



# The Challenge

- How can an educational application support, integrate within, and measure the *total state*?
- How can the learner maintain his/her identity and integrity from environment to environment?

1. Three Trends
2. Interoperability
3. Moodle Roadmap
4. Modern Learning
5. Extending Moodle

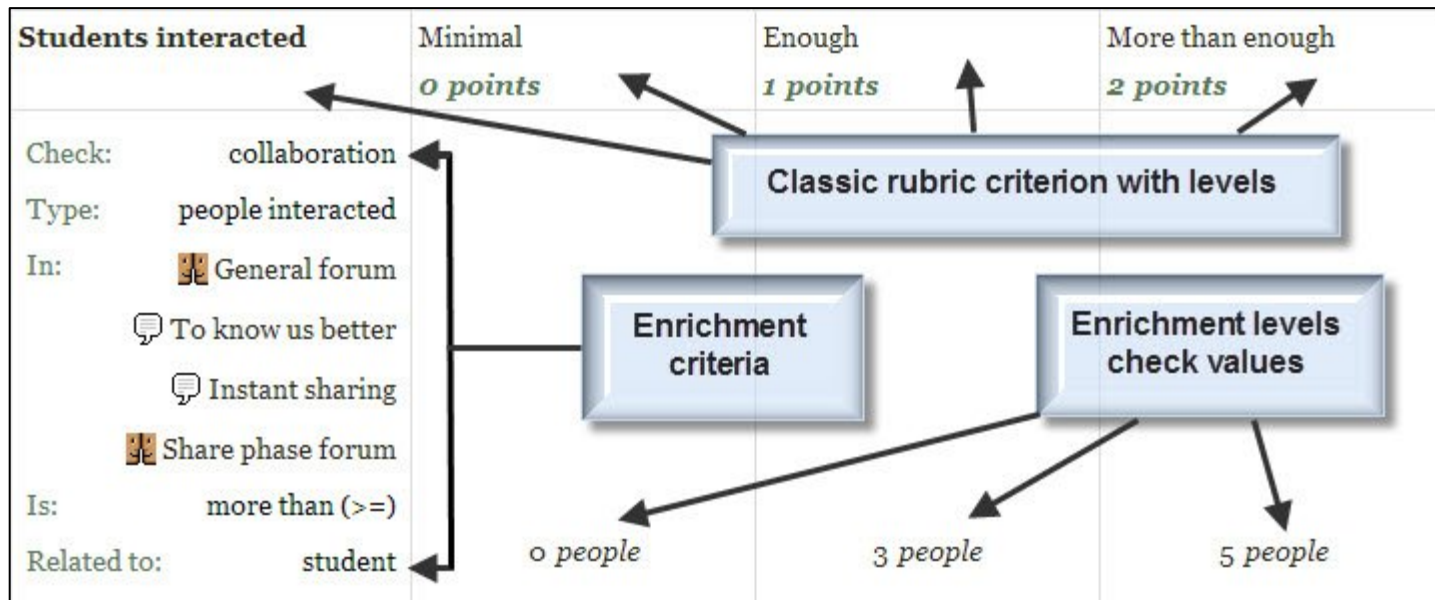
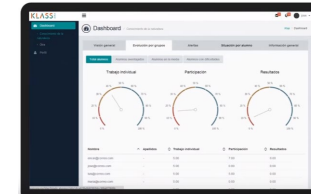
# Three Trends

- MOOCs
- Learning Analytics
- Personalized Learning



# Learning Analytics

- Predictive Analytics
- Recognition Tasks



# Personalized Learning

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

## Recognition Networks

The "what" of learning



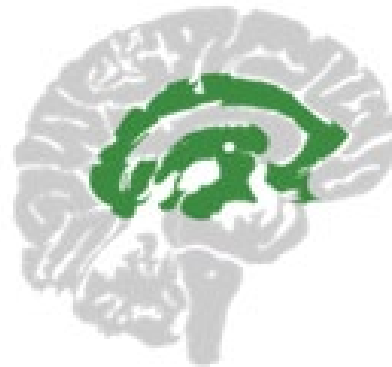
## Strategic Networks

The "how" of learning



## Affective Networks

The "why" of learning



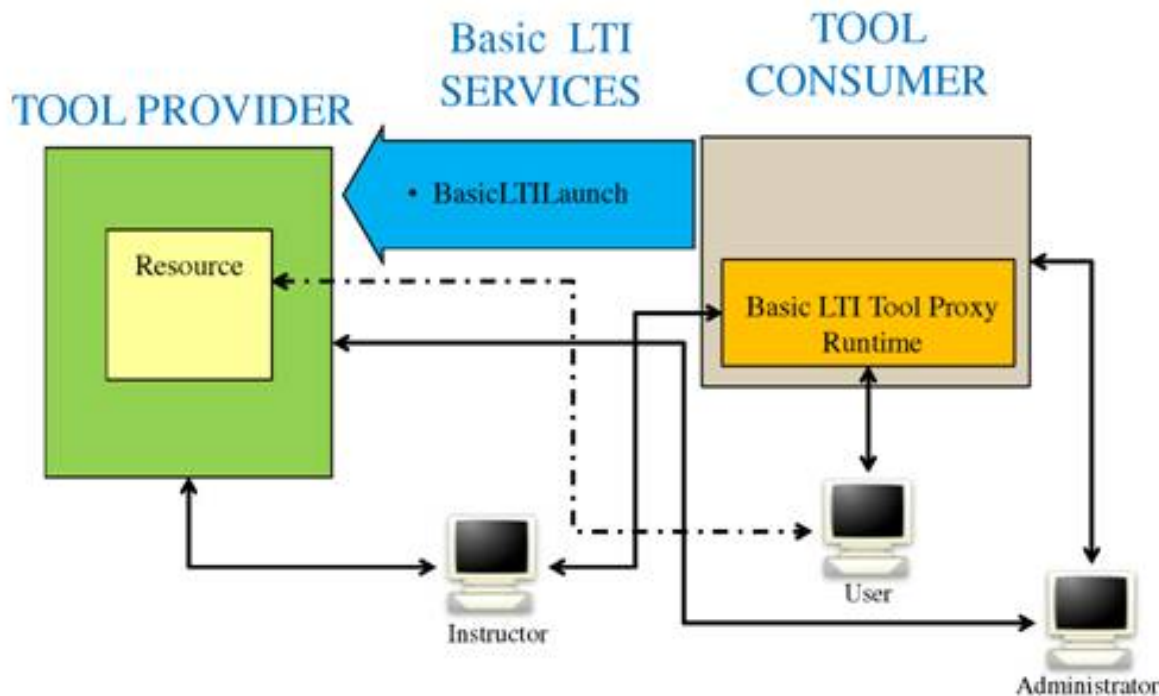
# Interoperability

- Learning Tools
- Cloud Storage
- Authentication



# Learning Tools

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



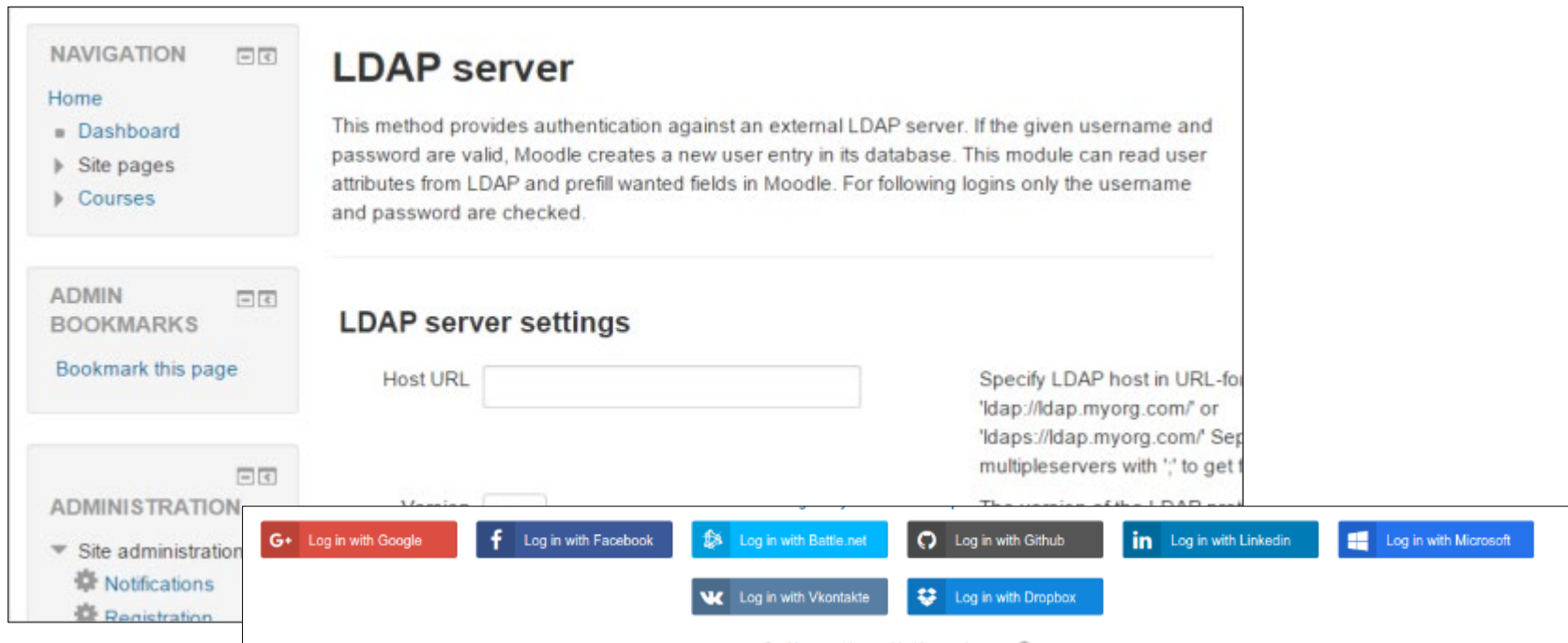
# Cloud Storage

- Cloud hosting of Moodle
- File management

The screenshot displays the 'My private files' interface in Moodle. On the left is a 'NAVIGATION' sidebar with a tree view containing: Home, My home, Site pages, My profile (with sub-items: View profile, Forum posts, Blogs, Messages, My private files, My badges, Repositories), and My courses. The main area is a 'File picker' window. It features a left-hand list of sources: Upload a file, Server files, Private files, Recent files, Google Drive, Picasa web album, Flickr, Flickr public, Wikimedia, URL downloader, and Microsoft Skydrive. The right-hand pane shows a grid of image thumbnails, each with a caption below it. The captions include: 'Mont-Blanc from', 'Mont-Blanc from', 'Mont-blanc-parc-', 'Mont Blanc-S256.jpg', 'Mont Blanc (from Les', and 'Mont Blanc - crop -'. A dark banner at the bottom left of the screenshot contains the text 'Convenient file management'.

# Authentication

- Basic Moodle Authentication / Moodle Network
- Authentication APIs / LDAP
- Social Network Authentication



The screenshot displays the Moodle administration interface for LDAP server settings. On the left, there are navigation and administration menus. The main content area is titled "LDAP server" and includes a descriptive paragraph about authentication against an external LDAP server. Below this is the "LDAP server settings" section, which features a "Host URL" input field and a text box for specifying LDAP host details. Overlaid at the bottom of the screenshot is a row of social login buttons: "Log in with Google", "Log in with Facebook", "Log in with Battle.net", "Log in with Github", "Log in with LinkedIn", "Log in with Microsoft", "Log in with Vkontakte", and "Log in with Dropbox".

**NAVIGATION**

- Home
  - Dashboard
  - Site pages
  - Courses

**ADMIN BOOKMARKS**

- Bookmark this page

**ADMINISTRATION**

- Site administration
  - Notifications
  - Registration

## LDAP server

This method provides authentication against an external LDAP server. If the given username and password are valid, Moodle creates a new user entry in its database. This module can read user attributes from LDAP and prefill wanted fields in Moodle. For following logins only the username and password are checked.

### LDAP server settings

Host URL

Specify LDAP host in URL-for 'ldap://ldap.myorg.com' or 'ldaps://ldap.myorg.com' Sep multipleservers with ',' to get f

Theme of the LDAP ser

Log in with Google Log in with Facebook Log in with Battle.net Log in with Github Log in with LinkedIn Log in with Microsoft Log in with Vkontakte Log in with Dropbox

# Moodle Roadmap

- Outcomes and competencies
- Learning plans
- Learning processes
- Content and OER

<https://docs.moodle.org/dev/Roadmap#Management>

# Outcomes and Competencies

[Home](#)  
[Users](#)  
[Fox McCloud](#)

[Learning plans](#)

### Learning Plans

Active Draft Completed

Plan	Actions
<a href="#">First Year Medicine</a>	Edit v
<a href="#">My Personal Plan</a>	Edit v

Add learning plan

Edit  
Delete  
Competencies  
Request approval  
Review request

### Evidence of Prior Learning

Name	Summary	Linked competencies	Actions
RHCE	Redhat Certified Engineer v3 <a href="#">CERTV4_20150404.pdf</a> <a href="#">www.redhat.com/verify/2324-234-2433-432-42</a>	<a href="#">15</a>	Edit v

Add evidence

Edit  
Delete  
Competencies

Request learning plan approval

Status of review

# Learning Plans

Home > Users > Fox McCloud > Learning Plans > First Year Medicine

[Home](#)  
[Users](#)  
[Fox McCloud](#)

[Learning plans](#)

## Learning Plan: First Year Medicine

[review comments](#)

Due date: 21/2/1993

Competency	Status	Proficient	Review status	Evidence	Actions
Can eat icecream	-	No	<a href="#">In progress</a>	Course in progress: <a href="#">Ben and Jerrys BI</a>	<a href="#">Edit</a> <a href="#">v</a>
Can cram for 24 hours	-	No		-	<a href="#">Edit</a> <a href="#">v</a>
Can party hard	Met	Yes		<a href="#">RCHE</a>	<a href="#">Edit</a> <a href="#">v</a>
Can remove an appendix	Met	Yes		Course completed: <a href="#">Appendix removal APDX</a>	<a href="#">Edit</a> <a href="#">v</a>

## New badge

Home > Site administration > Badges > Manage badges > New badge > Completing a set of competencies

Site administration

Badges  
[Manage Badges](#)

### Completing a set of competencies

#### Language Variation and Change *ACELA1475*

X

Understand that languages have different written and visual communication systems, different oral traditions and different ways of constructing meaning.

#### Language for interaction *ACELA1476*

X

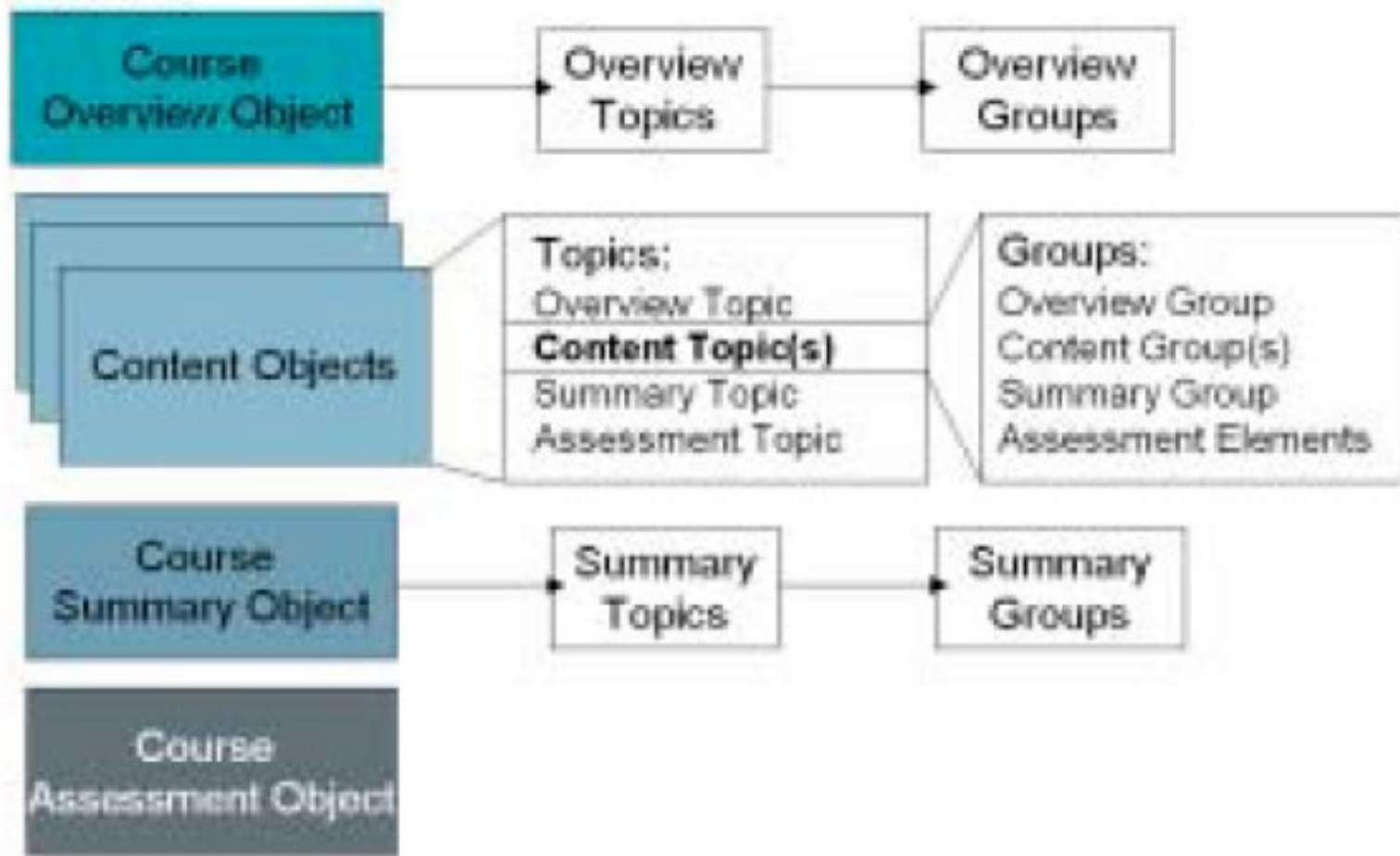
Understand that successful cooperation with others depends on shared use of social conventions, including turn-taking patterns, and forms of address that vary according to the degree of formality in social situations

[Add competencies](#)

Competencies must be complete by        Enable

This criterion is complete when...

# Learning Processes



# Content and OER





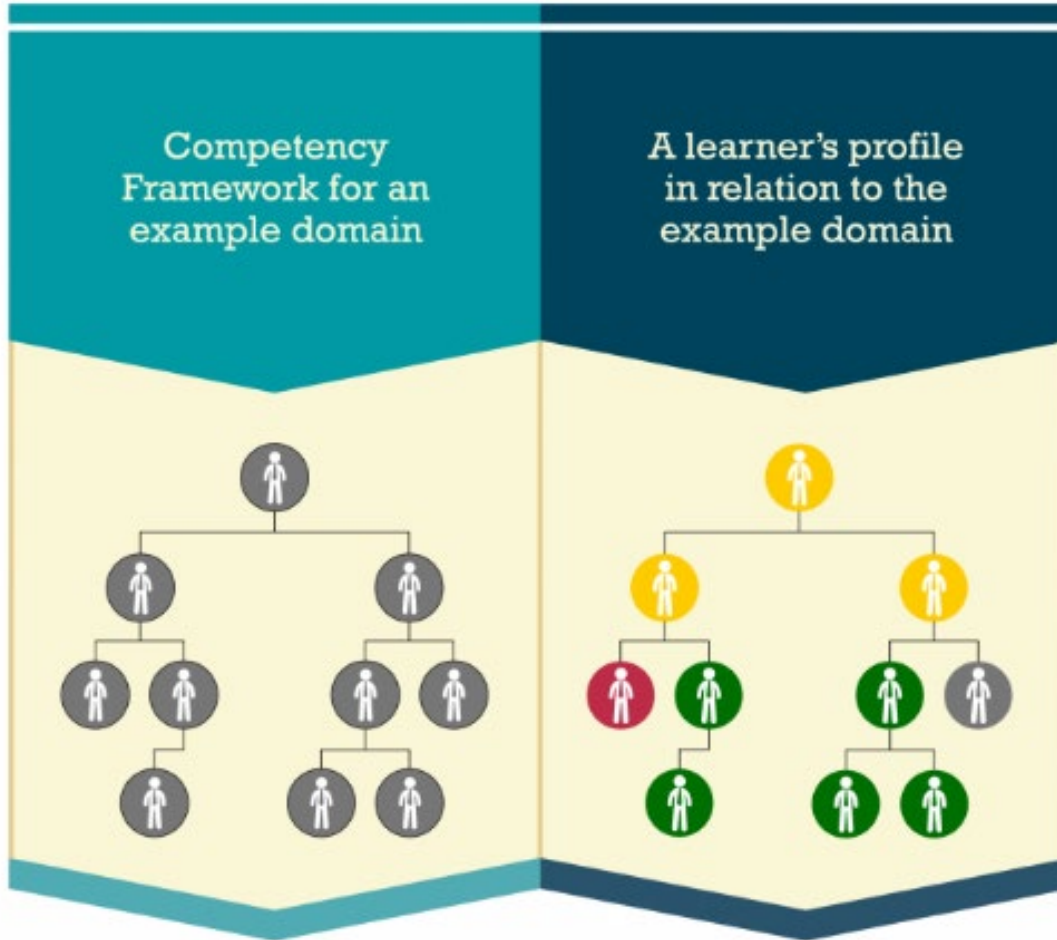
# Modern Learning

- Personal Learning Records
- CASS
- Docker

# Personal Learning Records

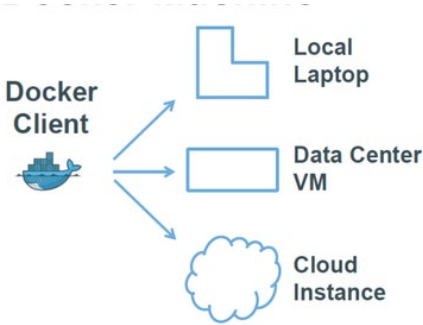


# CASS



## Competency and Skills System

# Docker



The machine running the Docker server is called the Docker host

**DOCKER HOST**

**LINUX**

Both have Different IP within same Linux Machine



communicates with the Docker server using the REST API

**MAIN TASKS**

- 1. RUN AS A DAEMON
- 2. BUILDING IMAGES
- 3. DOWNLOADING IMAGES
- 4. STARTING CONTAINERS
- 5. STOPPING CONTAINERS
- 6. REST API FOR REMOTE MANAGEMENT

# Extending Moodle

- Simulations and Work Environments
- Employment and Work Opportunities
- Personal Learning Environment (PLE)

# Sims and Work Environments

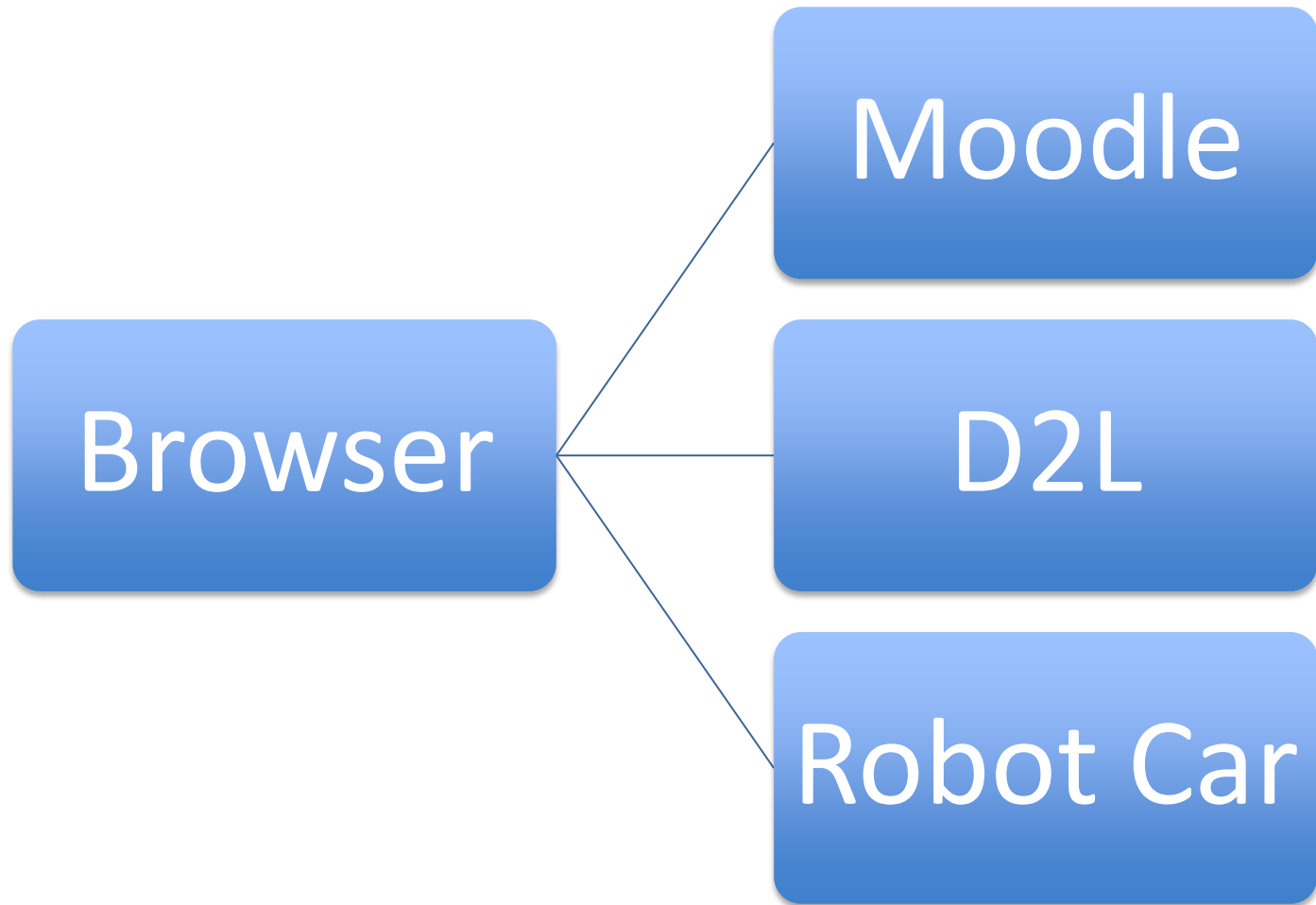


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# Employment and Opportunities

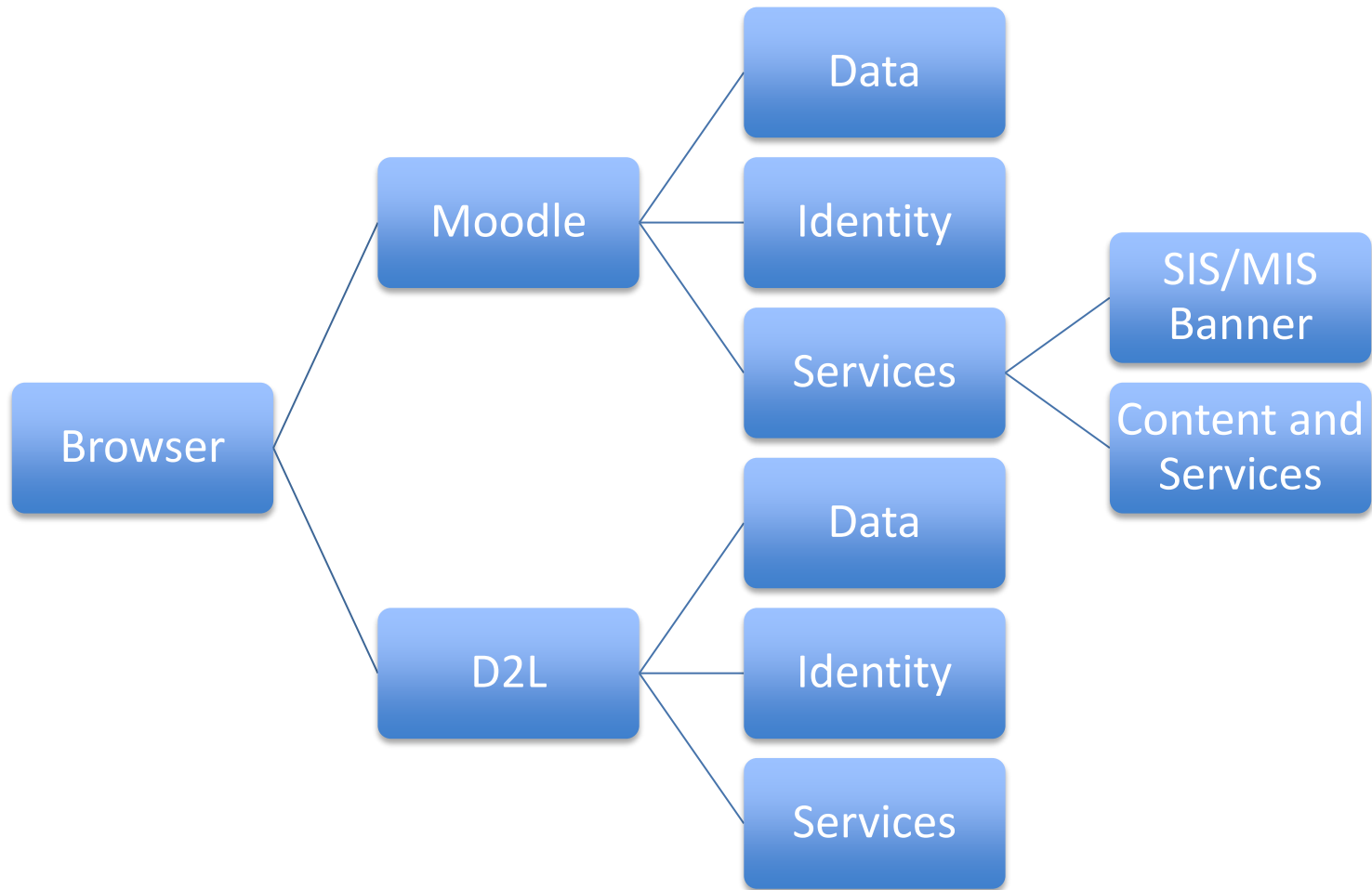


# The Network in the LMS

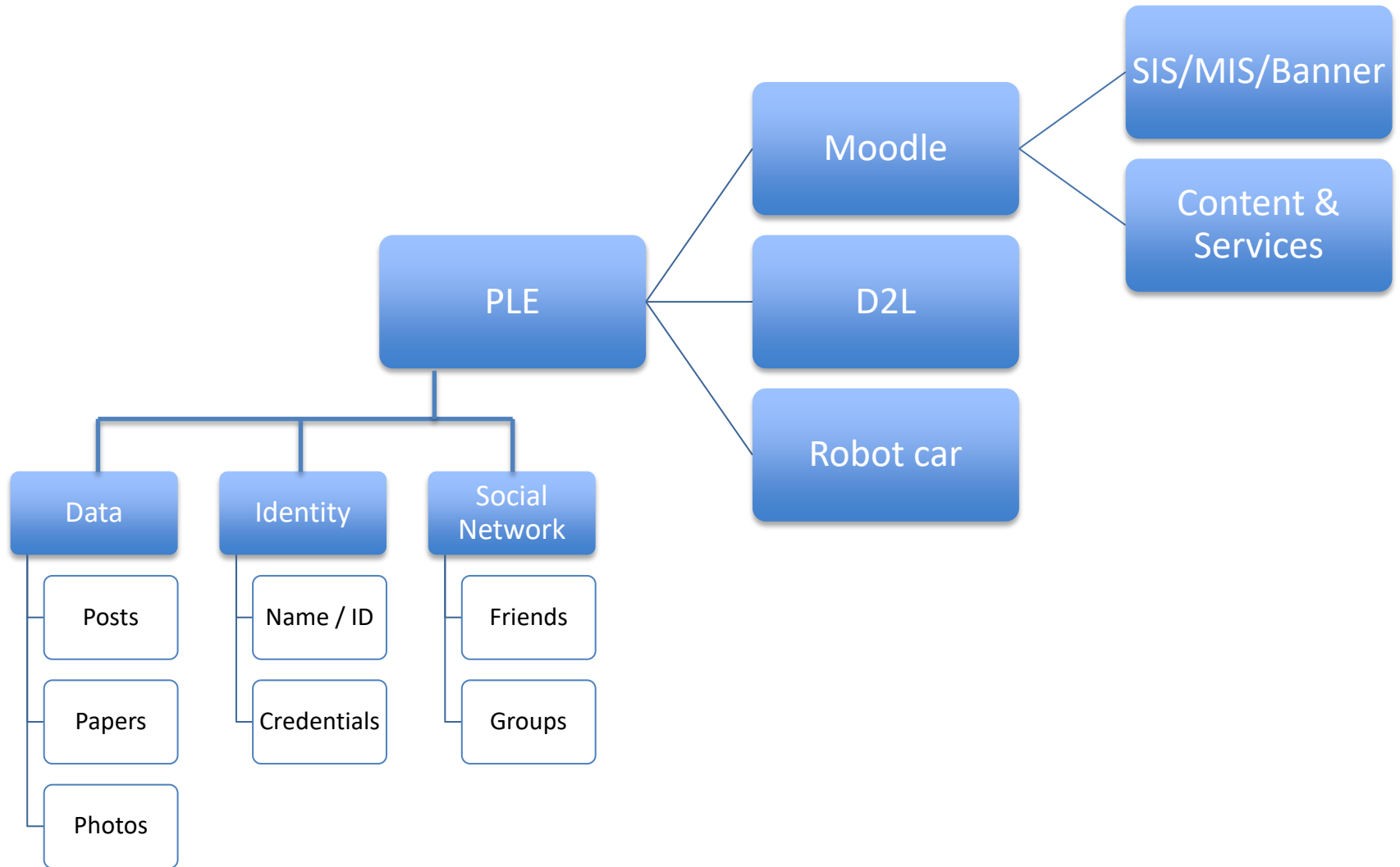


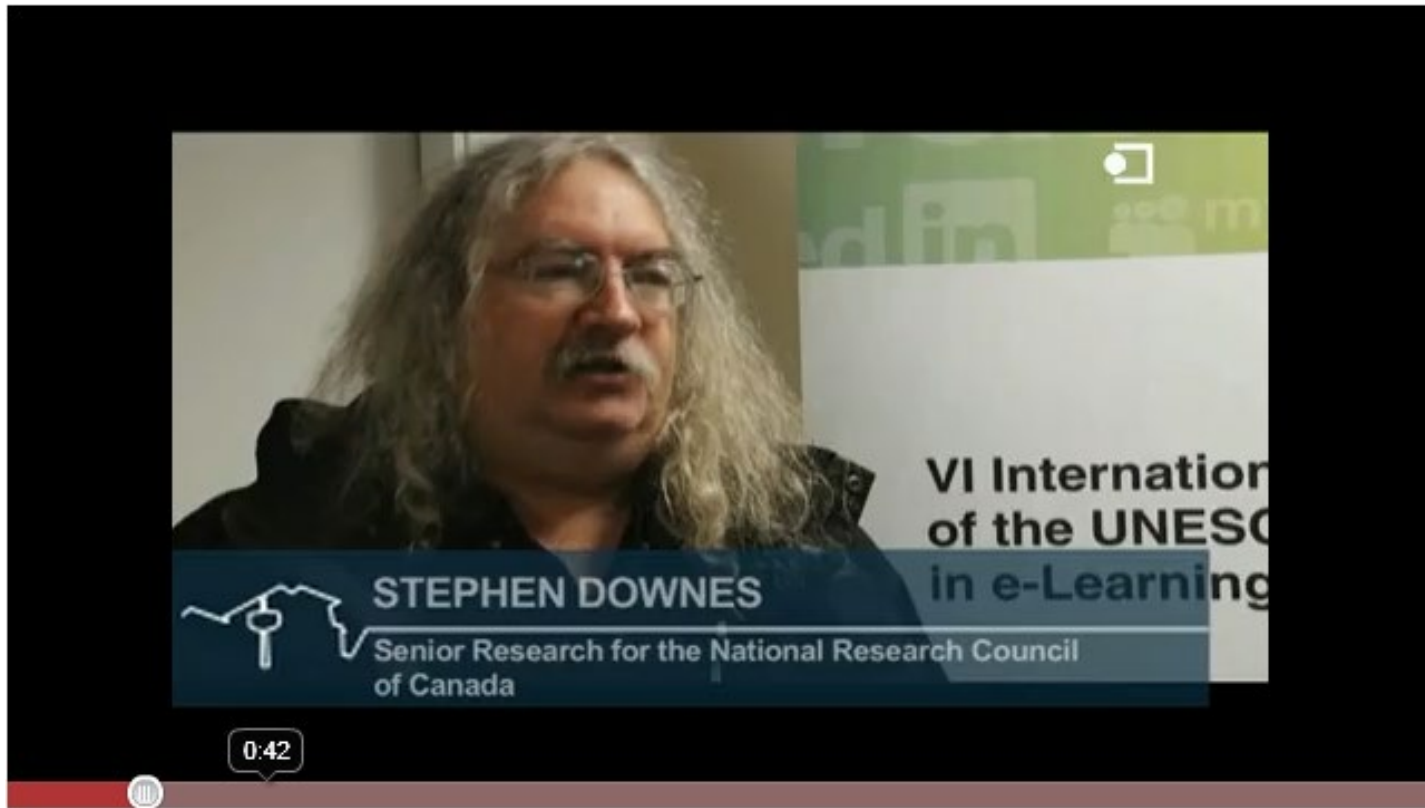


# The Network in the LMS



# The PLE in the Network





<http://www.youtube.com/watch?v=X0il0pgTUx0>

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

# Stephen Downes