

EduCamp Colombia

Software social para la enseñanza y el aprendizaje

<http://www.colombiaaprende.edu.co>

Revolución
Educativa
Colombia aprende

Colombia
aprende
La red del conocimiento

Ministerio de
Educación Nacional
República de Colombia



Stephen Downes
December 5 2007

Overview

1. E-Learning in Development
2. The Connectivist Approach
3. E-learning 2.0
4. The Personal Learning Environment

1. E-Learning in Development



Online Learning

- Has been around since 1995 or so
- Really grew with the World Wide Web
- Has advanced tremendously

Many positive developments in the last few years worth sharing...

Open Source Applications

- **Learning Management Systems**
such as Moodle, Sakai, Bodington, ATutor
- **Development and Community Tools**
such as LAMS, Connexions, ELGG, Drupal, WordPress
- **Supporting Software**
such as Firefox, Thunderbird, OpenOffice, Audacity



Open Educational Resources

- MIT's **OpenCourseWare** project
and the OpenCourseWare Consortium
- Open University's **Open Courses**
- **OER** initiatives
Hewlett, Wellcome, OECD, UNESCO
- **Creative Commons** and CC materials
in Flickr, Yahoo, Google, **Wikipedia**, Wikiversity, etc.



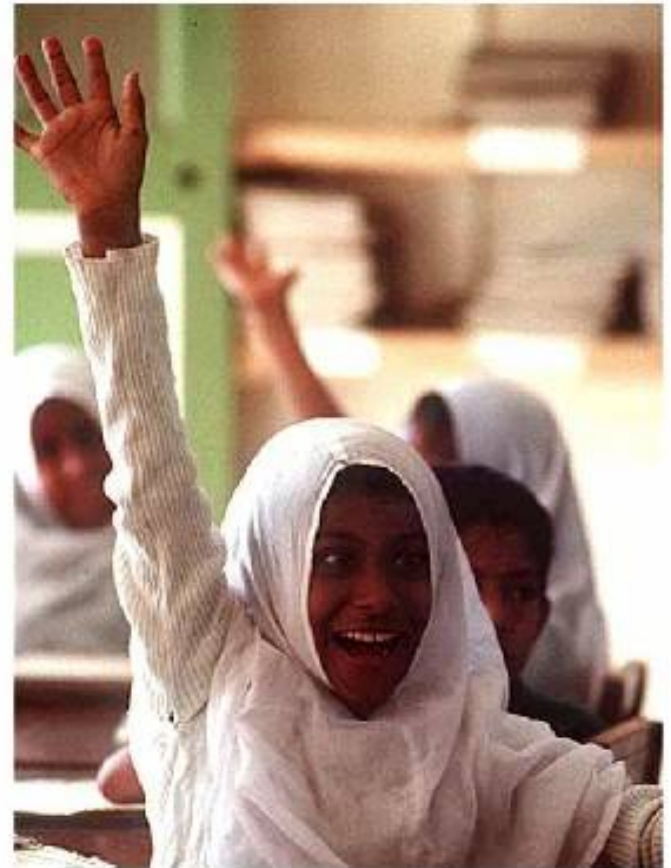
New Environments

- **Multimedia explosion**
podcasts, vodcasts, YouTube, Slideshare, more
- **Mobile computing**
mobile phones, PDAs, etc.
- **The 3D web**
Second Life is a start, we will see more of this

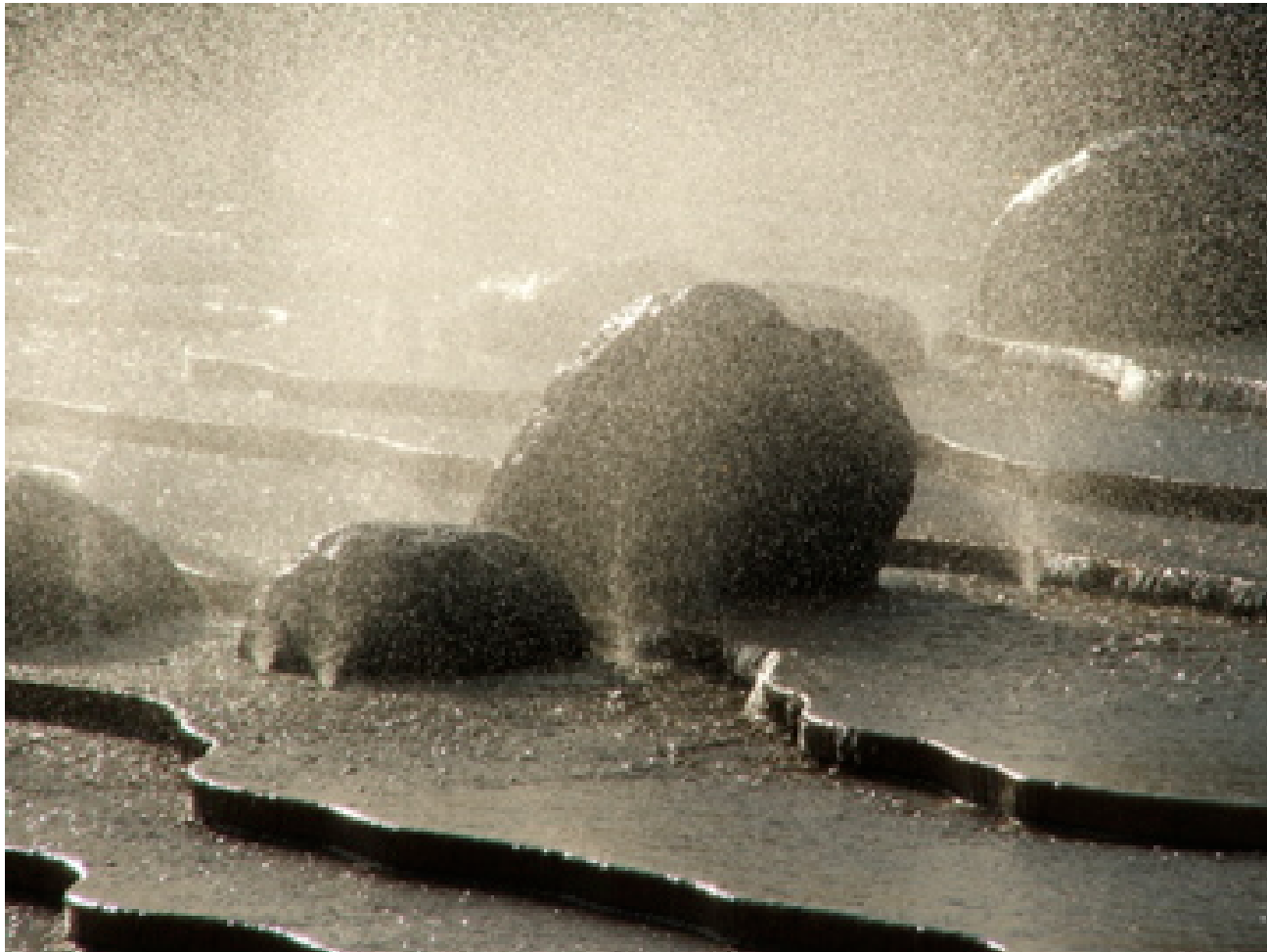


Access...

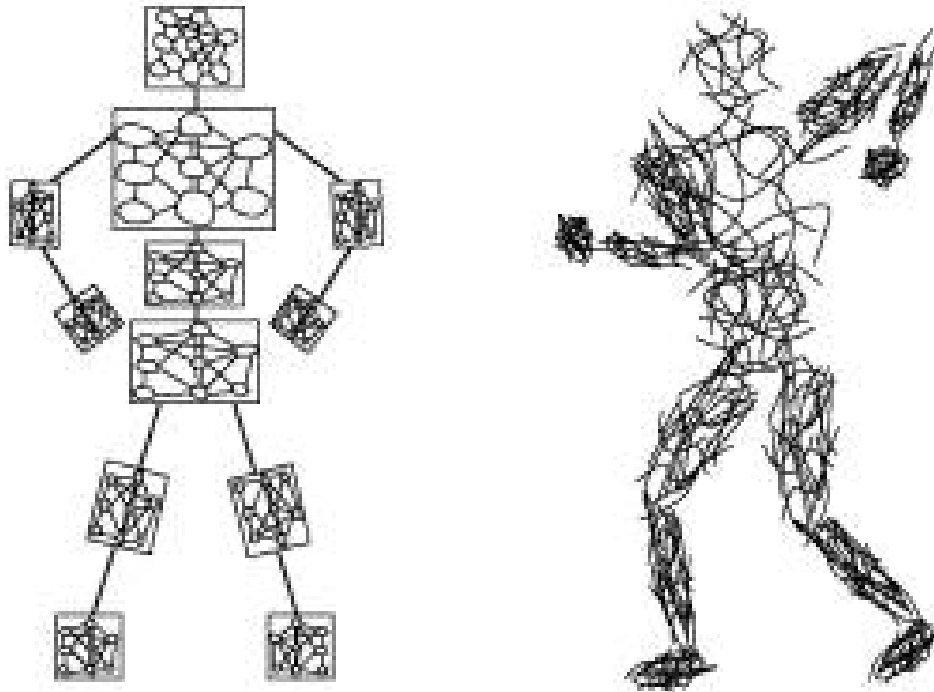
- *One-to-one computing*
such as the Maine laptop project,
now spreading rapidly
- *One Laptop per Child*
has launched –
computers in Nigeria
- *Wireless access*
3G networks, WLAN...



2. The Connectivist Approach



Connectionism



Minsky: Symbolic vs. Analogical Man: Top-Down vs. Bottom Up

<http://web.media.mit.edu/~minsky/papers/SymbolicVs.Connectionist.html>

Un...

As in, unorganized
As in *not* managed
Unconference



Messy vs. Neat

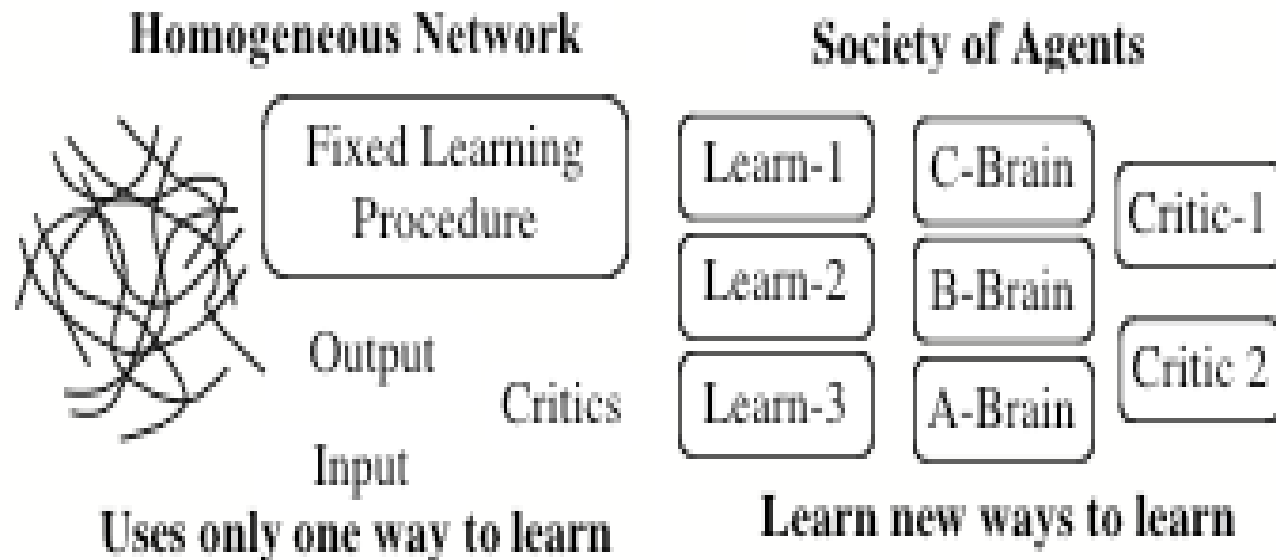
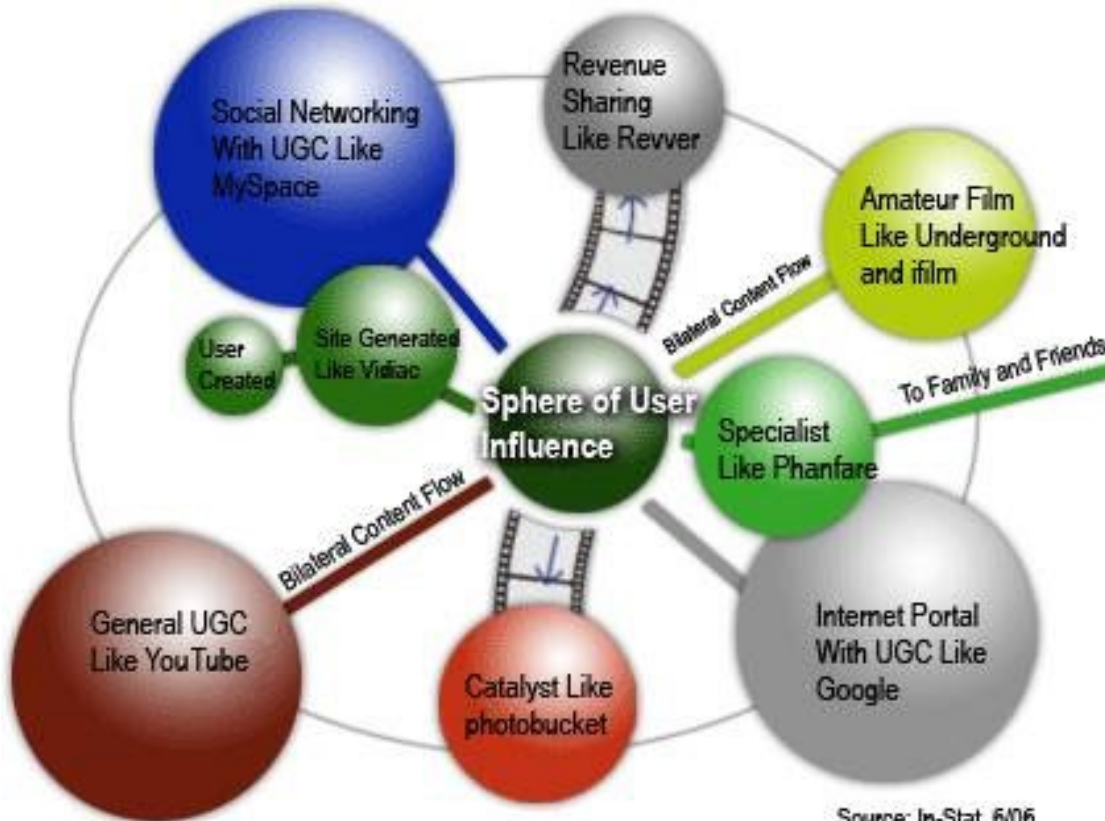


Figure. 7: Messy vs. Neat: Homostructural vs. Heterostructural

User-Generated Content



<http://www.linuxelectronics.com/news/general/user-generated-web-content-will-grow-rapidly-through-2010>

Flow

- IM and SMS expanded – Twitter
- Facebook ‘status’ updates – the now
- RSS, podcasting and other content feeds
- Mode – the idea of flow – how do you survive in a world of constant change?
Stop thinking of things as static

Connectivist Pedagogy

- To 'teach' is to model and demonstrate
- To 'learn' is to practice and reflect
- Both imply participation in what might be called 'an authentic community of practice'

Role of the teacher

- To practice one's work in an open manner; to work transparently
- To 'work' is to engage in a community
- To be openly reflective, eg., to write about the work

Role of the Learner

- To attach oneself to an authentic environment
 - Eg. A role-playing game
 - Eg. Electronic Performance Support
 - Eg. Community of Practice
- To observe and emulate successful practice
- To be 'reflective', ie., to engage in conversation about the practice

4. E-Learning 2.0



E-Learning 2.0

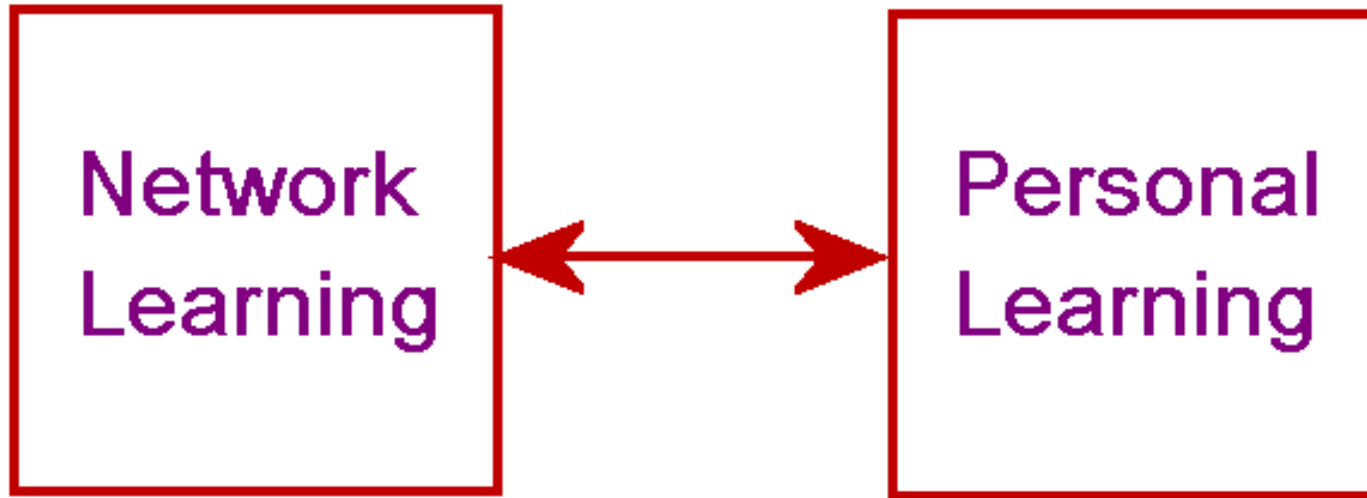
The idea is that learning is *not* based on *objects* and *contents* that are stored, as though in a library



Rather, the idea is that learning is like a utility - like water or electricity - that flows in a network or a grip, that we tap into when we want



The way networks learn is the way people learn...



- they are both complex systems
- the organization of each depends on connections

Connectivism (George Siemens)

The Concept

- Learner centered

Learning is centered around the interests of the learner

Learning is *owned* by the learner

This implies learner choice of subjects, materials, learning styles

- Immersive learning

This learning is
immersive –
learning by doing

- **Connected Learning**

The computer connects the student to the rest of the world

Learning occurs through connections with other learners

Learning is based on conversation and interaction

Examples

- Game-based learning

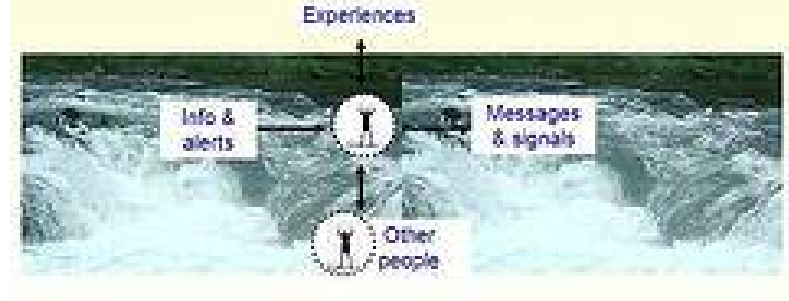
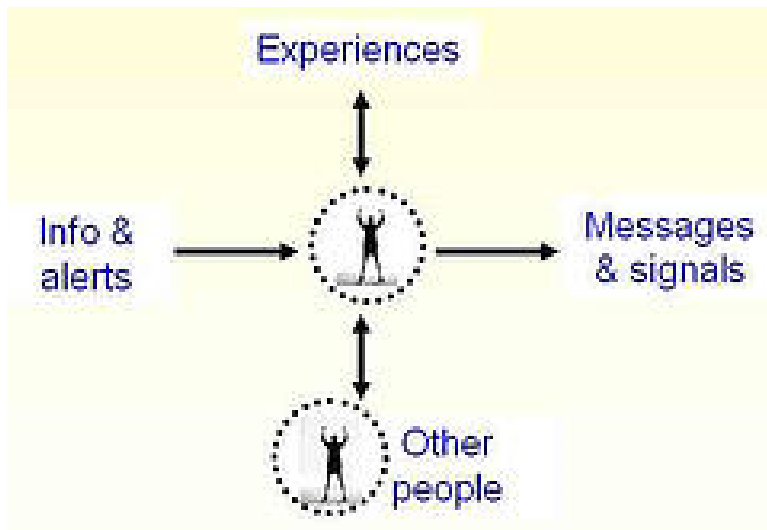


Types:

Branching, Spreadsheet, Quiz Game, Simulation Lab...

<http://www.downes.ca/post/11>

- Workflow (Informal) Learning



Types: EPSS, Community of Practice, Environment, Visualization...

<http://metatime.blogspot.com/>

- Mobile Learning



Examples:

Co-op learning, drill and flash-card,
instant messaging, field trips,
resource capture (like this talk!)

First Iteration: User-Produced Media

- Blogs and Blogging
- Podcasting and Vodcasting
- Game mods and other multimedia



Web 2.0: The Learning Network

- The intersection between the worlds for education, work, and home
- Key requirement is easy-to-use tools and hosting services*
- *E.g. the “e-Portfolio-as-blog” approach

<http://www.cetis.ac.uk/members/scott/entries/20050523083528>

Personal Learning

- *Interaction* – participation in a learning community (or a community of practice)
- *Usability* – simplicity and consistency
- *Relevance* – or *salience*, that is, learning that is relevant to you, now

Interaction: principles

- Pull is better than push...
- Speak in your own (genuine) voice (and listen for authenticity)
- Share your knowledge, your experiences, your opinions
- Make it a habit and a priority



Usability: principles

“... probably the greatest usability experts are found in the design labs of Google and Yahoo!”

Elements of Usability

- **Consistency** ... *I know what to expect...*
- **Simplicity** ... *I can understand how it works...*

Relevance: principles

- Information is a flow, not a collection of objects
 - Don't worry about remembering, worry about repeated exposure to good information
- Relevance is defined by function, not topic or category
- Information is relevant only if it is available where it is needed

Network Learning

Reliability

(AKA the Semantic Condition)



Diversity

- Did the process involve the widest possible spectrum of points of view?
- Did people who interpret the matter one way, and from one set of background assumptions, interact with people who approach the matter from a different perspective?

Autonomy

- Were the individual knowers contributing to the interaction of their own accord, according to their own knowledge, values and decisions?
- Or were they acting at the behest of some external agency seeking to magnify a certain point of view?

Openness

- Is there a mechanism that allows a given perspective to be entered into the system, to be heard and interacted with by others?

Connectivity

- Is the knowledge being produced the product of an interaction between the members, or is it a (mere) aggregation of the members' perspectives?
- A *different* type of knowledge is produced one way as opposed to the other.

5. Personal Learning Environment



Warrierz....c'mout an' playayyy...



Content as Vocabulary

<http://icanhascheezburger.com/>

Content as Creation

Aggregate

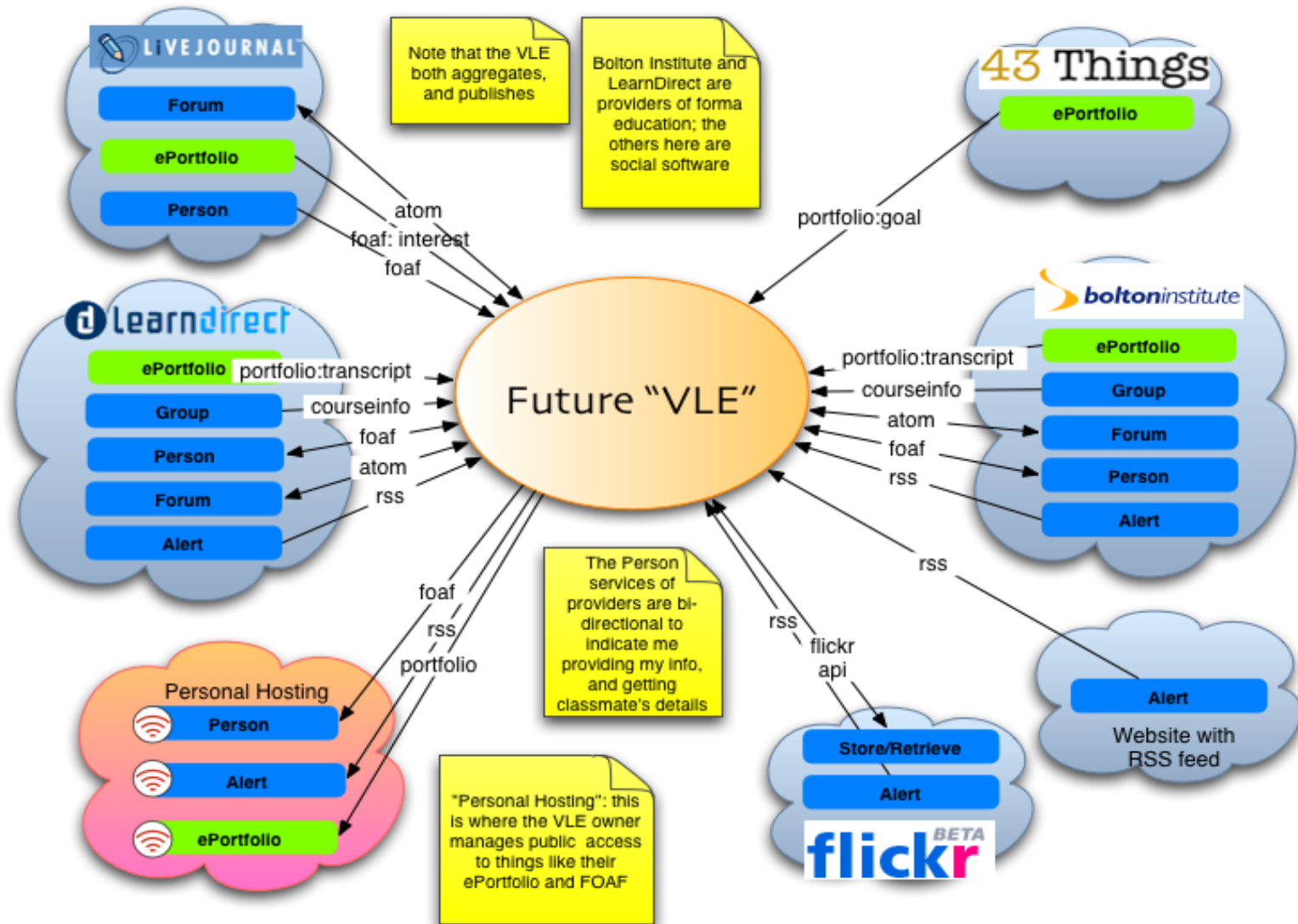
Remix

Repurpose

Feed Forward



The Idea of the PLE...



Plex Personal Learning Environment Example

The screenshot displays the Plex Personal Learning Environment interface. The main window is titled "Plex" and contains several panes:

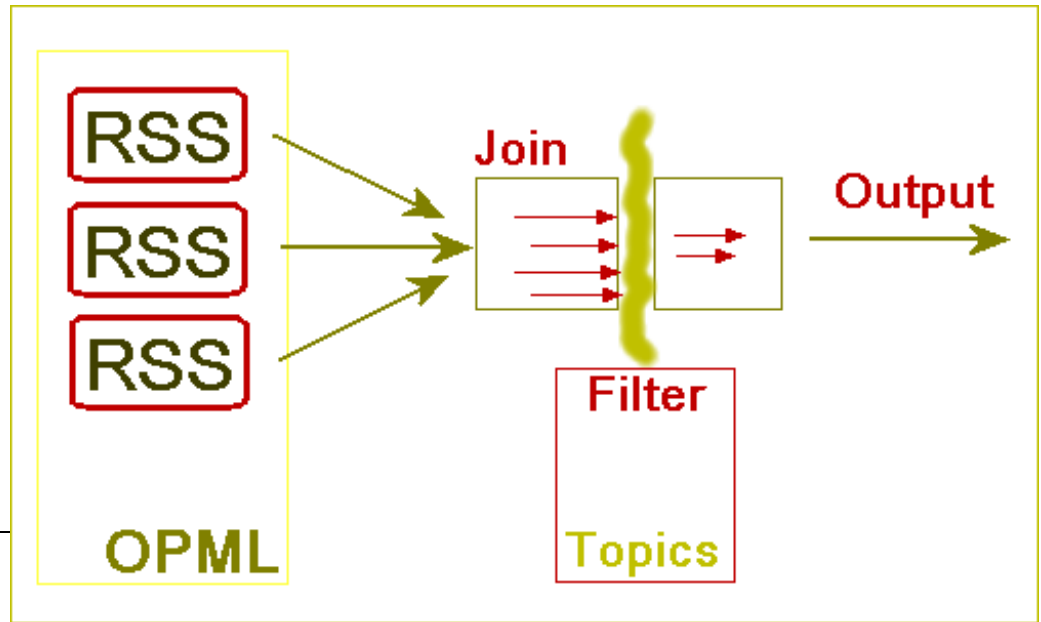
- Opportunities Explorer:** A tree view showing a search for "learn three chord rock guitar" under a "Match" category.
- Opportunity Viewer:** A detailed view of the selected opportunity, showing the title "learn three chord rock guitar" and the number of registered people (1).
- Search Results:** A list of search results from 43 Things, including titles like "Leran to play the guitar like no one has ev...", "learn to play acoustic guitar, also get a gu...", and "Learn to play the guitar guitar properly an...".
- Details:** A browser window showing the details of the selected opportunity, including the address "http://www.43things.com/things/view/161919" and a search bar.

The interface is designed to help users find and explore learning opportunities. The search results pane includes a table with the following data:

Title	Provider	Location
Leran to play the guitar like no one has ev...	43 Things	http://www.4...
learn to play acoustic guitar, also get a gu...	43 Things	http://www.4...
Learn to play the guitar guitar properly an...	43 Things	http://www.4...
meet Mcfly and just chill out with them an...	43 Things	http://www.4...
Create a music room downstairs, with a dr...	43 Things	http://www.4...
i wnat to keep playing guitar and play infr...	43 Things	http://www.4...
i want to learn to play the guitar and then...	43 Things	http://www.4...
Sing and play bass guitar at the same tim...	43 Things	http://www.4...

Collecting and Filtering RSS

<http://www.downes.ca/mygluframe.htm>



MyGlu

By Stephen Downes

[About](#)

Force: 1

Harvesting <http://del.icio.us/rss/Downes>

Feedfile is: myglu/feedcache/del.icio.us_rss_Downes

No content. Harvesting from source.

URL: <http://del.icio.us/rss/Downes>

Parsing Feed=HASH(0x9f0f10c)

Harvesting <http://www.downes.ca/news/OLDaily.xml>

Feedfile is: myglu/feedcache/www.downes.ca_news_OLDaily.xml

No content. Harvesting from source.

URL: <http://www.downes.ca/news/OLDaily.xml>

Parsing Feed=HASH(0x9f0ef8c)

RSS Writr

The screenshot shows the RSS Writr web editor interface. At the top left, there is a search input field and a "Start Search" button. Below this are navigation links: [Change Theme], Stephen's Web, [OLDaily], [Archives], [Threads], [Best Of], [Search], and [Options].

The main content area on the left features a large heading "Welcome to RSS Writr". Below the heading, there are three paragraphs of instructional text: "Select a content source from the list (see the panel at the lower right hand side of the page).", "When you see an item that interests you, drag it into the editing area (at right). You can drag multiple items into the editor.", and "When you have finished editing, save your new post to your blog." Below the text is a large empty rectangular area for editing.

On the right side, there is a text editor window. It has a "Title:" label and an input field. Below the title field is a toolbar with icons for bold (B), underline (U), italic (I), bulleted list, numbered list, decrease indent, increase indent, link, and unlink. To the right of the toolbar is the text "Shift+Enter for single line space". The main editing area of the text editor is highlighted in yellow and contains the text "Hello".

At the bottom right, there is a section titled "Content Sources" with a dropdown menu currently showing "Stephen's MyGlu Test".



<http://www.downes.ca/editor/writr.htm>

Edu_RSS Viewer

Stephen's Web

START SEARCH

[\[NEWS\]](#) [\[DISCUSS\]](#) [\[SEARCH\]](#) [\[ABOUT\]](#) [\[ARCHIVES\]](#) [\[OPTIONS\]](#)

 **EDU-RSS RECENT** 

You are
logged in
as Stephen
Downes


[\[Logout\]](#)

*Formation and professional certification open and remote on the free software ****

Tally of the general project, history, objectives, concepts
[From: [Thot](#), April 10, 2007] [Tags: [Project Based Learning](#)]
<http://thot.cursus.edu/rubrique.asp?no=25673>

Blog This!

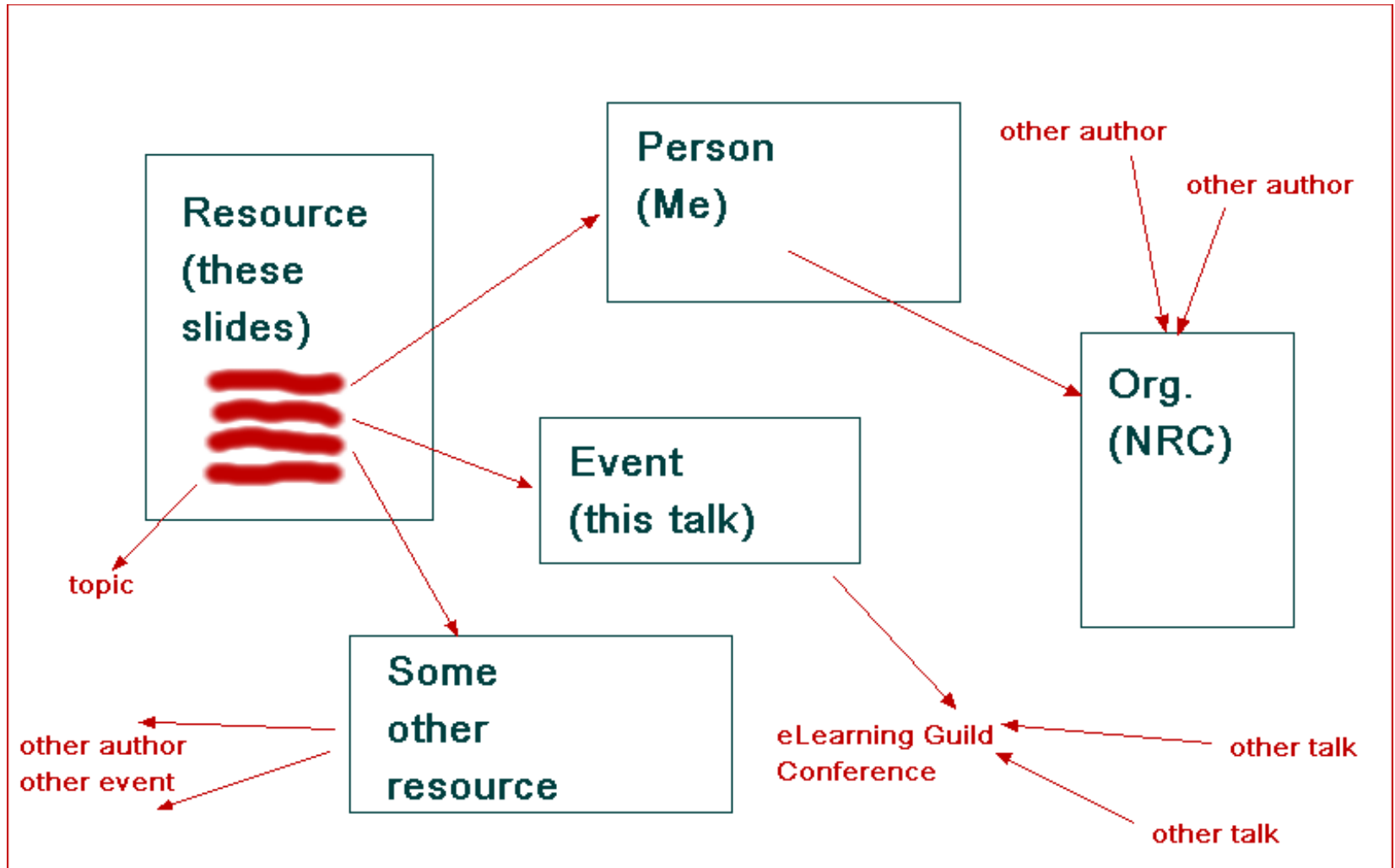
1 of 1594

SOME RIGHTS RESERVED THIS WORK IS LICENSED UNDER A  CREATIVE COMMONS LICENSE

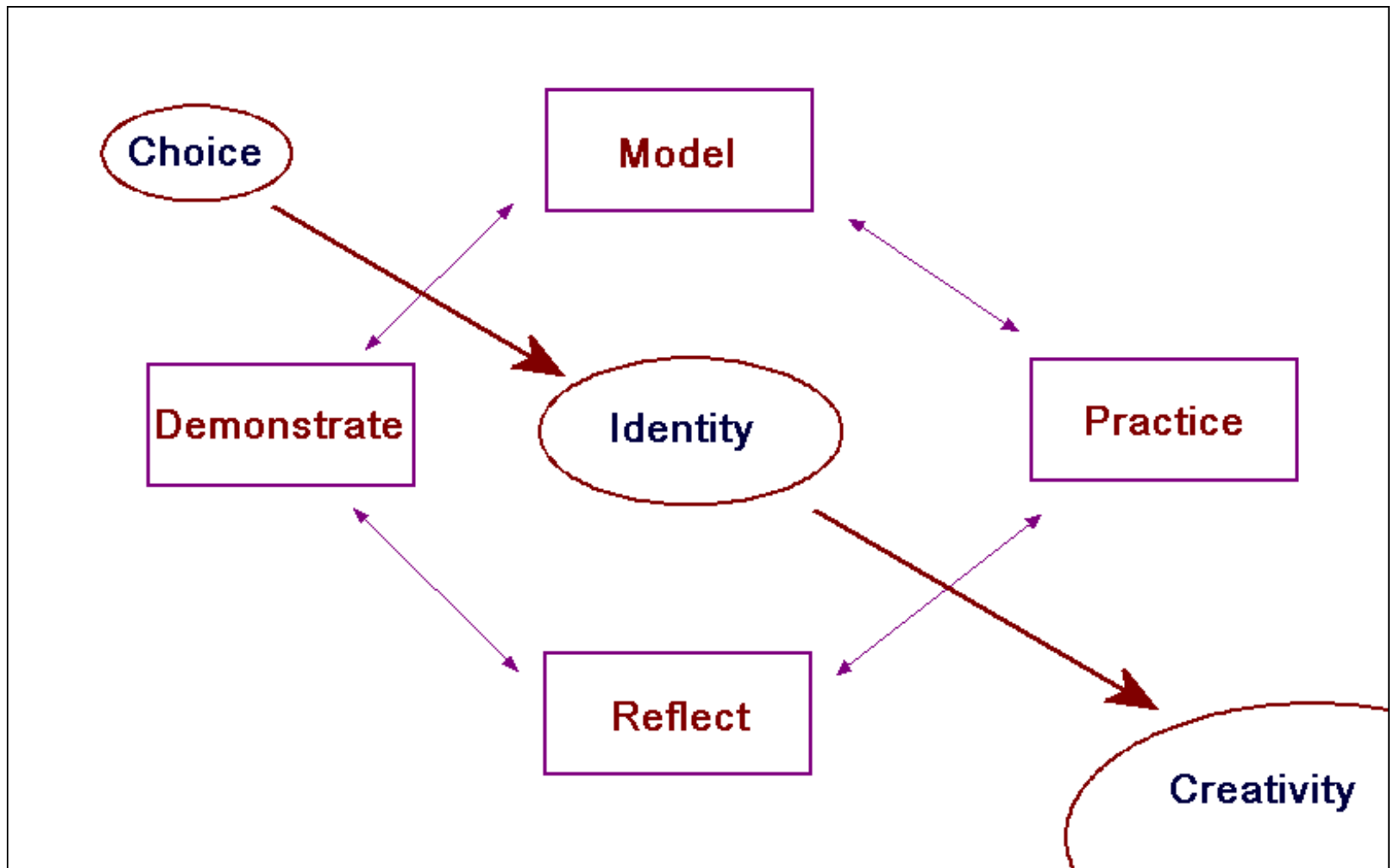
COPYRIGHT 2007 STEPHEN DOWNES
CONTACT: STEPHEN@DOWNES.CA

<http://www.downes.ca/cgi-bin/page.cgi?action=viewer>

Relations between Entities...



What is the PLE?



We can get an idea of what the PLE looks like by drilling down into the pieces...

Model

- conceptual frameworks
 - wiki (wiki API, RSS)
 - concept maps (SVG, mapping format)
 - gliffy (SVG?)
- reference frameworks
 - Wikipedia
 - video / 2L 3D representation – embedded spaces

The question is – how to transport and represent models that are actually used?

Demonstrate

- reference examples

- code library
- image samples

- thought processes

- show experts at work (Chaos Manor)

- application

- case studies
- stories

The question is, how can we connect the learner with the community at work?

Practice

- scaffolded practice
 - game interfaces
 - sandboxes
- job aids
 - flash cards
 - cheat sheets
- games and simulations
 - mod kits
 - mmorpgs

The question is, how can we enable access to multiple environments that support various activities?

The question is, how can we assist people to see themselves, their practice, in a mirror?

Reflection

- guided reflection
 - forms-based input
 - presentations and seminars
- journaling
 - blogs, wikis
- communities
 - discussion, sharing

People talk about 'motivation'
– but the real issue here is
ownership

Choice – Identity - Creativity

- simulated or actual environments that present tasks or problems
- OpenID, authentication, feature or profile development
- Portfolios & creative libraries



Stephen Downes

<http://www.downes.ca>