

Trends in the Future of Learning



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<http://www.downes.ca/presentation/484>

A New Challenge

“With the automation of many of the functions employees currently perform, the emphasis will switch from answering simple queries to dealing with more complex problems that will require higher level of analysis, access to experts and greater autonomy.”

How can the College@ESDC equipped itself for what's coming? What form(s) is learning, and especially operational training, likely to take in 10-15 years?

Part One. What Does Learning Become?

1. Relevant
2. Engaging
3. Personal



Relevant

- Any time / Any place
- Ubiquitous
- Context-Aware
- Problem-Focused

Case: Mobile Learning, Mobile Support

Access - learning as you go, with different devices

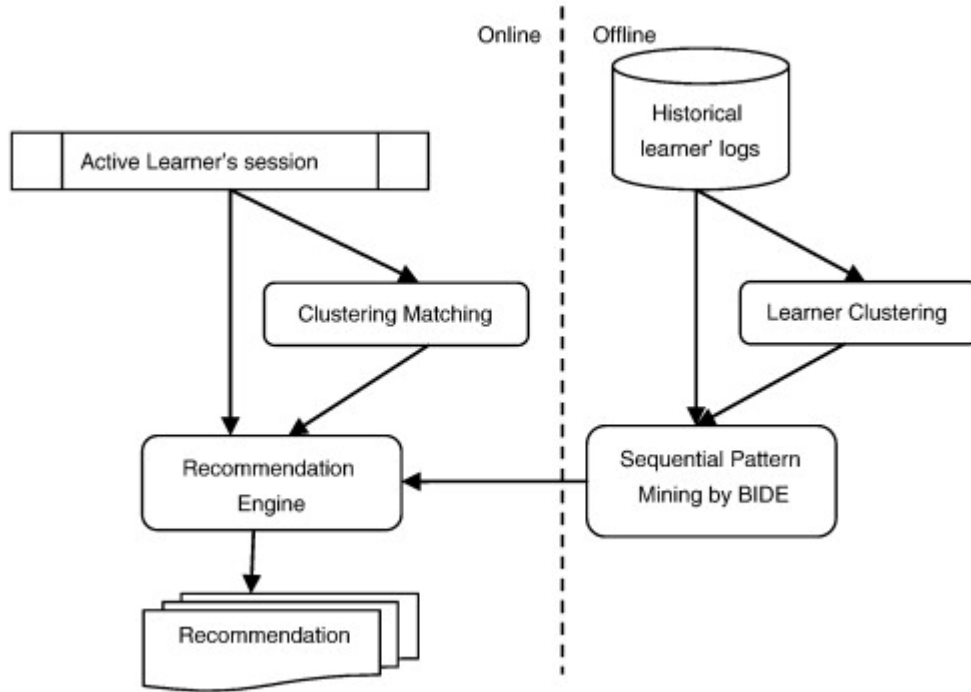
Device – smartphone only? Or tablets and laptops?

Location - learners can learn outside their office

Design - content specifically designed for mobile



Case: Content Recommendations



- Resource Recommendation
 - Collaborative filtering
 - Human cognitive modeling
 - Content analysis
 - Self-assessment
 - Sensor & data analysis

Engaging

- Engaging = Immersive + Wanted
- We have to *want* to be there
- And we have to *believe* that we're there

Phases of Business Technology

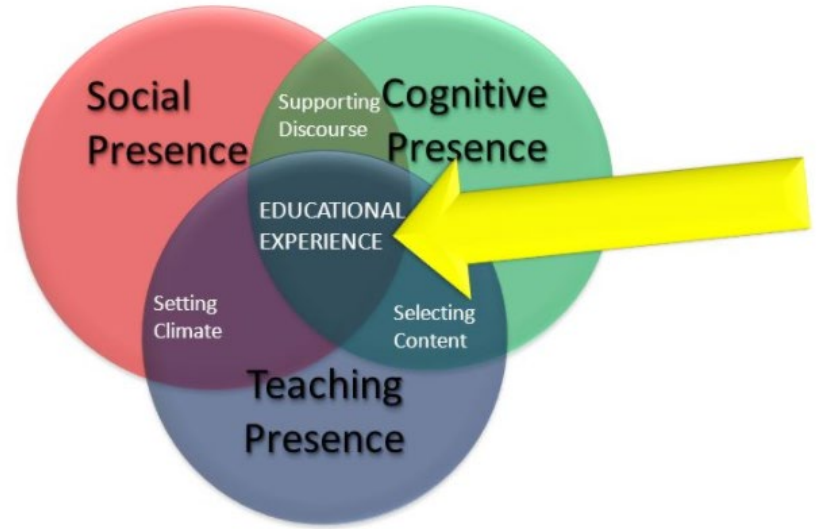
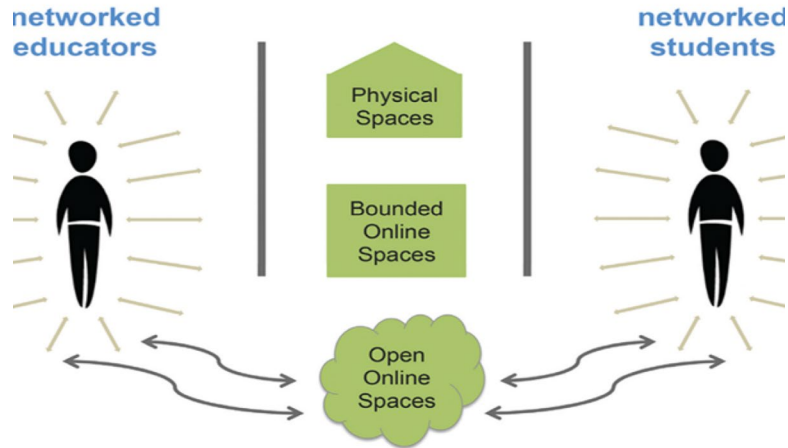


Slack, Airtable, Trello: what makes them good? Presence

<https://pt.slideshare.net/AnantCorp/team-collaboration-slack-airtable-trello-what-makes-them-good-76384318>



Immersive



1. A Model for Networked Education (Credit: Image by Catherine Cronin, building a Networked Teacher by Alec Couros. CC BY-SA)

Presence is the idea that there is a person at the other end of the interaction... the presence of that person makes us believe

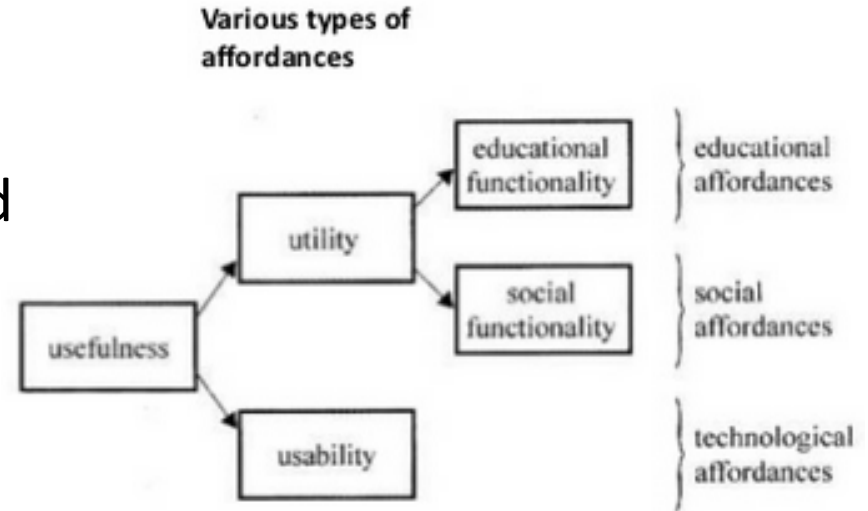
Presence

What does *wanted* make you think of...?

personal, spontaneous,
opportunistic
informal, pervasive, situated
private, context-aware
bite-sized, and portable

Jari Laru -

<https://www.slideshare.net/larux/affordances-short-introductionlarulet2011>

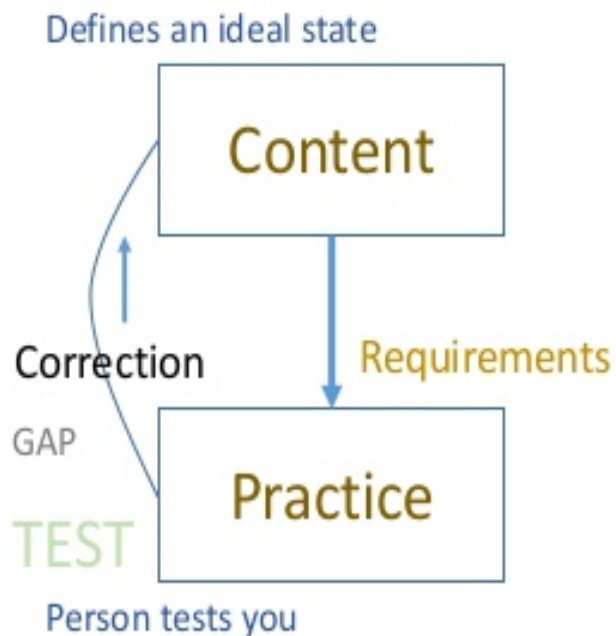


Affordances

Personal

Personalized

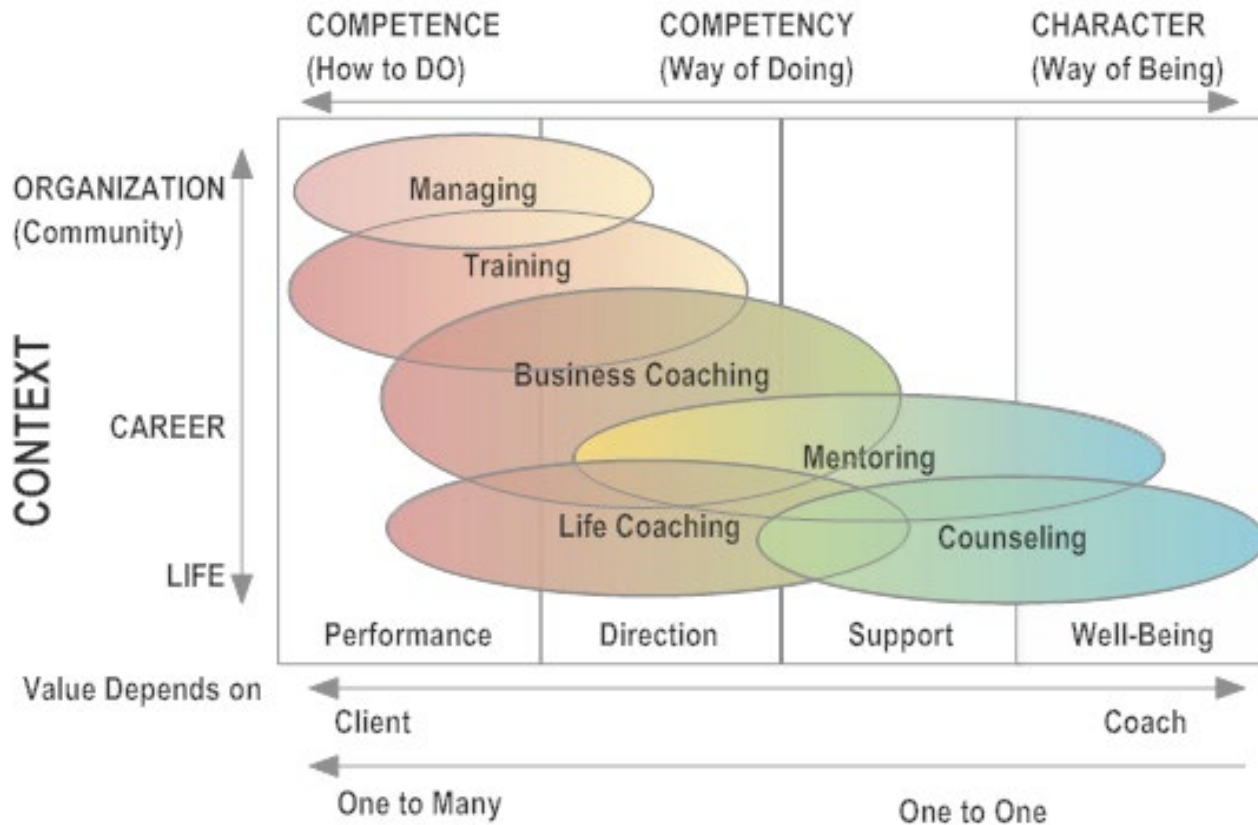
We do for you



Personal

You do for yourself

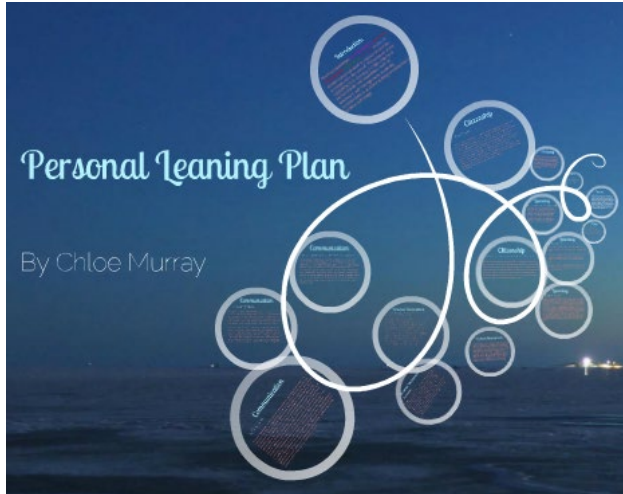




<http://leadershipadvantedge.com/>

Competencies vs Support

Case: Personal Learning Plan



- [Illuminate Education](#) - data-based learning path
- [FilterED Global Filter](#) - specializes in rapid personal path creation
- [MiCLUES](#) - creates personal learning paths through museums and exhibits
- [ItsLearning](#) - learning platform
- [Aperero OpenSSP](#) - student success plan

Chloe Mnurray -

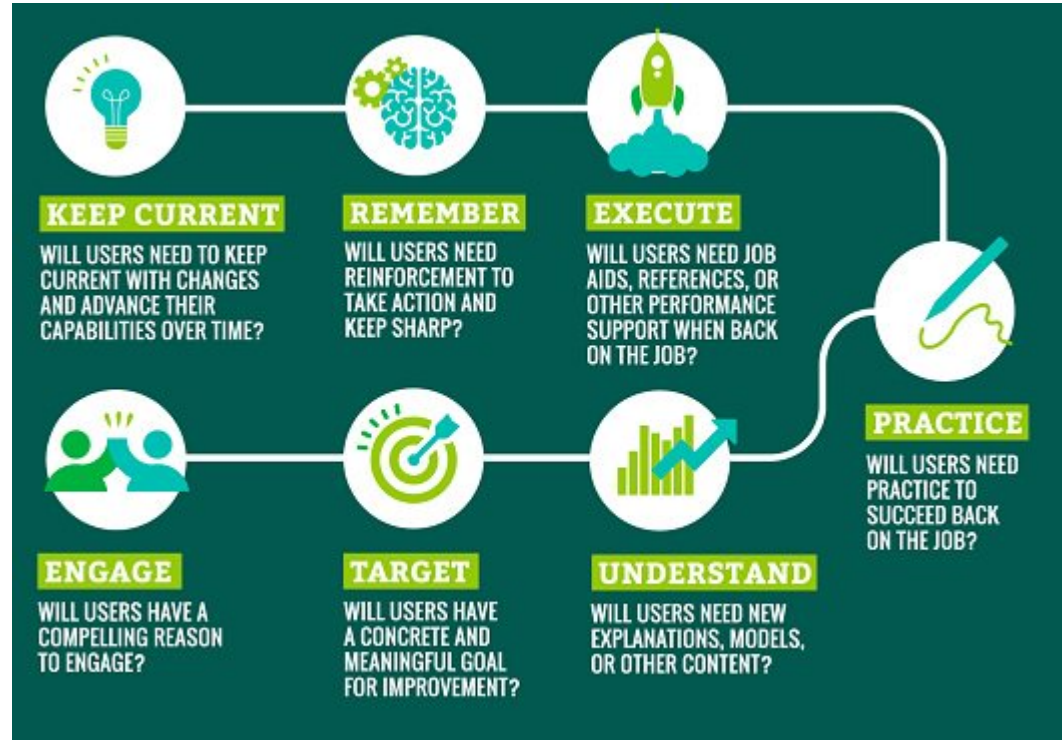
<https://prezi.com/9i69gkg75eqc/copy-of-chloe/>

Don't tell me, show me:

- “show me how to think strategically”
- “show me how to reframe an issue”
- “show me how to deal with the ambiguity of the world right now”

Steve Lowenthal -

<https://elearningindustry.com/bridging-the-learning-and-doing-gap-3-best-practices>



Practice vs Presentation

Part Two. How Do We provide That?

1. Learning Resources
2. Environments
3. Assessment

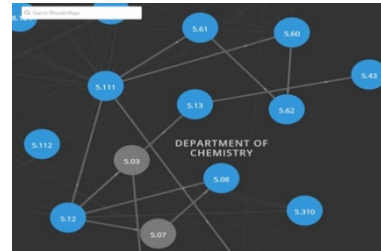


Learning Resources

- Open Educational Resources
- Open Data and Data Books
- Personalized Learning
- Performance Support



<https://openstax.org/>



<https://ocw.mit.edu/>



<https://www.oercommons.org/>

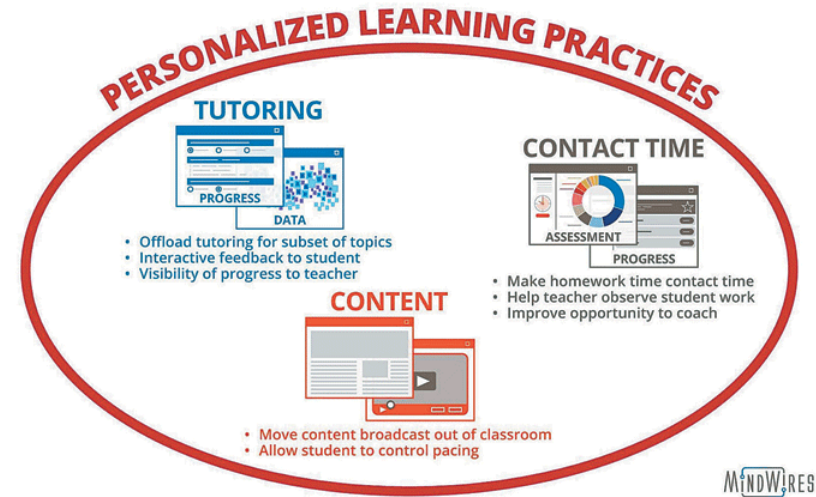


Open Educational Resources

Practices:

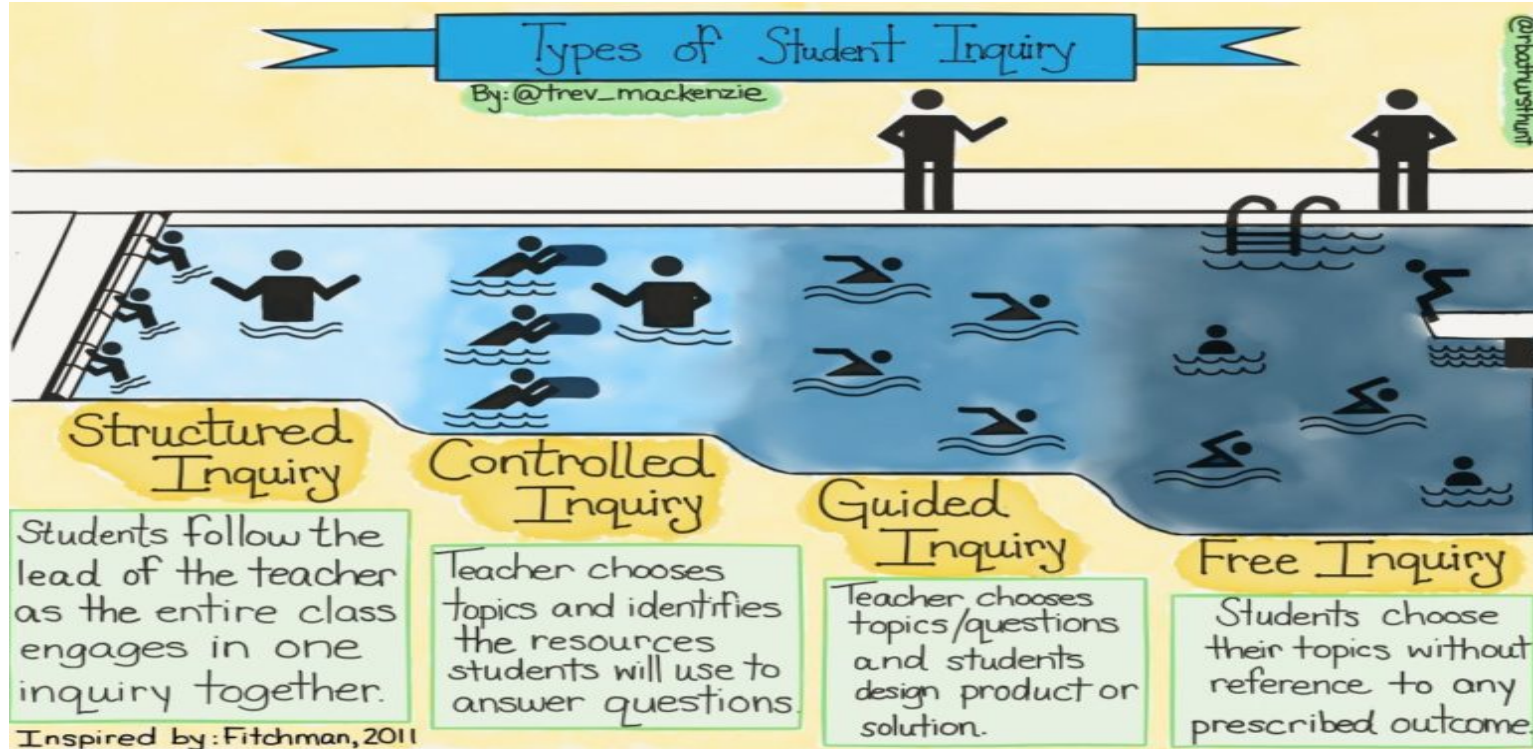
- Moving content broadcast out of the classroom
- Turn class time into contact time
- Providing tutoring

“...a delicate balance between student autonomy and instructor-led direction and scaffolding...”

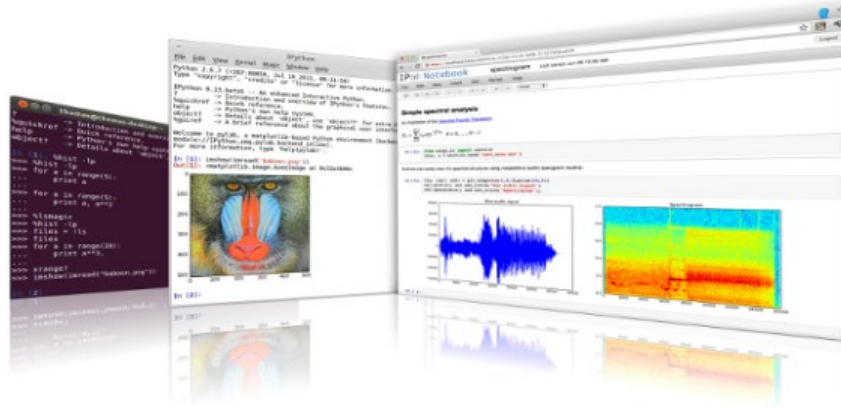


Personalized Learning

Case: Types of Student Inquiry



A range of approaches (after Dana Fichtman, Thomas & Boynton, 2011, *Inquiry: a districtwide approach to staff and student learning*) <http://sk.sagepub.com/books/inquiry>



iPython is an interactive programming shell for the Python programming language
<https://ipython.org/>

The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code...
<http://jupyter.org/>



Open Data and Data Books



<http://fortune.com/2014/05/27/a-tennis-racquet-that-isnt-just-strung-but-wired/>

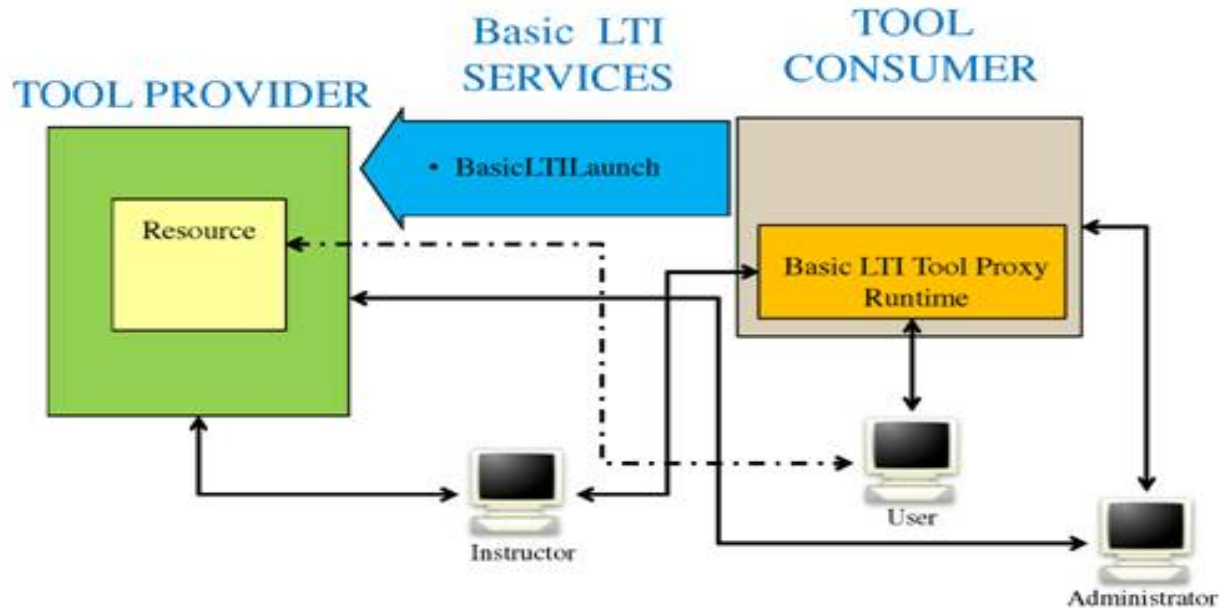
PHOTO COURTESY B

Performance Support

Environments

- Learning platforms
- Internet of Things
- Social Learning
- LTI, API and JSON
- Cloud Apps and Storage

- LTI Producer – provides features
- LTI Consumer – connects to features



<https://www.imsglobal.org/specs/litv1p0/implementation-guide>

Learning Platforms

Case: CSPA GCCampus

- Saba learning management system (LMS)
- Drupal 7 content management system (CMS)
- Moodle LMS
- Kaltura OVP
- CSPA service bus

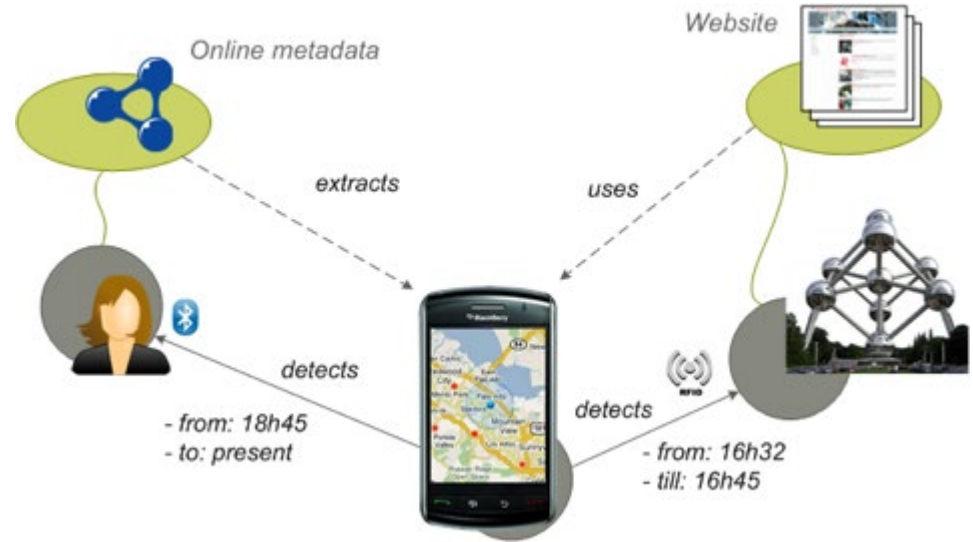




<https://www.pcgamesn.com/grand-theft-auto-v/the-best-grand-theft-auto-v-mods>

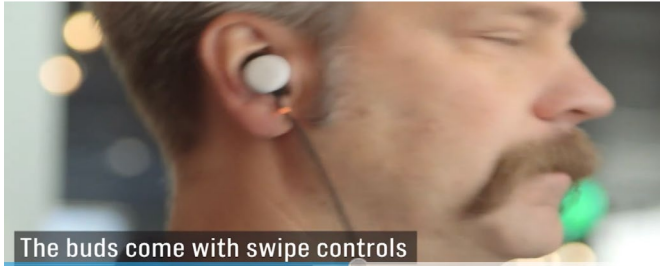


MagicBand. It's a bracelet Disney hands out ([story on Gizmodo](#))



WISE Research Group, 2012 - <https://wise.vub.ac.be/project/context-aware-mobile-application-development>

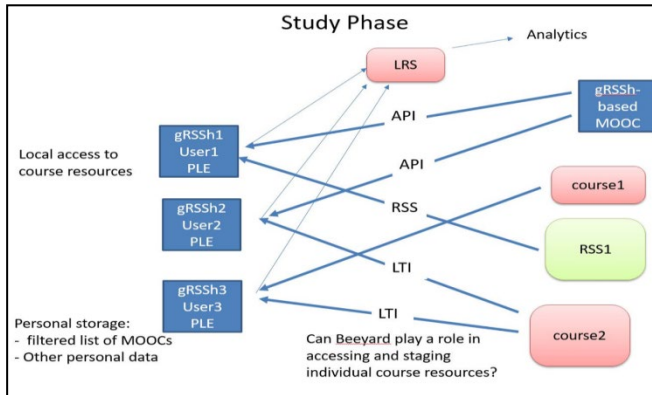
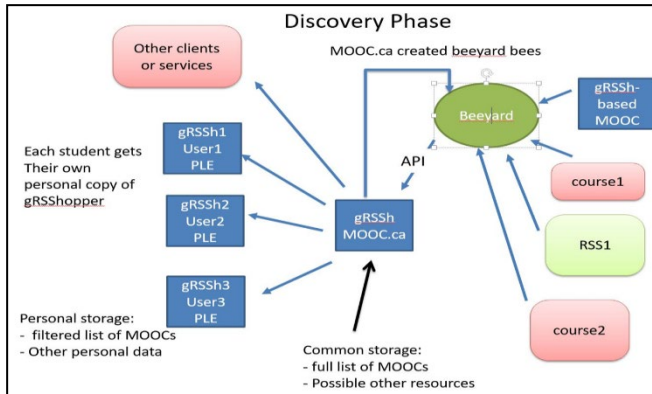
Internet of Things



The buds come with swipe controls

<https://www.cnbc.com/2017/10/04/google-translation-earbuds-google-pixel-buds-launched.html>

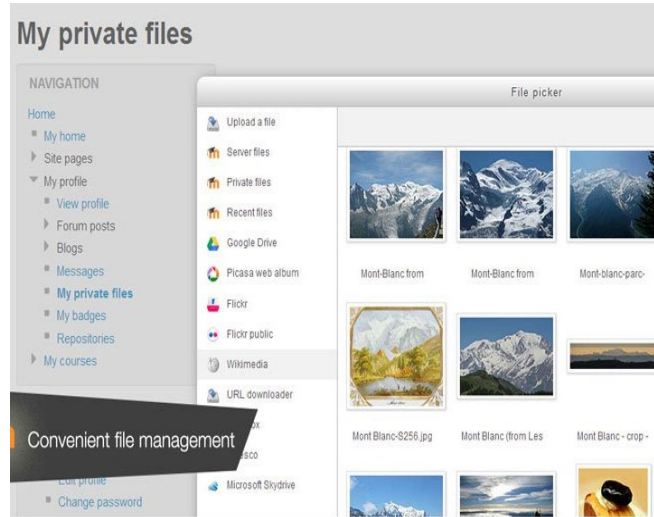
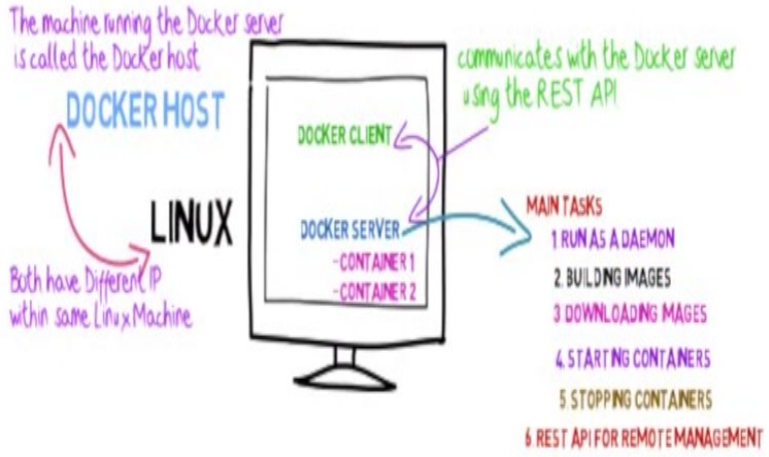
Social Learning



LTI / API / JSON

Case: Resource Integration

- Linkage - each with a tab or an icon on the other system
- Single signon - single unique identifier for all services
- Common Services – Listed among other services
- Extending the bus - user information and data exchanged
- Learning Tools Interoperability - launched using SCORM or LTI
- Full integration - Resources are available throughout GoC and vice versa



<http://www.tomsitpro.com/articles/docker-enterprise-hub-orchestration,1-2375.html>

Cloud Apps & Storage

Assessment

- Competencies and Skills
- Learning records
- Quantified Self / Dashboards
- Feed Forward

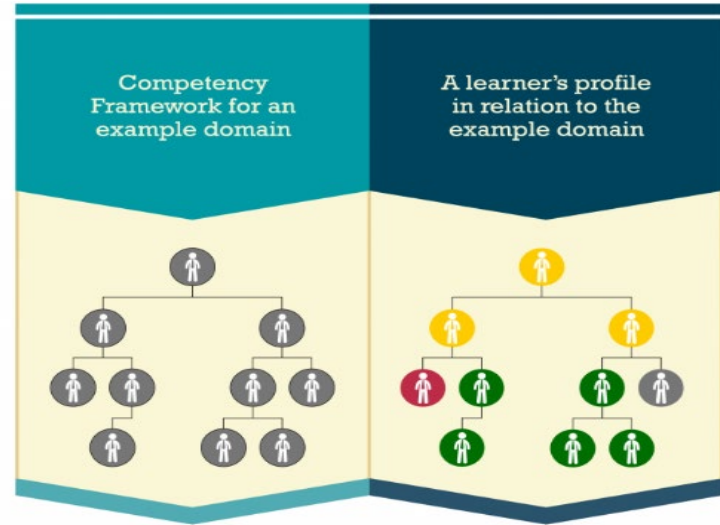
Learning
Plan

Automated
Assessment



- accurately and honestly measure a student's achievement?
- incentives for *honest* academic behaviour?

<http://pagecentertraining.psu.edu/public-relations-ethics/core-ethical-principles/lesson-2-sample-title/the-pillars-of-public-relations-ethics/>

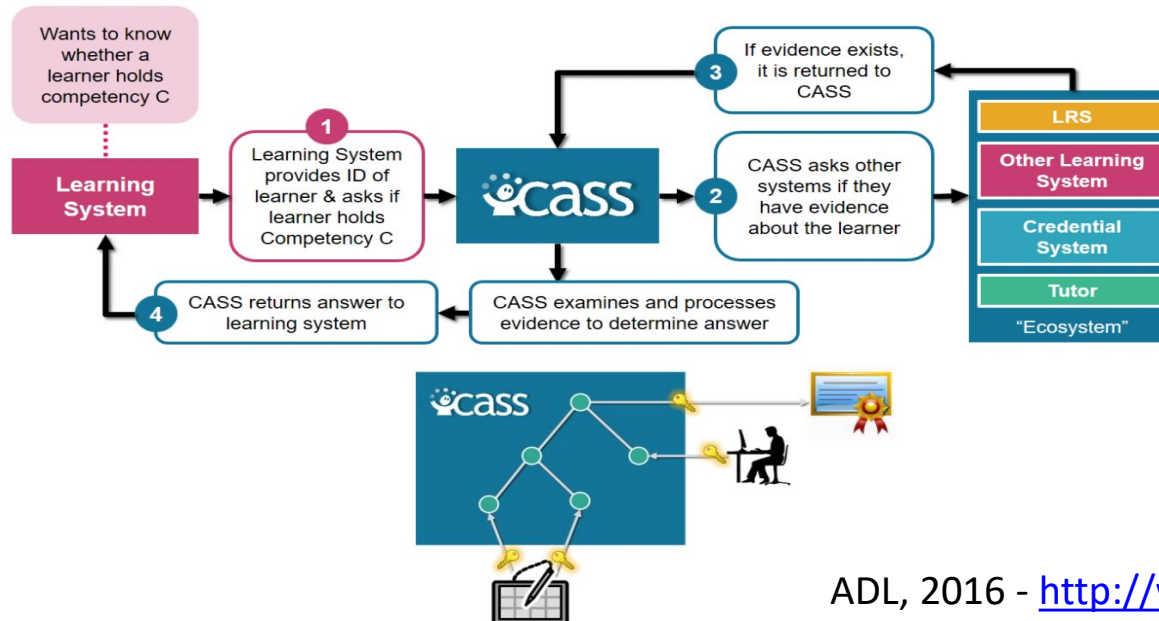


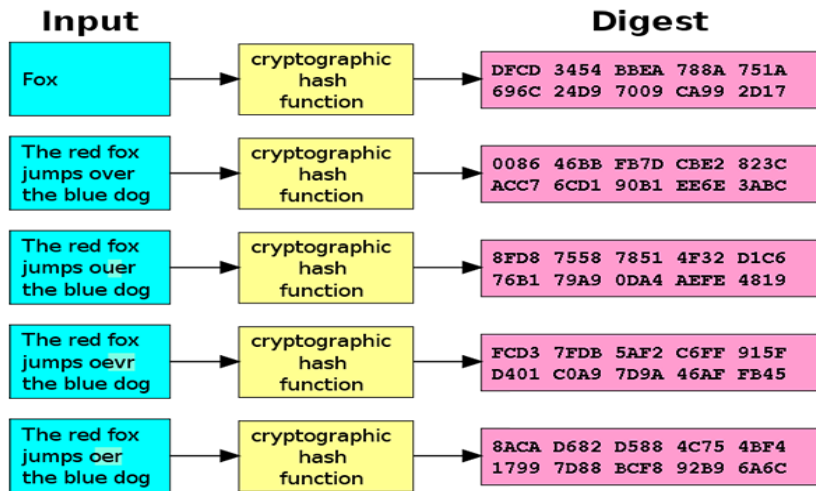
<https://www.adlnet.gov/introducing-the-next-big-thing-cass/>

Competencies and Skills

Case: Competencies and Skills Systems (CASS)

- Workforce Planning
- Recruiting and Onboarding
- Performance and Goal Management
- Learning Management
- Career and Succession Planning
- Compensation Management





Doug Belshaw:

"If we used the blockchain for Open Badges," he writes, "then we could prove beyond reasonable doubt that the person receiving badge Y is the same person who created evidence X."

<http://dmlcentral.net/blog/doug-belshaw/peering-deep-future-educational-credentialing>

<http://www.downes.ca/search/blockchain>

Learning Records

OERs are now widely available through subject-specific libraries with provisions for authoring as well



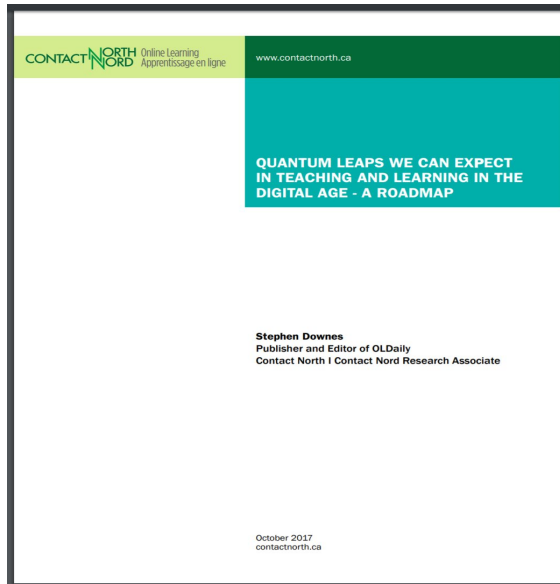
DS106 – assignment bank

<http://assignments.ds106.us/>

- *Course commentary*
- *User-generated content*
- *External content*
- *Content curation*
- *Collaborative learning*

Feed Forward

The Report...



You can download this report from:
<http://bit.ly/quantum-leaps>

The report talks a lot about what will change (and some about what will not_ and also about *how* things change

Add your comments

<http://bit.ly/quantum-edit>



<http://www.downes.ca>