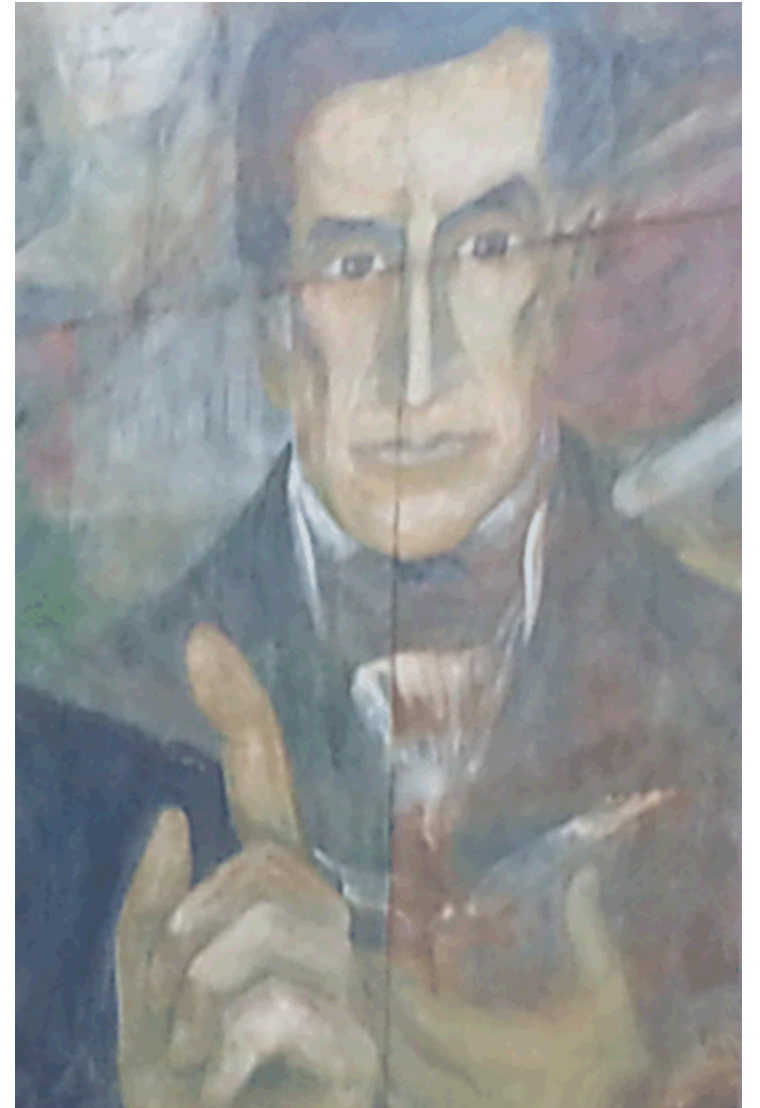


# Additional Course Components

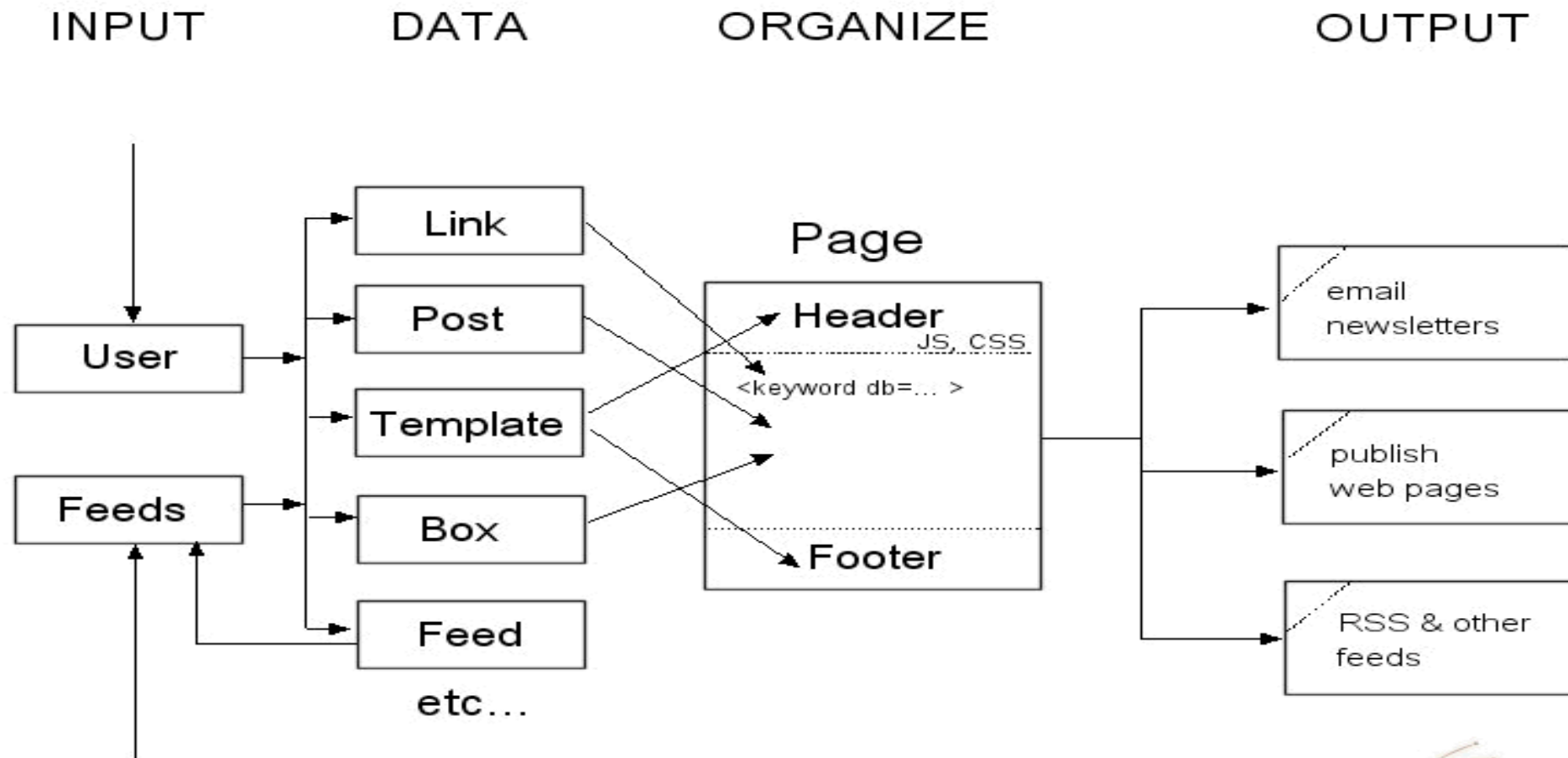
- For Students – *any* online communications system, including
  - Blogs – Blogger, WordPress, Tumblr
  - Social Network – Facebook, Twitter, Google+
  - Content site – Google Docs, Flickr, Instragram
  - Aggregator – Feedly, OldReader, (new) Bli RSS

# Process

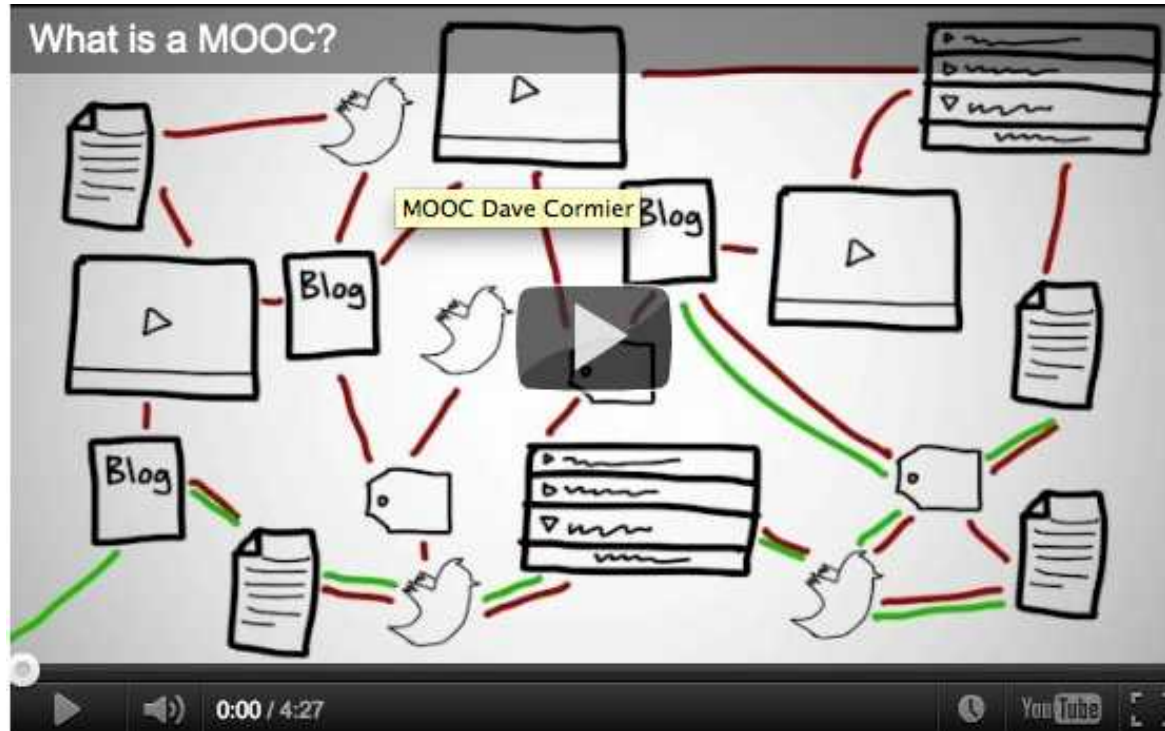
- Each Week
  - Conversation or activity with guest
  - Discussion and reflection
- Each *Day*
  - Aggregate student content
  - Share via web site & newsletter



# gRSShopper



# How to Learn in a cMOOC



Learning is a process of immersion into a knowing community

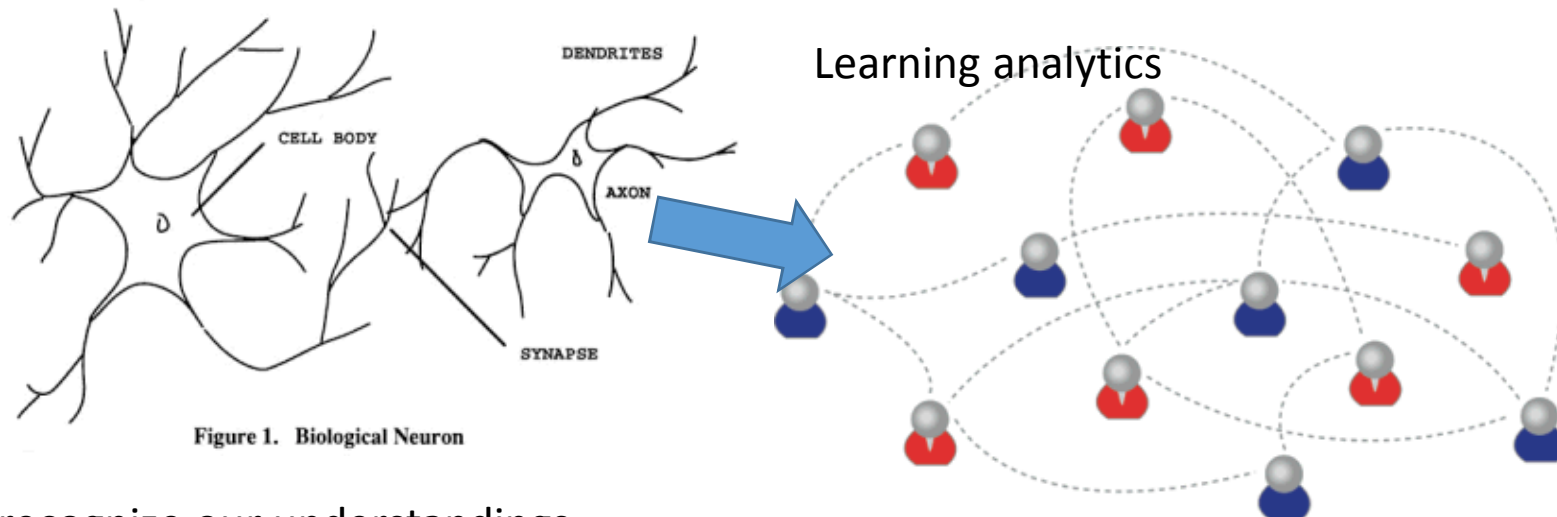
<http://www.tonybates.ca/2012/03/03/more-reflections-on-moocs-and-mitx/>



Learning is a process of *recognizing* and *growing into* or *becoming* an instantiation of those values...

# 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

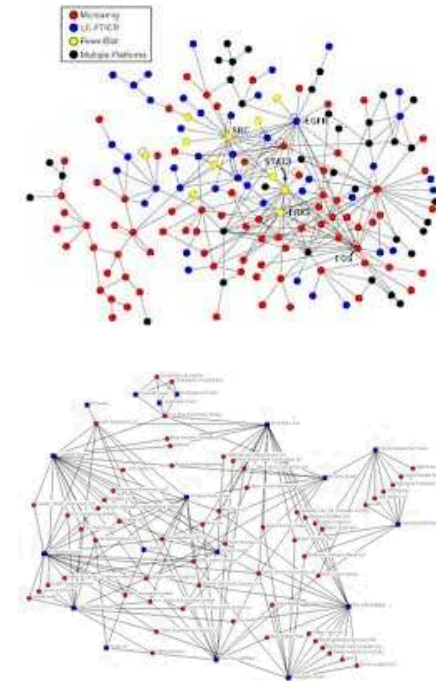
networks



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



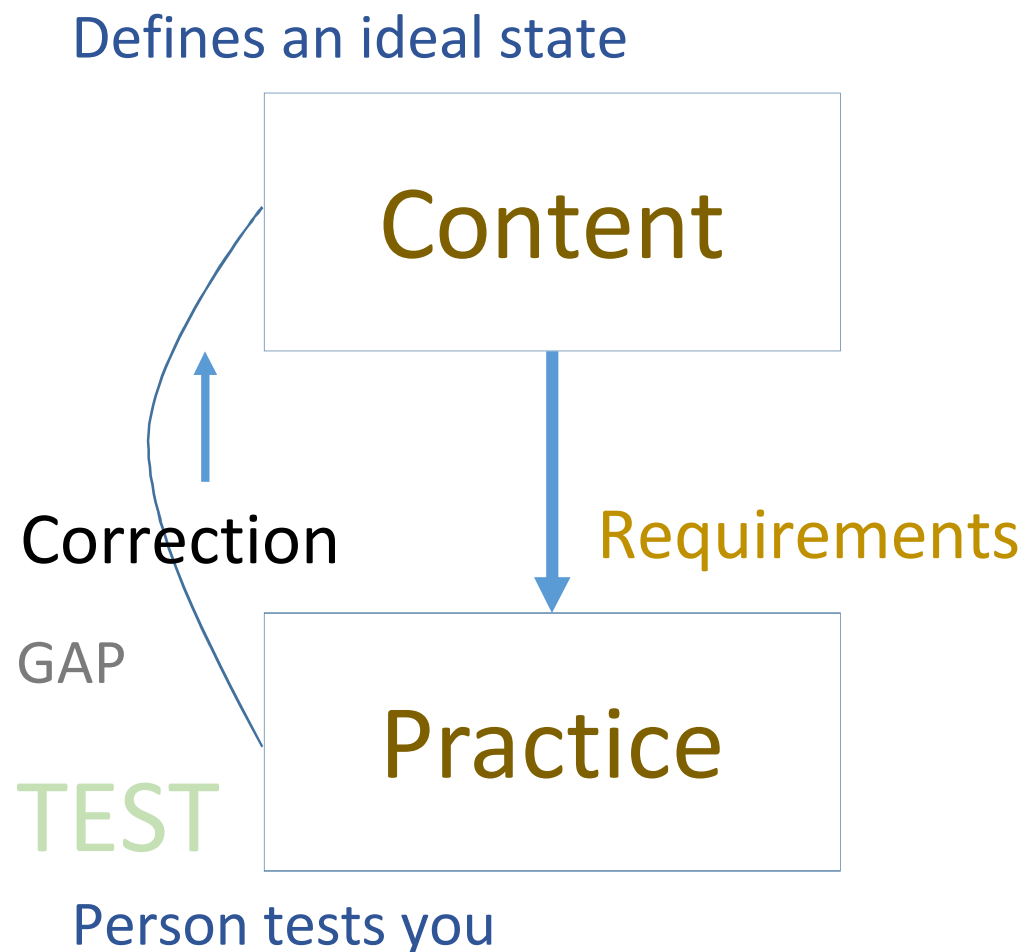
<http://www.magnet.edu/>



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

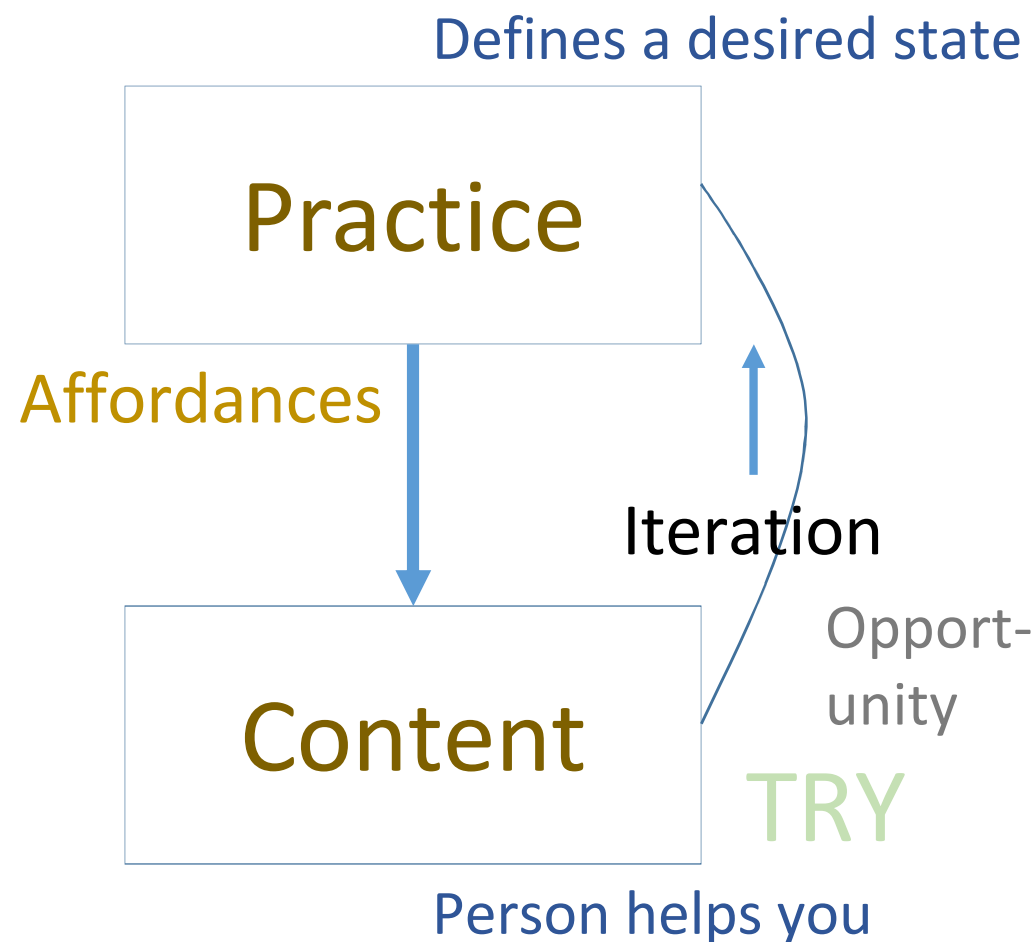
# Personalized

We do for you



# Personal

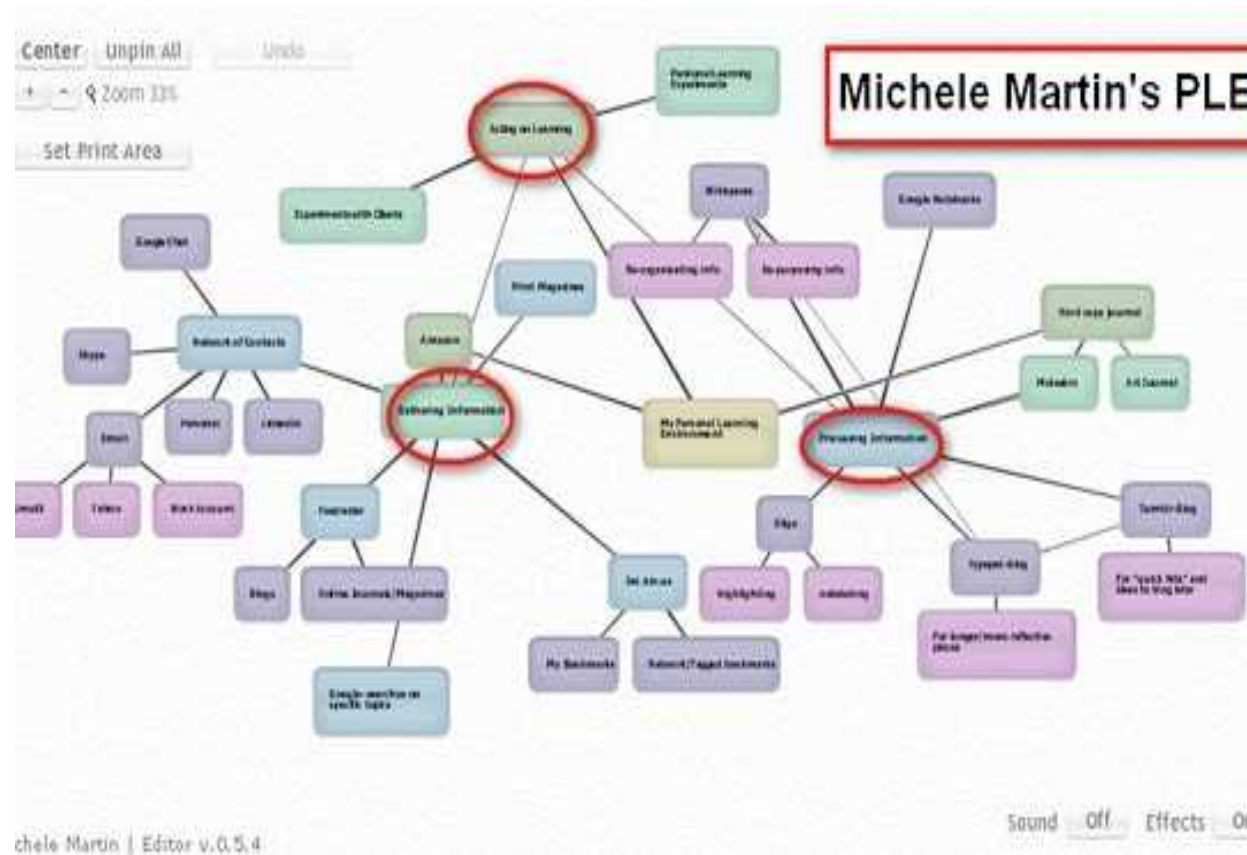
You do for yourself



## 4. Personal Learning Environments



# Personal Learning Environments

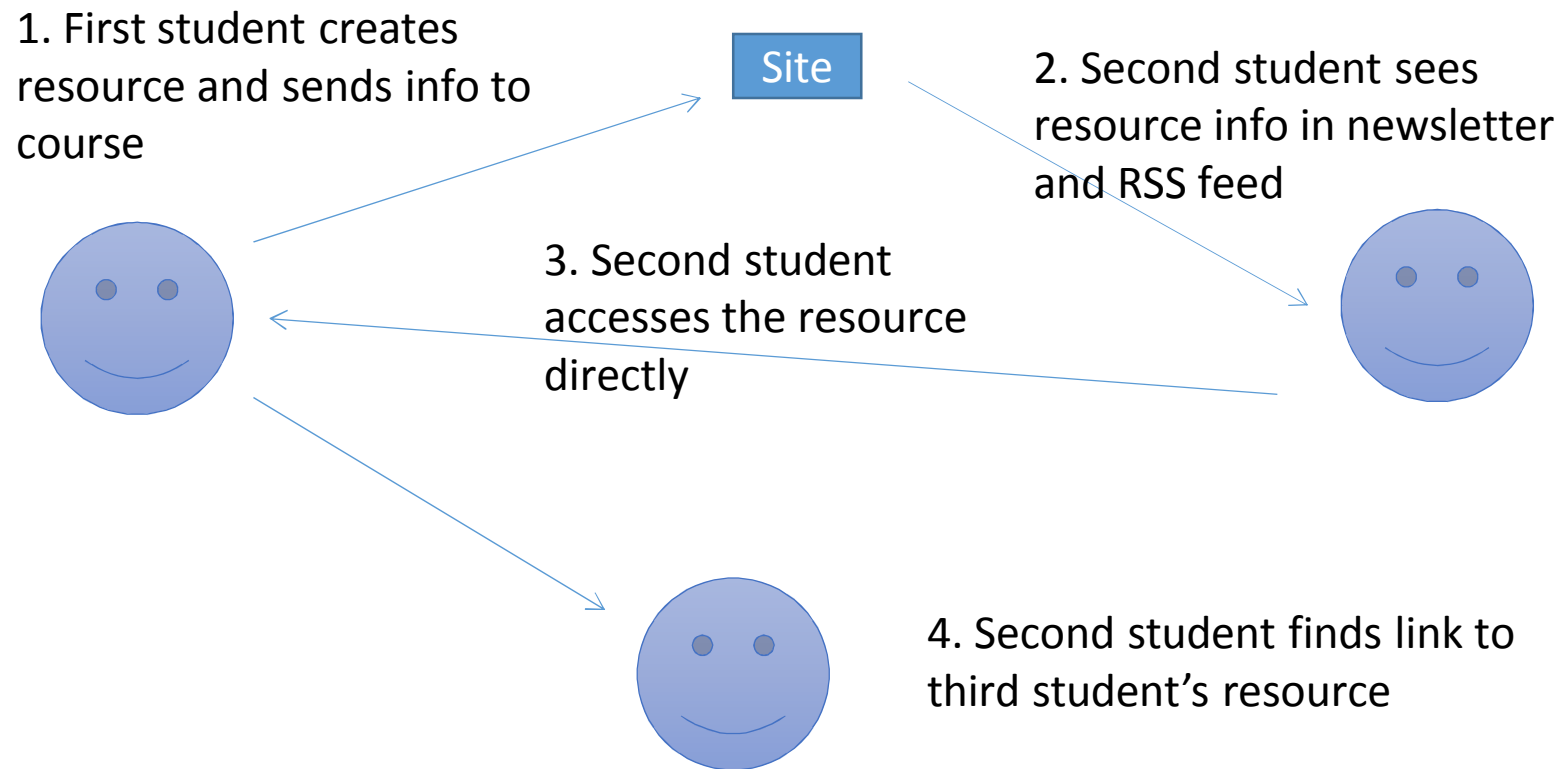


<http://dmlcentral.net/blog/howard-rheingold/diy-u-interview-anyakamenetz>

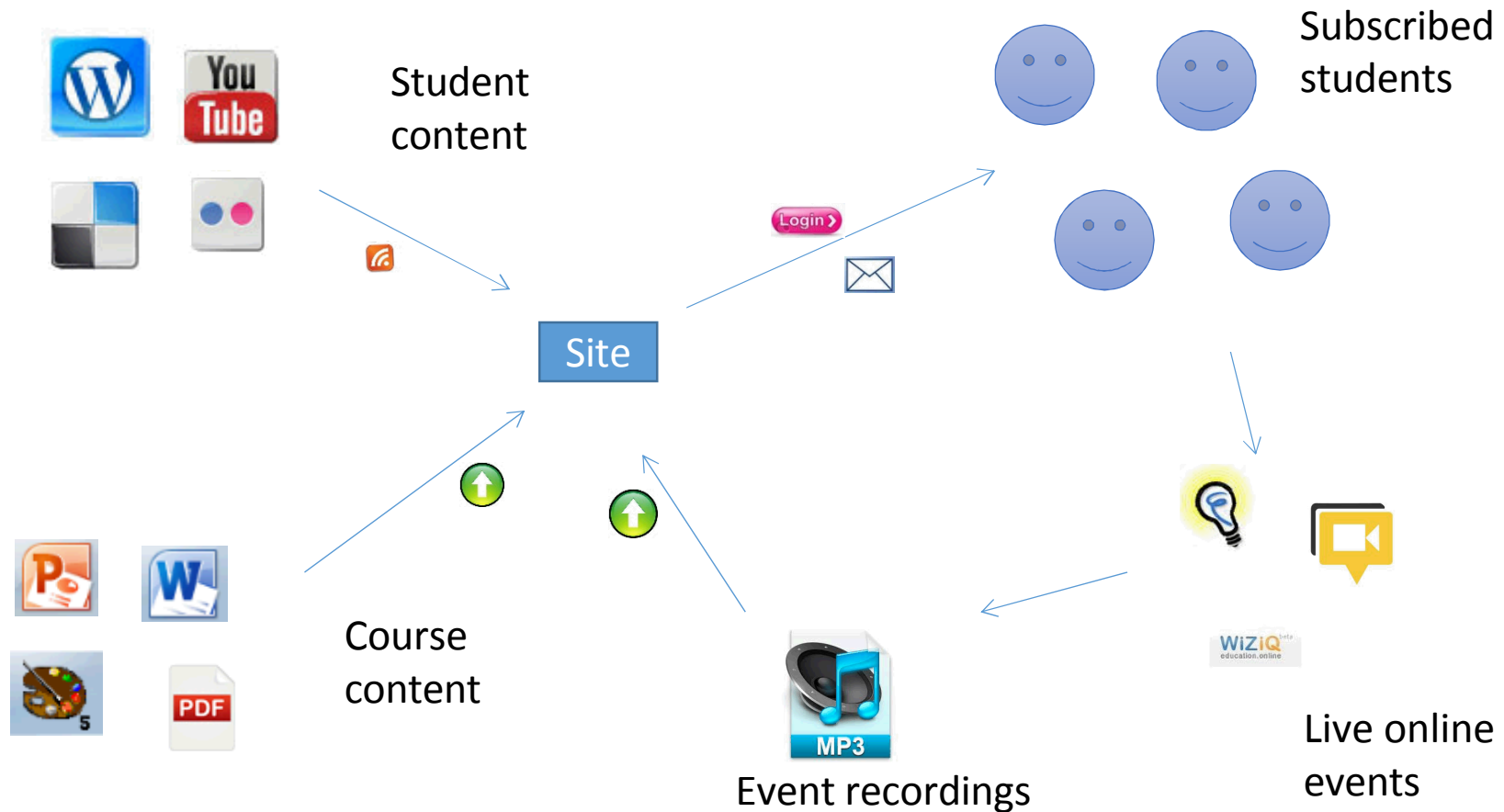
<http://www.downes.ca/post/58150>



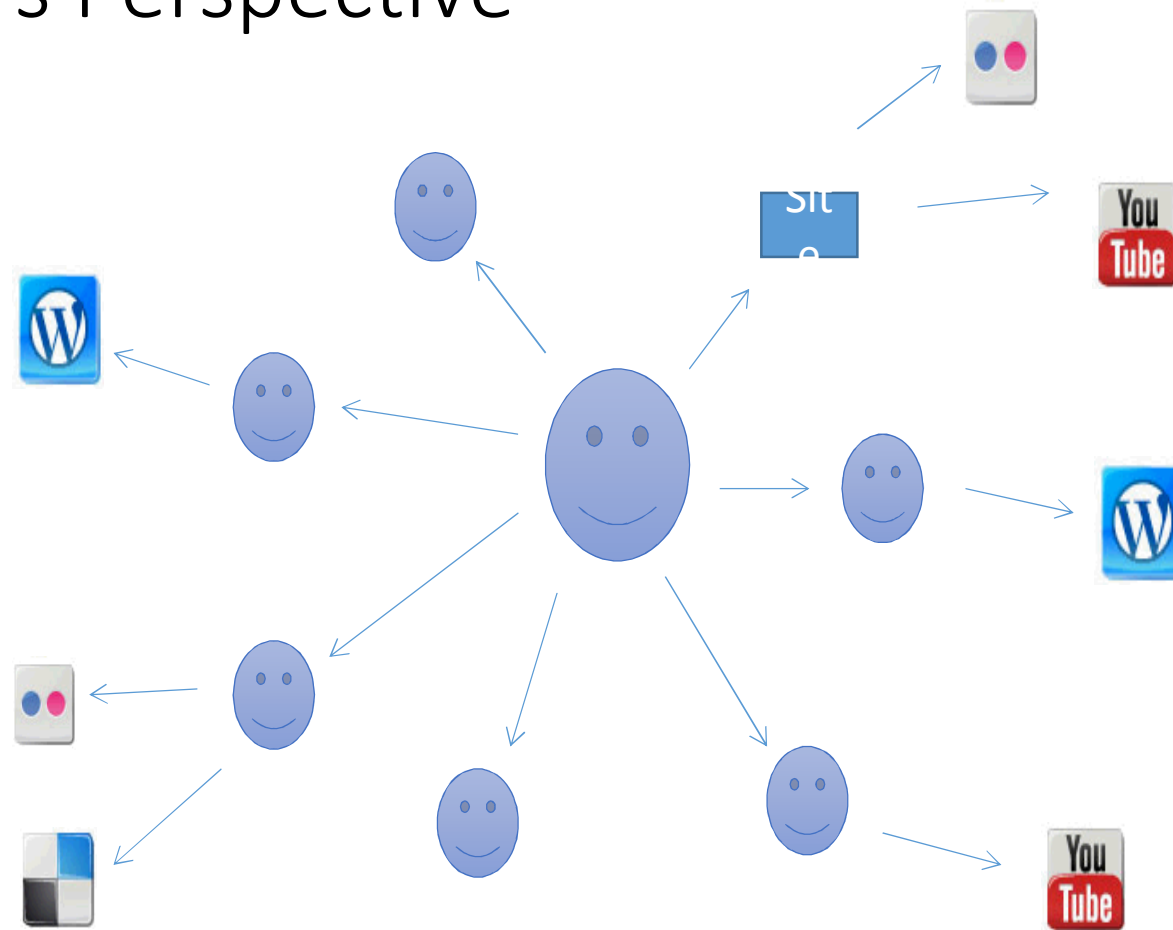
# Underlying MOOC Support



# Course Provider Perspective

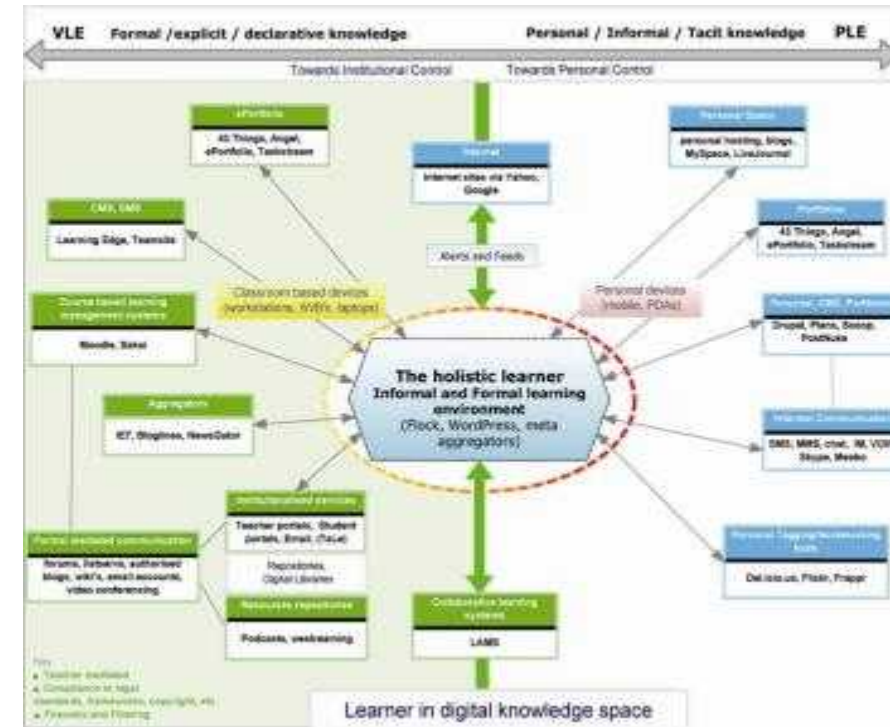
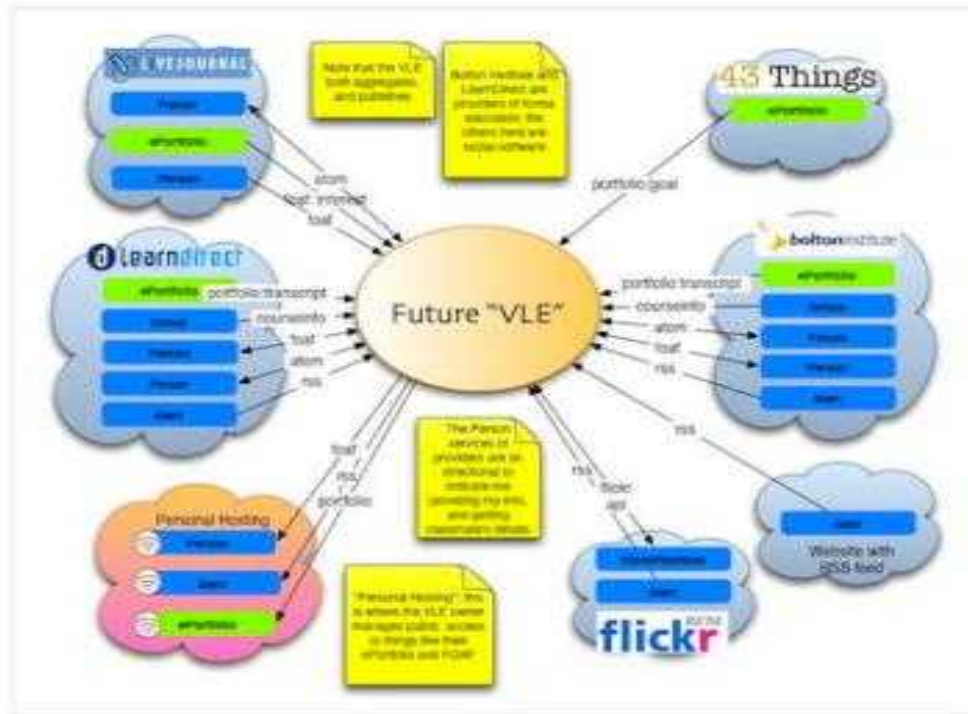


# The Student's Perspective



A range of different resources and services

# 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](http://www.edtechpost.ca/ple_diagrams/index.php/mind-map-3)



## 5. Learning and Performance Support Systems



# 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.

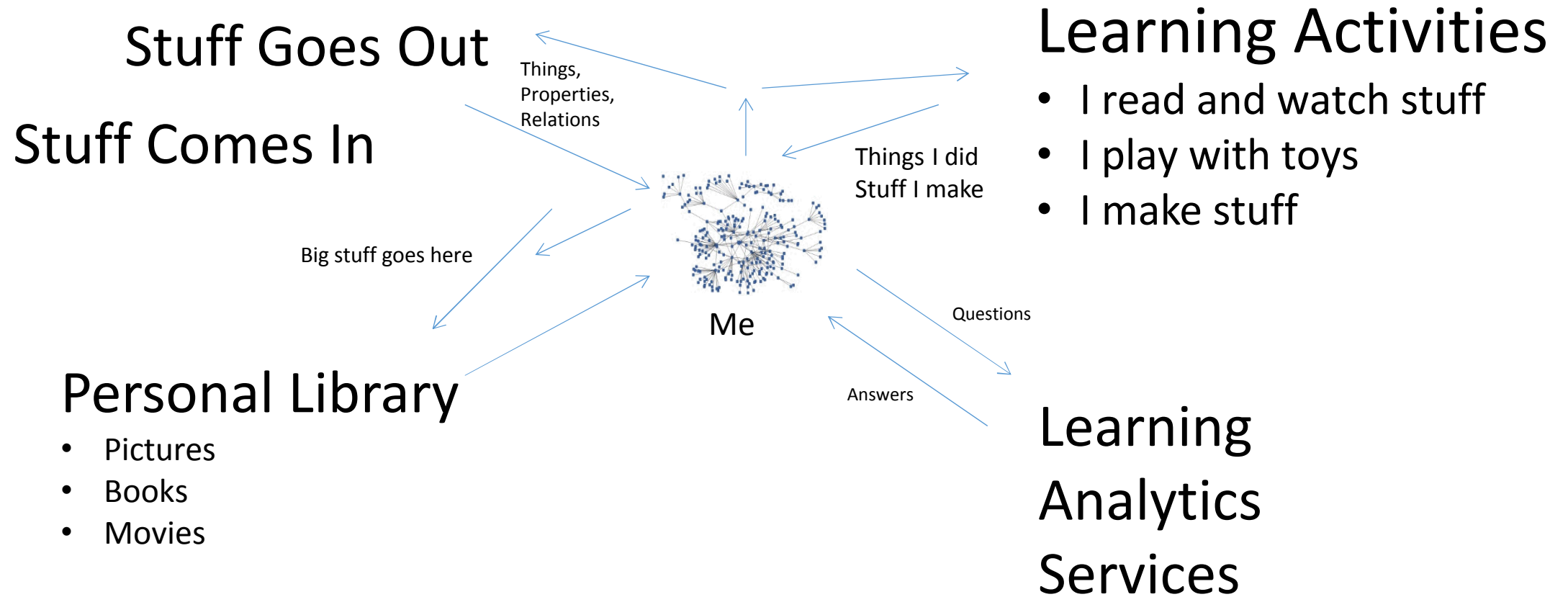


Me

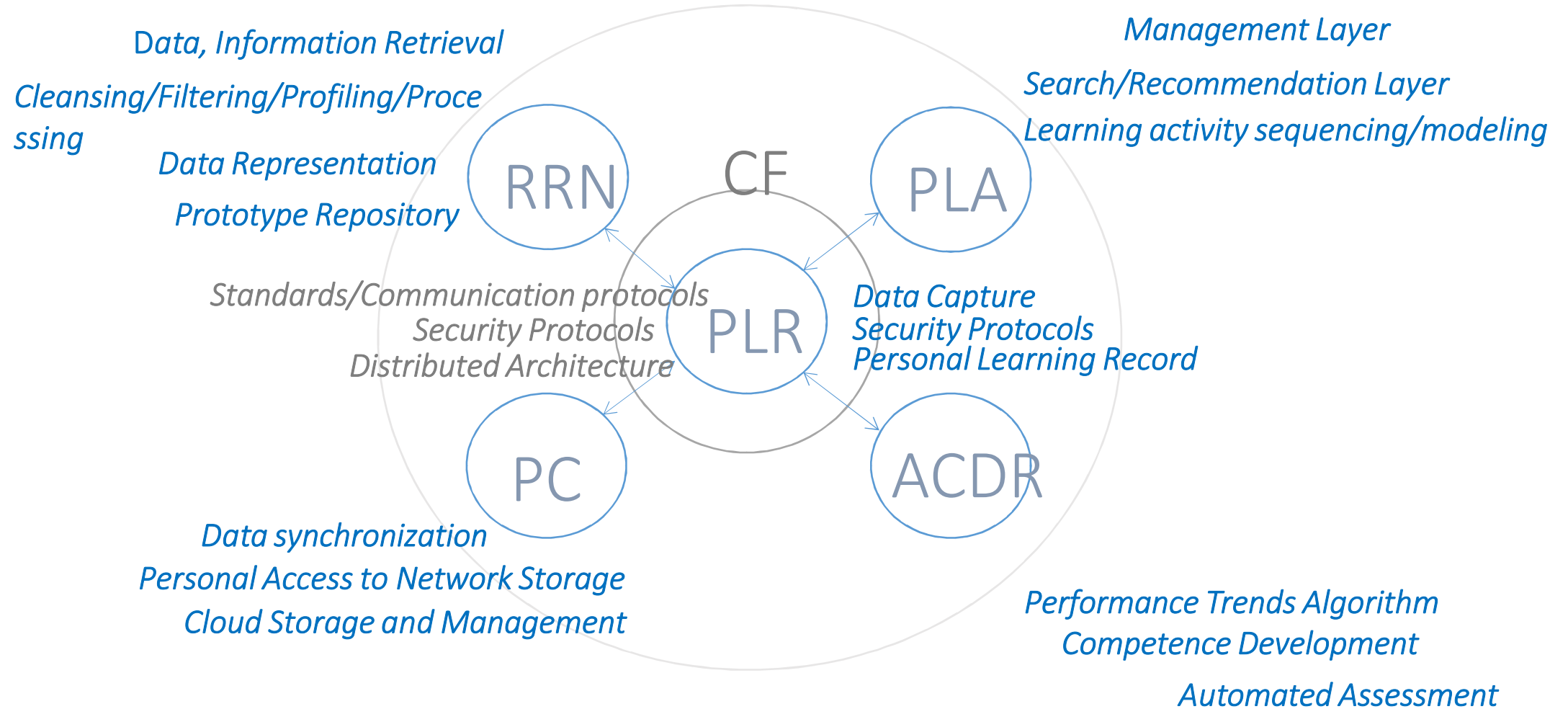
The PLR contains all a person's learning records, including:

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

# LPSS is Built Around the Personal Learning Record



# LPSS Details





# Resource Repository Network (RRN)



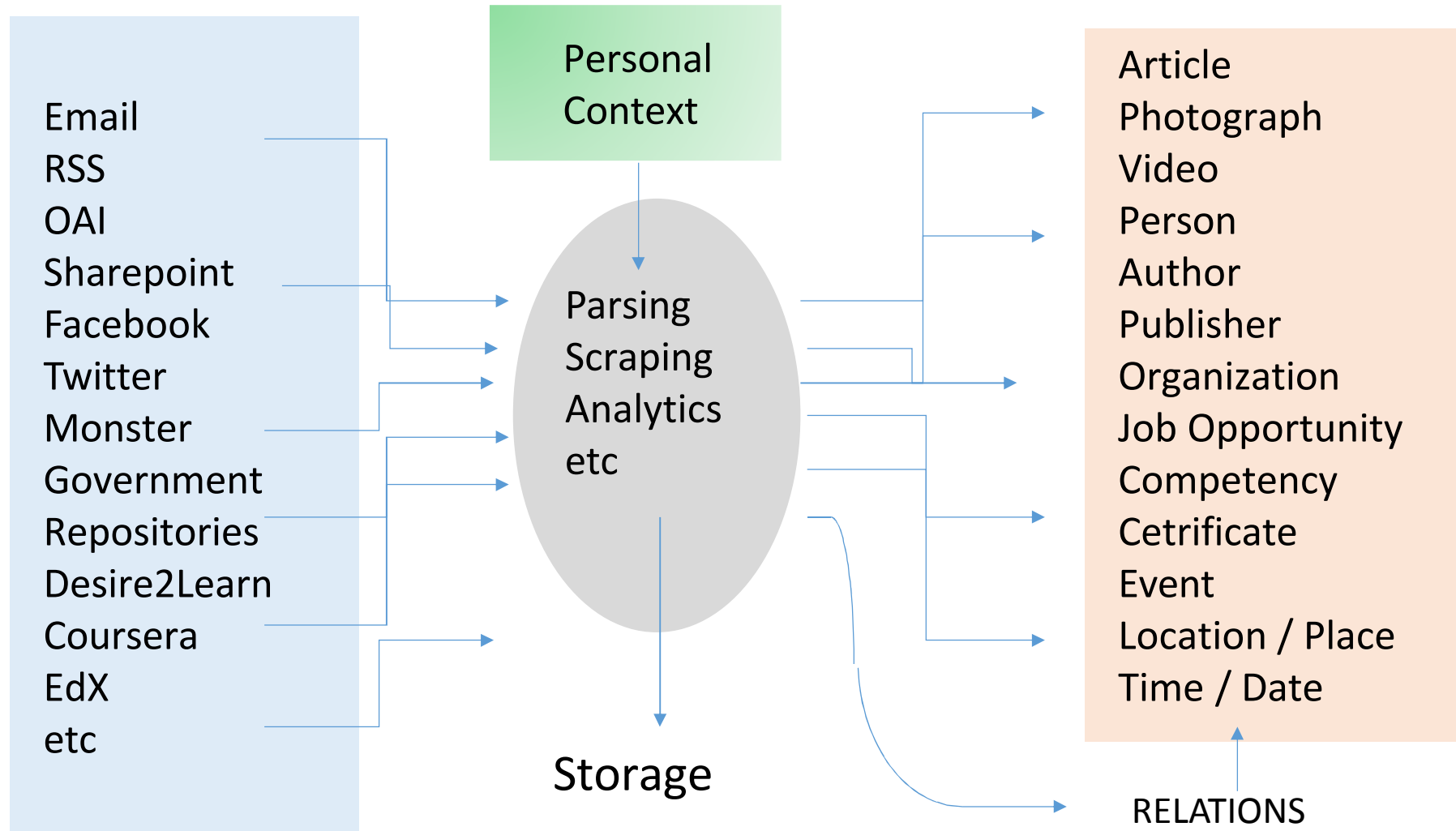
- Assemble resources from multiple locations

# Resource Repository Network



- Manage and discover list of sources and resources
- Maintain authentication and credentials
- Support APIs and metadata standards
- Gather, analyze and sort resources and/or metadata

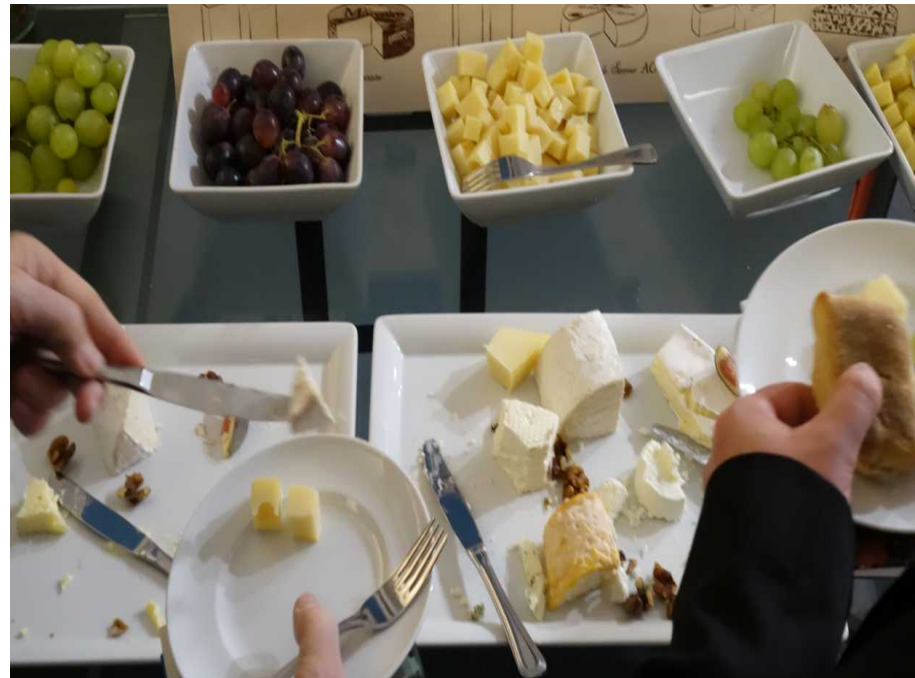
# RRN Aggregation and Storage



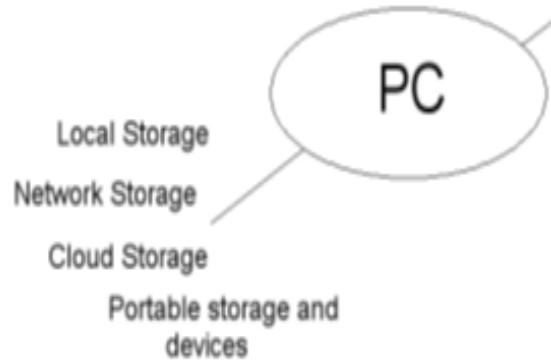
# Personal Cloud



Synchronized cloud data services  
(including Owncloud) to support  
data portability



# Personal Cloud

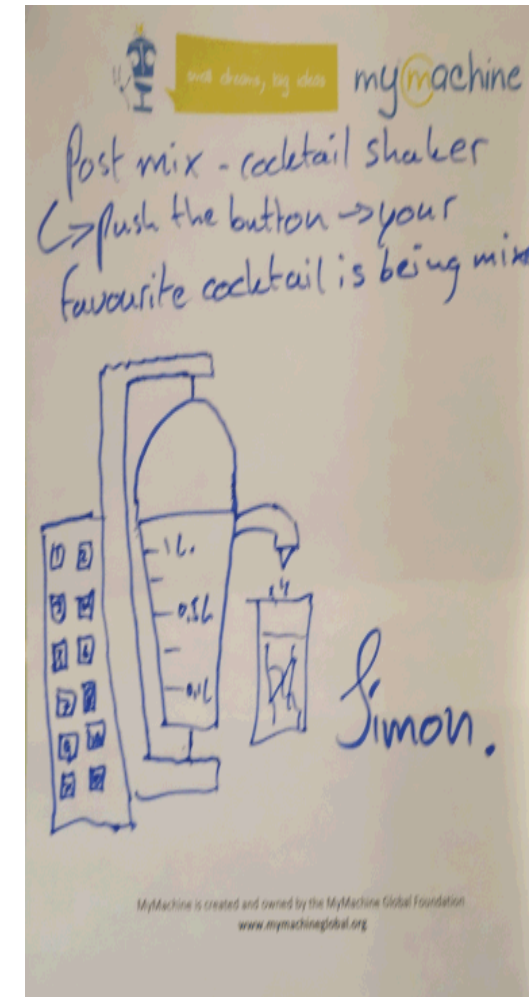


- Manage list of local and remote storage systems
- Maintain security, encryption, authentication and credentials
- Include local or personal device storage
- Manage and synchronize resource sets and data



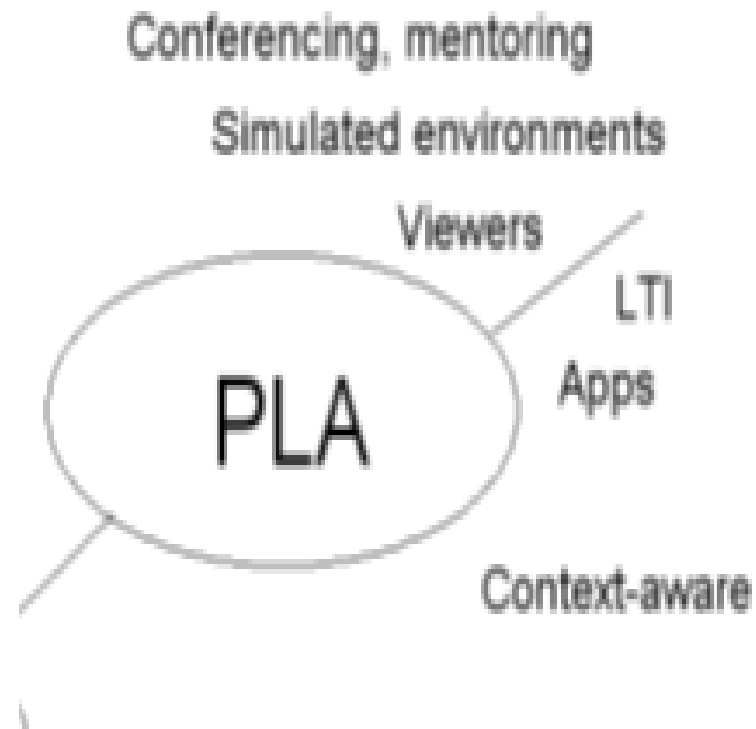
# Personal Learning Assistant

Projection of learning services  
into multiple platforms



# Personal Learning Assistant

- Collect contextual information for system
- Display resources of various formats, including SCORM, LTI, etc.
- Support (scaffolded) authoring environments
- Project LPSS capacity into external software and devices



# PLA: Collecting xAPI from Med Sims



[https://www.flickr.com/photos/stephen\\_downes/15710336207/](https://www.flickr.com/photos/stephen_downes/15710336207/)

<http://www.nrc-cnrc.gc.ca/eng/rd/medical/>

# Automated Competency Recognition and Development



# Automated Competency Recognition and Development

- Import or create competency definitions
- Analyze interactions for skills and learning gaps
- Support development of learning plans
- Provide resource and service recommendations





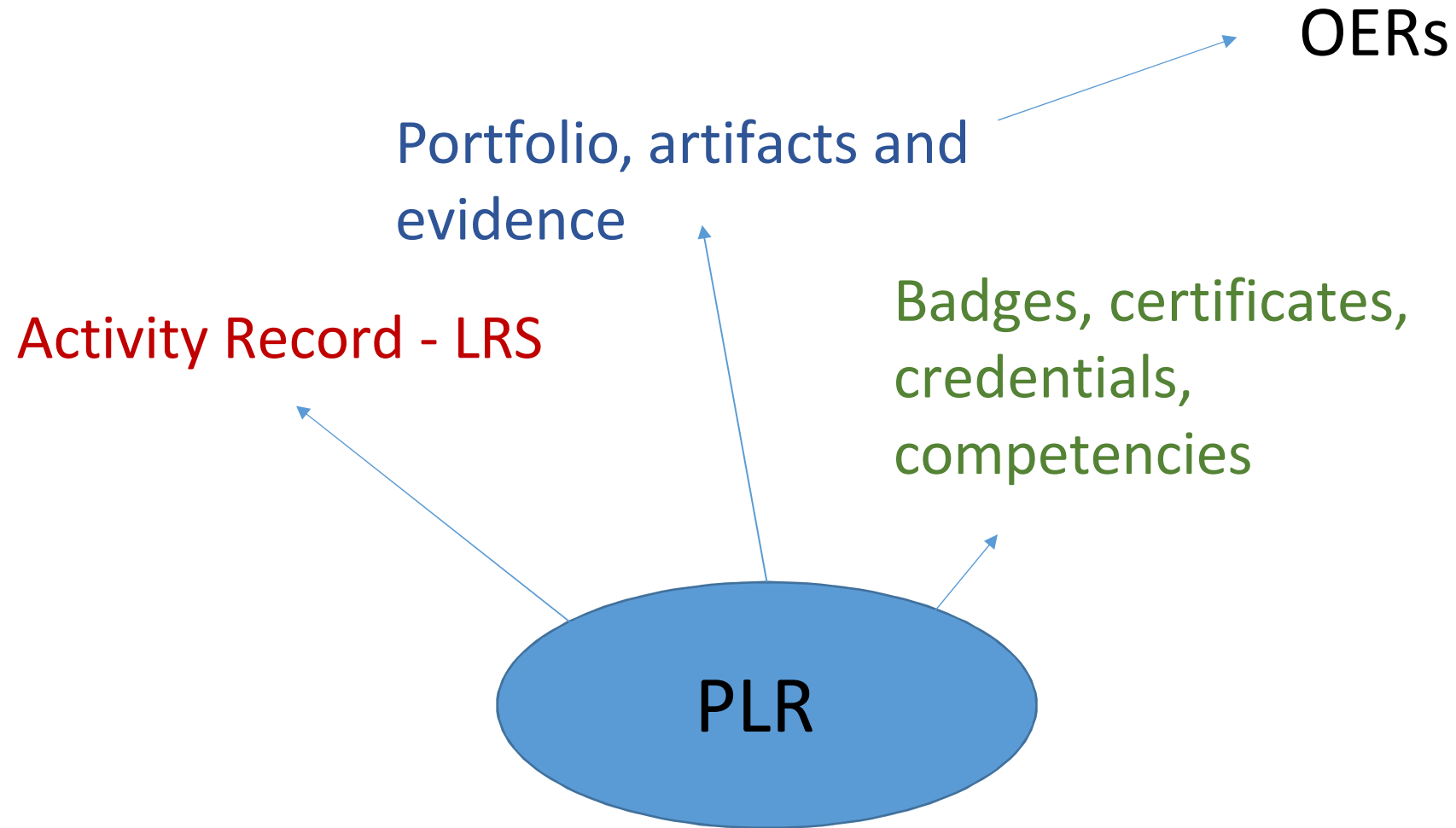
# Personal Learning Record

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



<http://halfanhour.blogspot.de/2014/12/eportfolios-and-badges-workshop-oeb14.html>

# Personal Learning Record



# Personal Learning Record

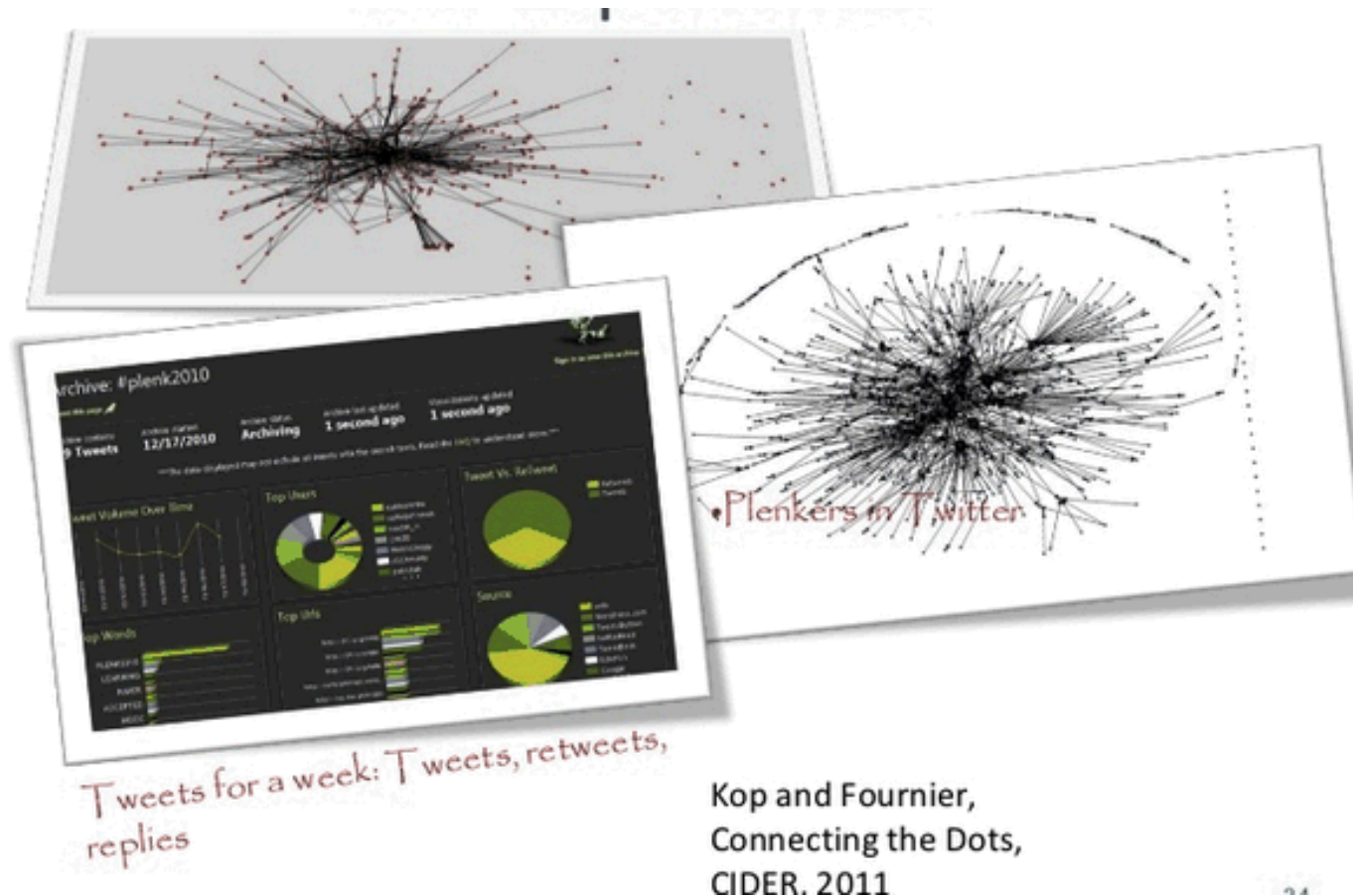


- Collect full record of interactions with all resources, external systems
- Support learning activity data exchange formats (eg. xAPI)
- Collect and present a person's personal portfolio
- Display certifications and credentials (eg. badges)
- Maintain 3<sup>rd</sup> party certification

## 6. Expanding LPSS



# Plearn – Importance of the Graph



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

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



# OIF – MOOC-REL



The screenshot shows the homepage of the 'REL 2014 - Pour une éducation libre' MOOC. The header is dark blue with white text for the title and navigation links. Below the header, a dark blue bar contains a login status message. The main content area has a light green background. On the left, there is a sidebar with a graphic of people icons and a list of menu items. The main content area features a large green title, a welcome message, a paragraph about the course start date and duration, and a section for the course introduction.

## REL 2014 - Pour une éducation libre

ACCUEIL VOTRE COMPTE ▼ COMPTES RENDUS ▼ PARTICIPER ▼ SYNDICATION RSS ▼ ARCHIVES ▼

Vous n'êtes pas connecté(e). [[Connexion](#)] - [[Inscription](#)]

Réutiliser, retravailler, recombinaire, redistribuer

### Réutiliser, Retravailler, Recombiner, Redistribuer – 4R des REL pour une Éducation libre

Bienvenue à votre Cours en Ligne Ouvert et Massif (CLOM) de l'Organisation internationale de la Francophonie portant sur les ressources éducatives libres (REL).

Le cours débute le 3 mars 2014 et dure neuf semaines consécutives. Si vous n'êtes pas déjà inscrit(e), faites-le tout de suite pour recevoir le Bulletin de nouvelles quotidiennes et bénéficier du droit de commentaires/discussion dans le site.

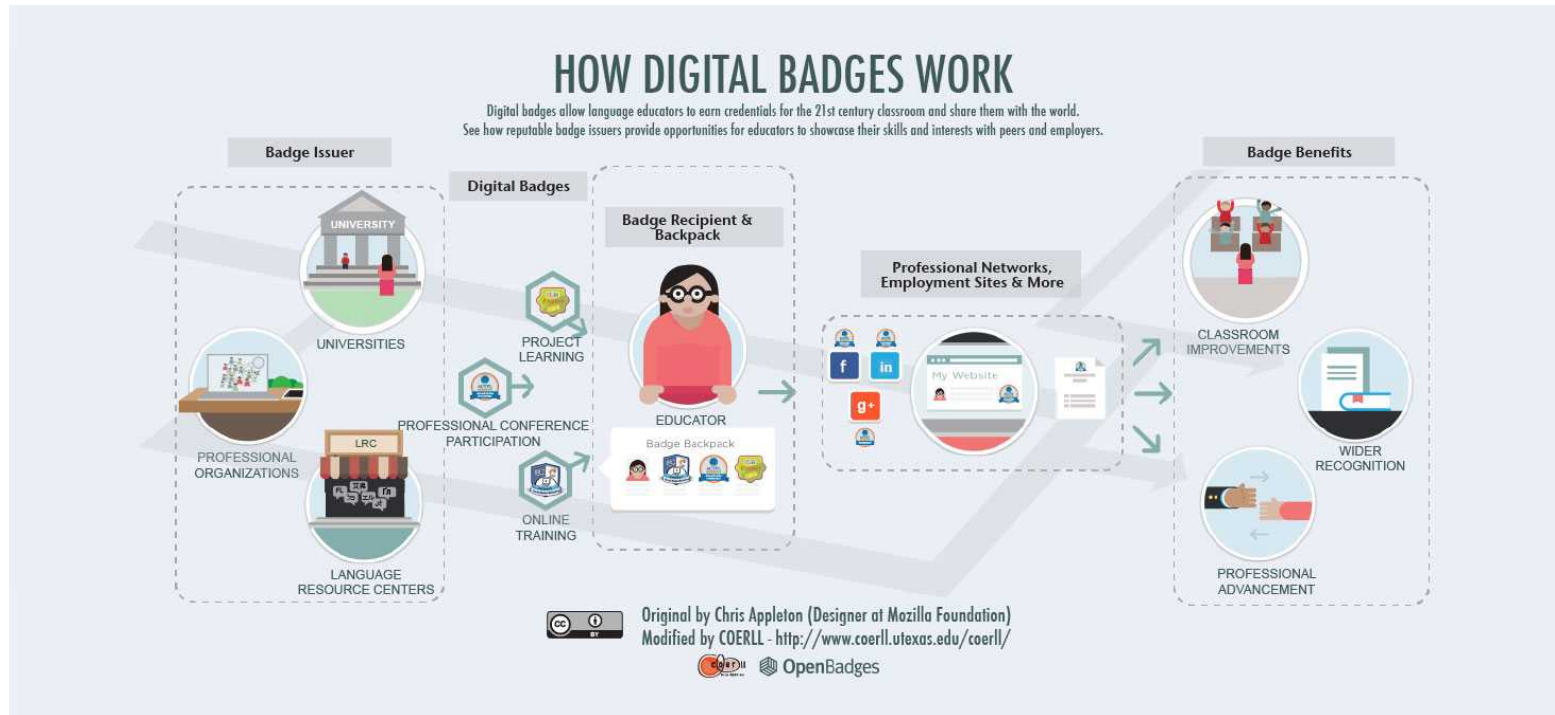
#### Introduction au CLOM REL 2014

Vous trouverez ci-dessous une courte vidéo qui explique le contexte du présent cours. Nous vous

- INTRODUCTION ▼
- 1. DU CLOM CONNECTIVISTE ET FONCTIONNEMENT DE CE COURS ▼

<http://rel2014.mooc.ca/>

# PCO Badges for Learning



<http://www.downes.ca/post/63738>

# ONGARDE



<http://www.journal.forces.gc.ca/vol14/no2/page70-eng.asp>

# ALECSO – Capacity Building



<http://www.downes.ca/presentation/337>

# Concierge OMS

Government of Canada / Gouvernement du Canada | Canada.gc.ca | Services | Departments | Français

## Concierge Service

Canada

Home | About us | Find programs | Find facilities | My concierge | Register | Log in

Home → Your guide to innovation

### Your guide to innovation

Helping Canadian enterprises find and access programs and services that support business innovation.

How can we help you?

Find a program that meets your needs

Learn more

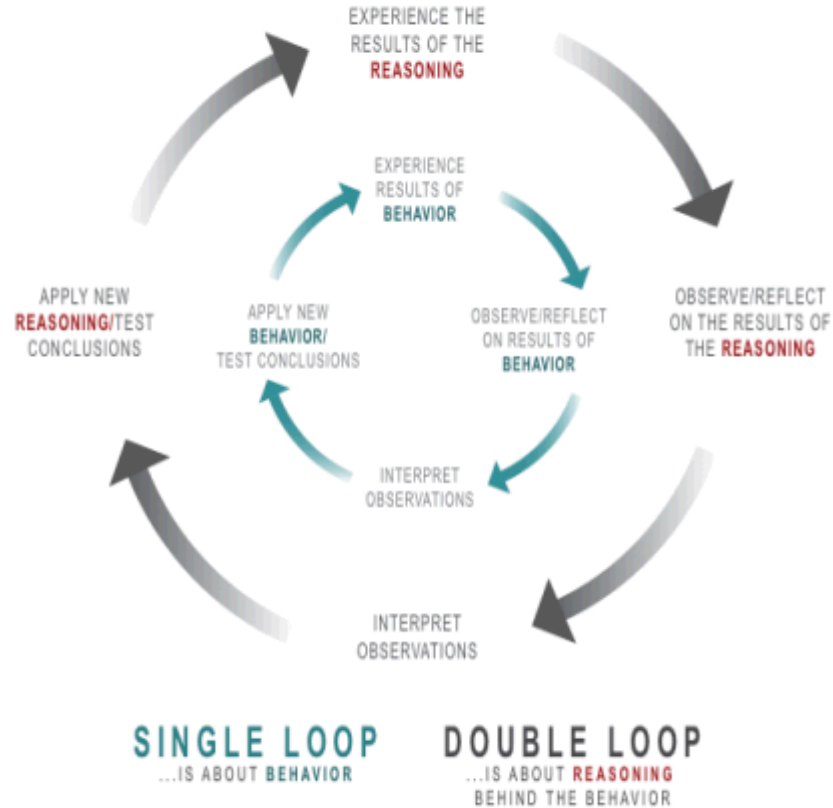
Create an account to get the benefits to support you & your business!



<https://concierge.portal.gc.ca/>



# Implementation Projects

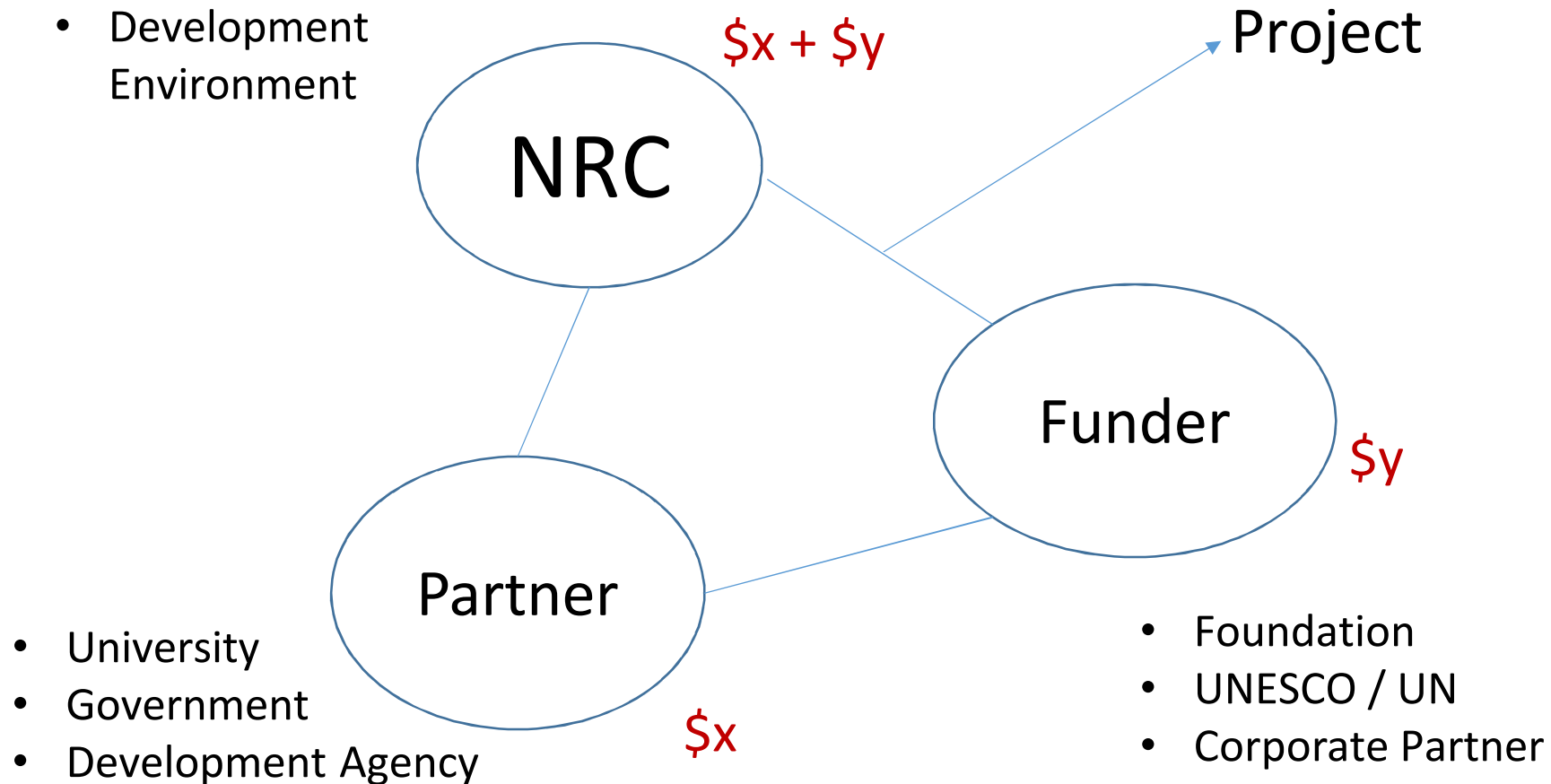


Ultimately,  
the objective  
is to support  
individual  
learning in a  
network

<http://integralleadershipmanifesto.com/manifesto/making-subject-object/>

# Expanding LPSS

- \$20 Million Investment
- NRC Technologies
- Development Environment



# Possible Projects...

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





Stephen Downes

<http://www.downes.ca>





# Success Factors

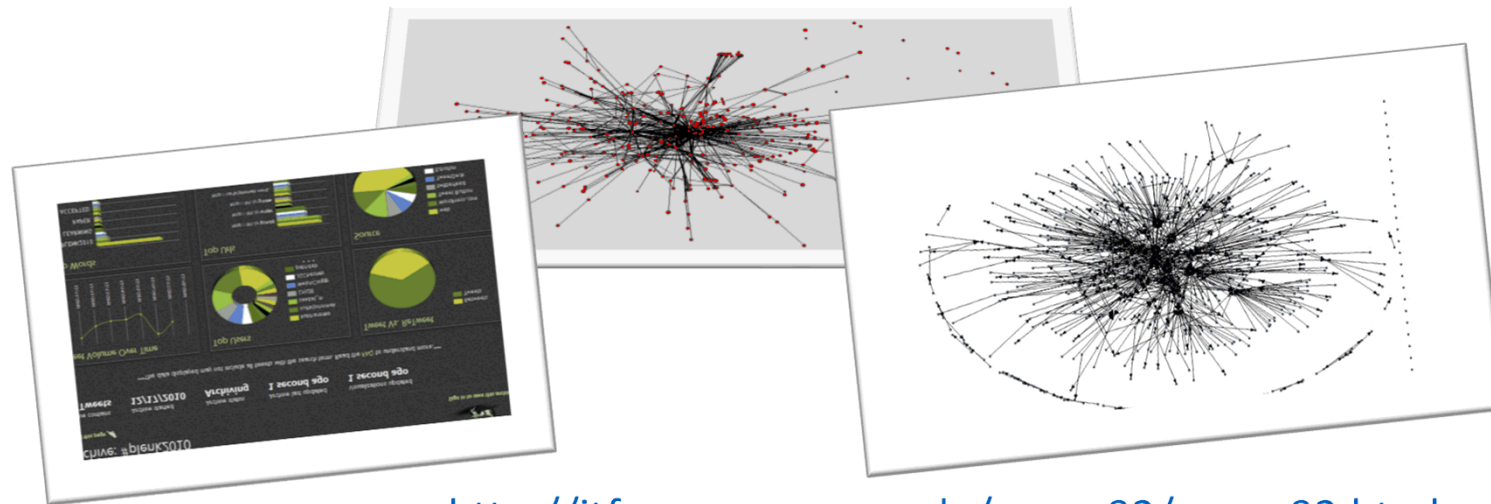
# Success Factors (The Wealth of Nations)

What sort of decentralized network will best support learning-as-growth?



# The Semantic Condition

- Autonomy, diversity, openness, interactivity
- These conditions are the conditions for a constructive dialogue...
- And are thus the design principles for a MOOC



<http://itforum.coe.uga.edu/paper92/paper92.html>

# The Objective of Learning

- Learning is not acquisition, it is growth
- It is about the personal development of each person
  - Not just what the person 'knows'
  - Equally important is a person's sense of value and place in society

# Knowledge Translation



# 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>

# Synthesis

- the contextualization and integration of research findings of individual research studies within the larger body of knowledge on the topic.
- a systematic review, follow the methods developed by the Cochrane Collaboration, result from a consensus conference or expert panel or synthesize qualitative or quantitative results.

# Dissemination

- “...summaries for / briefings to stakeholders, educational sessions with patients, practitioners and/or policy makers, engaging knowledge users in developing and executing dissemination / implementation plan.”

# Exchange

- “interaction between the knowledge user (decision maker) and the researcher...”
- “results in mutual learning through the process of planning, producing, disseminating, and applying existing or new research in decision-making...”

# Application

- “the iterative process by which knowledge is put into practice...”
- “...while keeping in mind that principles, values and laws can compete among and between each other at any given point in time.”



# Criticisms...

- The 'knowledge translation model implies a set of facts that can be 'known' and applied to practice
- In practice, knowledge is often contextual and 'constructed' after the fact
  - Consider, for example, the case of recognizing your mother at the train station
  - Consider, for example, the practice of riding a bicycle (cf Polanyi)

## 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