Connectivist
learning
and teaching

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Connectivist Learning: Three Principles

- *Usability* – simplicity and consistency

Three Principles:

- _Relevance_ – or _salience_, that is, learning that is relevant to you, now

Interaction:

"… the capacity to communicate with other people interested in the same topic or using the same online resource."

- *Why do we want it?*

  – **Human contact …** *talk to me…*

  – **Human content …** *teach me…*

Interaction: How to Get It

- You cannot depend on traditional learning for interactivity...
  - Most learning based on the broadcast model
  - Most interactivity separated from learning

Interaction: How to Get It

- Built your own interaction network
  - Place *yourself*, not the content, at the centre
  - Don't connect to *things*, connect to *people*
  - Create the environment that suits you best

Interaction: Your Personal Network

- A place to write…

  - Weblogs and online journals

  - Email and mailing lists

Interaction: Your Personal Network

- A way so send quick messages

  - Instant messaging tools, SMS

  - Skype   http://www.skype.com

  - Twitter   http://www.twitter.com

Interaction: Your Personal Network

- A place to connect with friends

    - Social networks (eg. Facebook)

    - Threaded discussion lists (eg. Like the ones on Moodle)

    - Live events (eg. Elluminate, Ustream, DimDim, etc.)

Interaction: The Connectivist Way

- If interaction isn't provided, create it…
  - If you are at a lecture like this, blog it or tweet it

Interaction: The Connectivist Way

- If there is no official discussion, create it

- set up a Ning or a wiki or a Google Doc
  http://www.ning.com
  http://www.pbwiki.com
  http://docs.google.com

WEB 2.0 - THE PEOPLE SPEAK

Interaction: The Connectivist Way

- Use back-channels

  – Private lists http://groups.yahoo.com/

  – Gmail accounts http://mail.google.com

  – Flickr tags

  – Twitter #hashtags

Don't touch that telephone, Comrade! We have Skype now

Web 2.0

Usability:

"… 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…*

Consistency? As a Learner?

- Yes! Take charge of your learning...

Consistency? As a Learner?

- Clarify first principles…

  – for example, how do *you* understand learning theory? Eg. Five Instructional Design Principles Worth Revisiting

Consistency? As a Learner?

- Organize your knowledge
  - For example, build your own CMS (using, say, Drupal or Joomla)

- Summarize, summarize, summarize
  - (and then put it into your own knowledge base)

Simplify the Message

- Use your own vocabulary, examples
  - *You* own your language – don't let academics and (especially) vendors tell you what jargon to use

    (The definitions aren't important and foster a false sense of precision – don't let other people dictate language to you)

Simplify the Message

- Don't compartmentalize (needlessly)

  (It's not 'math' vs. 'language' vs 'art' – it's all a single body of knowledge with various facets)

Usability: The Connectivist Way

- <u>Important</u>: your institutional CMS is almost certainly dysfunctional – create your own *distributed* knowledge management system…

Usability: The Connectivist Way

– Create a blog on Blogger, just to take notes

- Keep your notes on a USB and sync with different computers with SyncToy

WE HEAR THE BLOGOSPHERE NOW

Web 2.0

http://halfanhour.blogspot.com
http://lifehacker.com/326199/synchronize-folders-with-synctoy-20

Usability: The Connectivist Way

– Store photos on Flickr

This lets you create your own image library and share with others

Don't just take party pictures, take pictures of whatever you might need

Remember to tag Flickr photos for later use

http://www.flickr.com/photos/stephen_downes/

Usability: The Connectivist Way

– Create a GMail account and forward important emails to yourself (and take advantage of Google's search)

- Use the Firefox calendar sync extension to create your own master calendar

WEB 2.0 WIRELESS EVERYWHERE

https://addons.mozilla.org/en-US/firefox/addon/9411

Relevance:

"… learners should get what they want, when they want it, and where they want it "

- *Generating Relevance*

  – **Content …** *getting what you want*

  – **Location, location, location***…*

Getting What You Want

- <u>Step One</u>: maximize your sources – today's best bet is RSS – go to <u>http://www.google.com/reader</u> , set up an account, and search for topics of interest
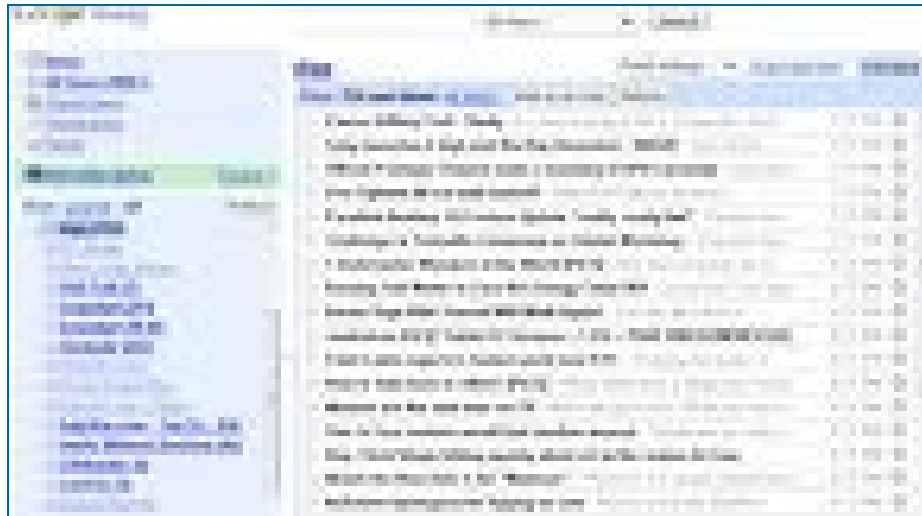
Getting What You Want

- <u>Step Two</u>: filter ruthlessly – if you don't need it now, delete it (it will be online somewhere should you need it later)
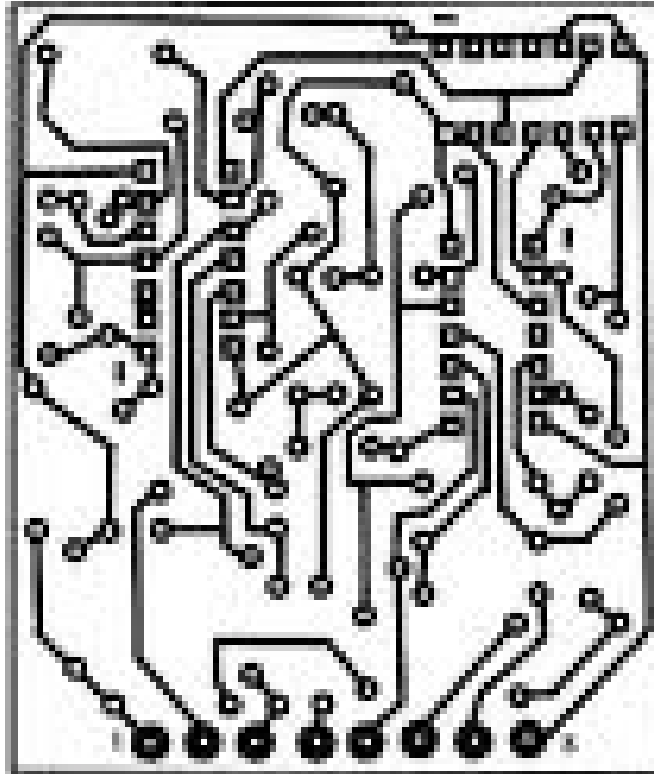
Getting What You Want

- <u>Step Three</u>: convert – don't just acquire and store, you'll never remember it later

- Instead convert it into your language, your system – if it's not worth taking a few minutes to summarize, it's not worth saving

Getting What You Want

- *Important*: Don't let someone else dictate your information priorities – only you know what speaks to you

Getting It Where (and When) You Want

- Shun formal classes and sessions in favour of informal activities

Or if you must be there, maximize their value to you:
-Use them as raw material for blog posts
-Make connections with people in class

Getting It Where (and When) You Want

- *Do* connect to your work at home (and even on vacation) – *but* – feel free to sleep at the office

  – Your best time might not be 9 to 5 …

  – Ideas (and learning) happen when they happen

Relevance: The Connectivist Way

- Develop unofficial channels of information (and disregard most of the official ones)

THE WISDOM OF CROWDS

Relevance: The Connectivist Way

– For example, I scan, then delete, almost all institutional emails

– Traditional newspapers and press form only a *small* part of my knowledge base (simply because the world is no much more than politics and Paris Hilton)

Relevance: The Connectivist Way

- Create 'project pages' on your wiki (you have a wiki, right?) with links to templates, forms, etc.

Eg. The Plearn Trac Wiki

http://trac.edgewall.org/

Relevance: The Connectivist Way

- Use TweetDeck or Tweetie to follow networks of colleagues on Flickr

- (Or do what I do and follow their RSS feeds)

- Use Facebook or MySpace to have conversations and share resources

Relevance: The Connectivist Way

- Demand access

What I'm _Really_ Saying Here…

1. You are at the centre of your own *personal learning network*

What I'm _Really_ Saying Here…

2. To gain from self-directed learning you must _be self-directed_
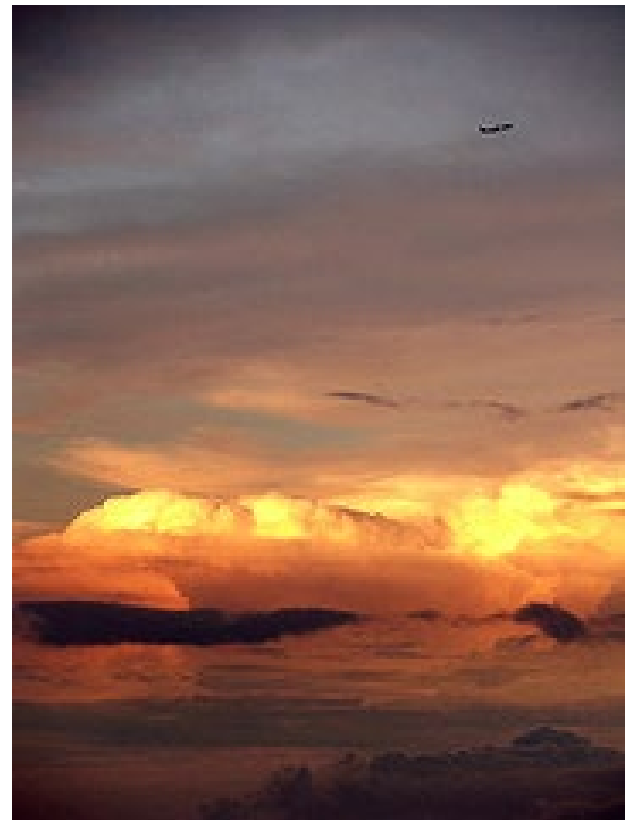
What I'm *Really* Saying Here…

3. These principles should guide *how we teach* as well as how we learn

Connectivist Teaching

Connectivist teaching = Managing Connections

Personal Learning Landscape

Image: http://tesl-ej.org/ej34/m1.html   Via: http://edtechpost.wikispaces.com/PLE+Diagrams
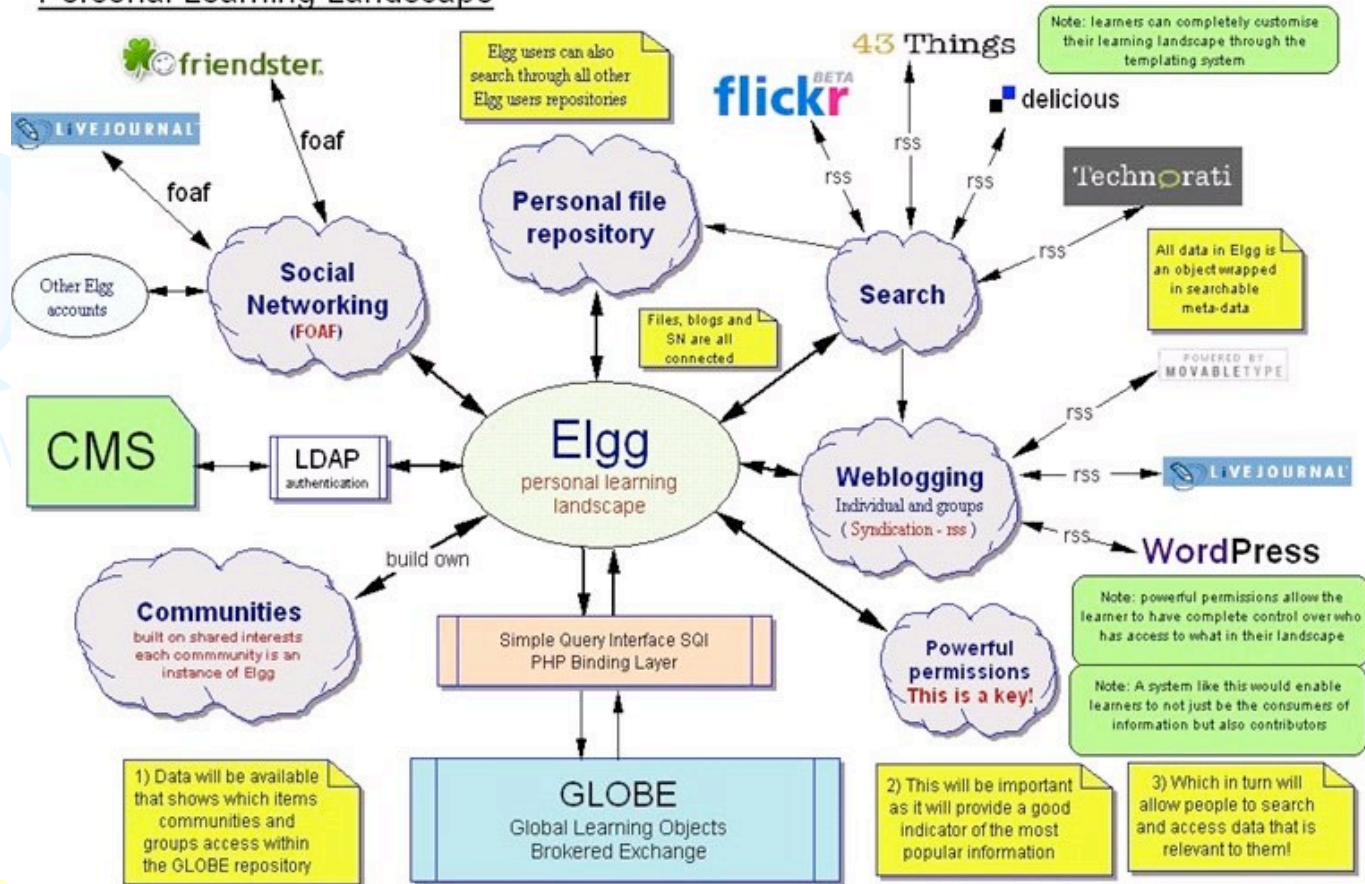
Two Kinds of Knowledge

Knowledge in the Classroom:
- Static
- Declarative
- Authority-based

Knowledge in the Network:
- Dynamic
- Tacit / Non-Declarative
- Constructed

PLEs in a Network
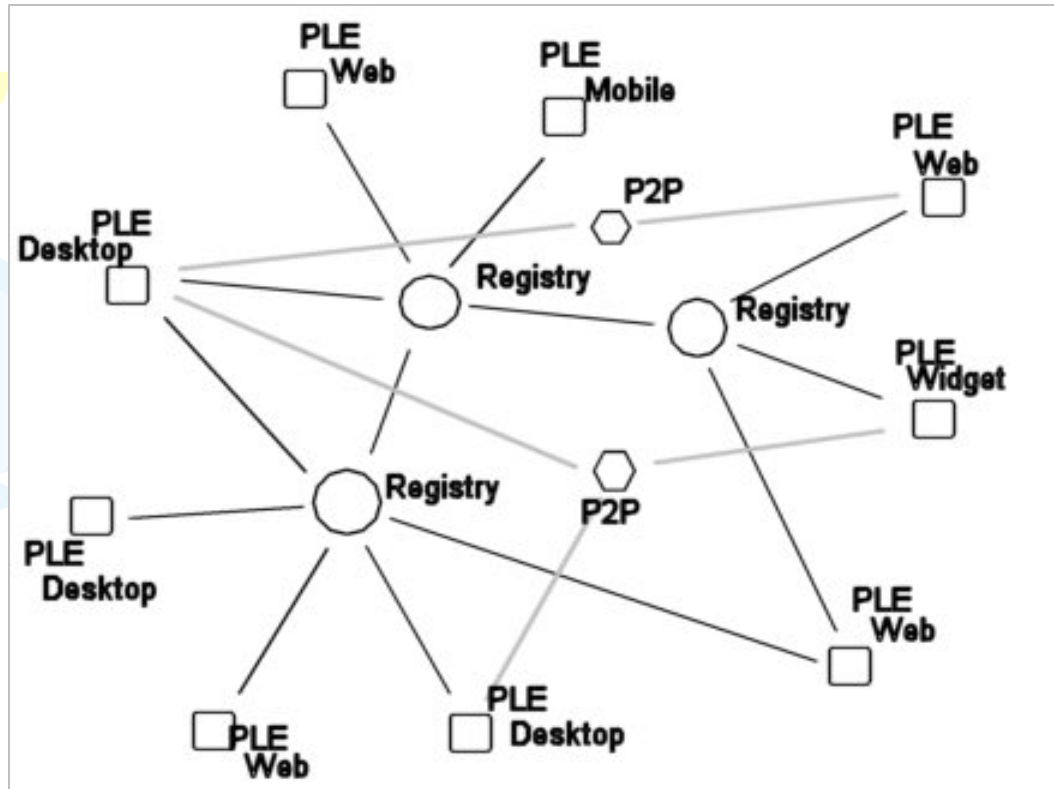
Teachers and students are envisioned as working as a network

Social Learning

- The next step in such a discussion is usually to describe a theory of social learning, depicting learning as an external process (or set of processes)

Group

One-to-one

Situational
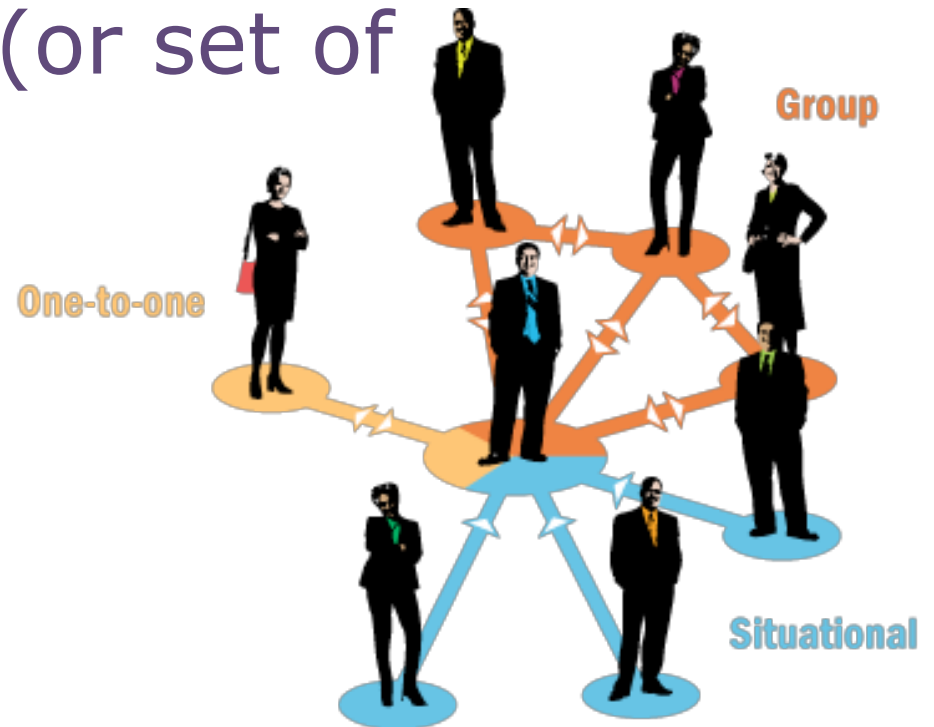
Some Forms of Social Learning

- Behaviourism / Instructivism
- Interaction & Interaction Theory (Moore)
- Social Constructivism (Vygotsky)
- Problem-Based Learning (Johnasson)

Aspects of Social Learning

- Externally-Based Definitions
  - Learning objectives, Body of Knowledge
- Externally-Based Processes
  - Learning activities, Processes and conversations
  - Interaction and communication
- External Systems
  - Classes, networks, groups, collaboration
- External Evaluation

Personal vs Social

Social knowledge is *not* personal knowledge

- Personal Knowledge management = Learning
- Social Knowledge Management = Research (or, *social* learning)

The product of the educational system is not a *social* outcome (knowledge, skill, problem, community) but a *personal* outcome

Image: http://www.stalipius.com/?page_id=43

Personal Knowledge
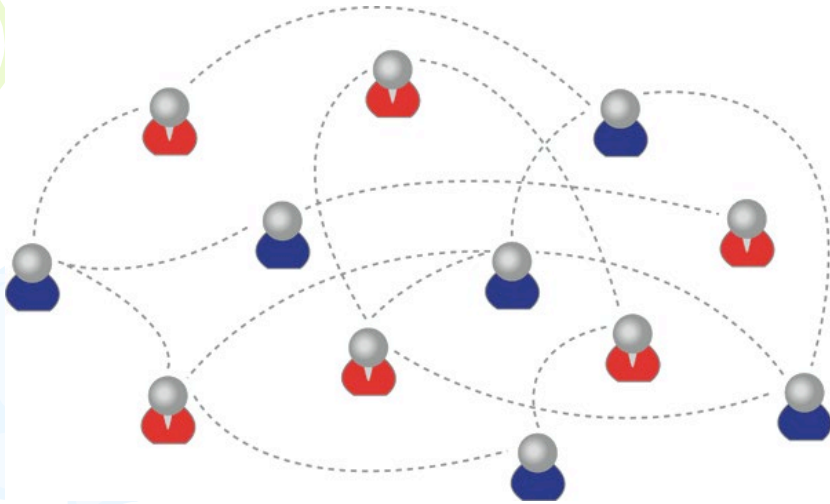
We are using one of these
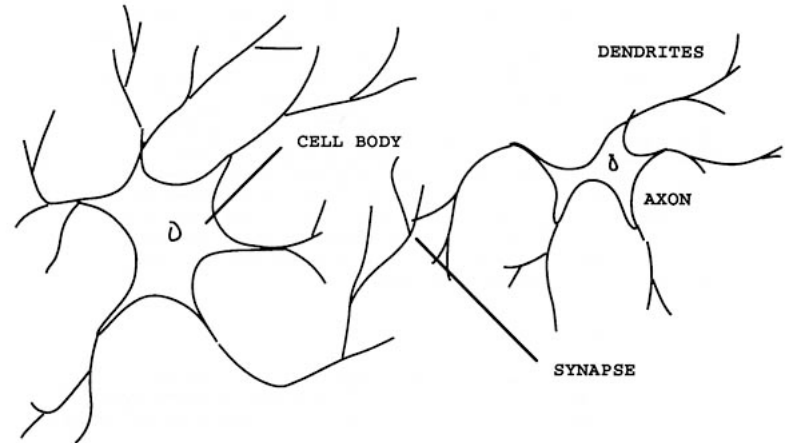
To create one of these

Figure 1. Biological Neuron

Personal knowledge consists of *neural* connections, not social connections

Learning Outcomes

Simple vs complex – text vs network

"Paris is the capital of France"

vs
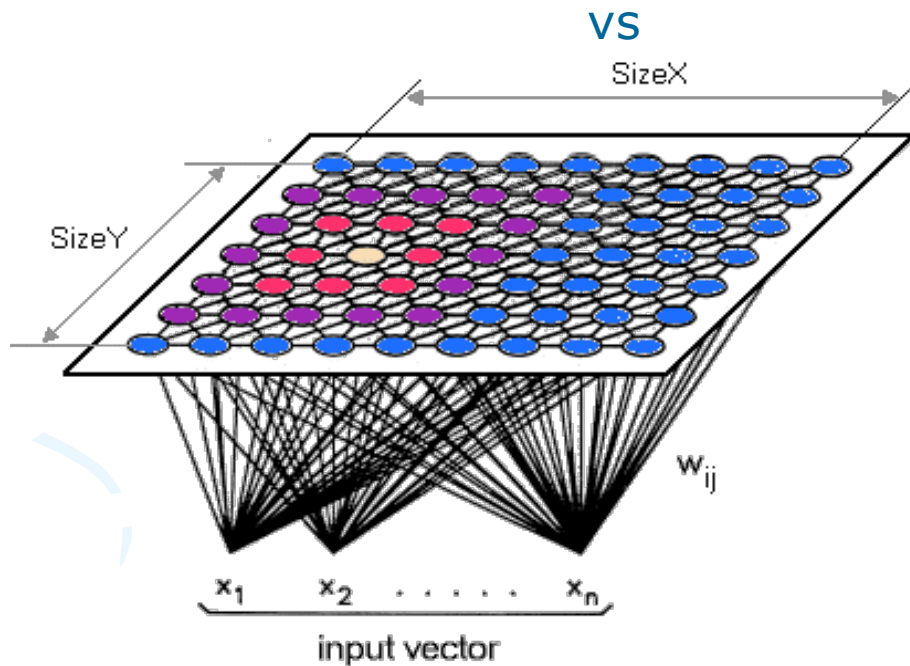
It's the difference between:

- 'Knowing' that 'Paris is the capital of France' or even some sort of 'knowing how' (these are *external* definitions of this knowledge) and

- What it *feels like* to have geographical knowledge; what it *feels like* to be a speaker of a language
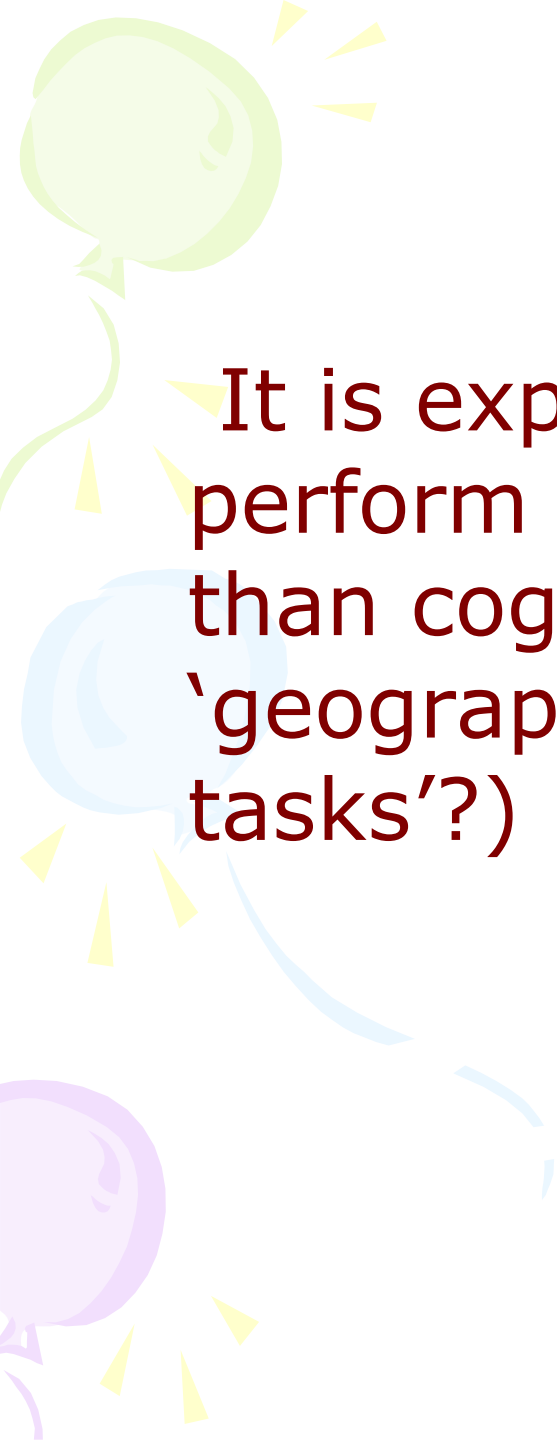
Learning a discipline is a *total state* and not a collection of specific states

It is obtained through *immersion* in an environment rather than acquisition of particular entities

Image:

It is expressed functionally (can you perform 'as a geographer'?) rather than cognitively (can you state 'geography facts' or do 'geography tasks'?)
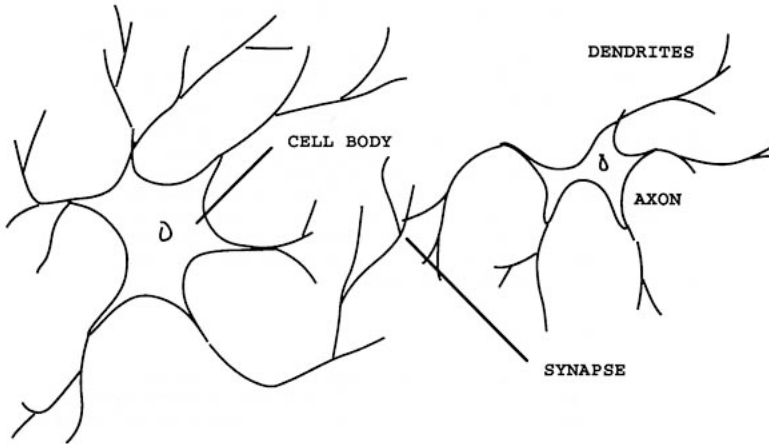
Figure 1. Biological Neuron
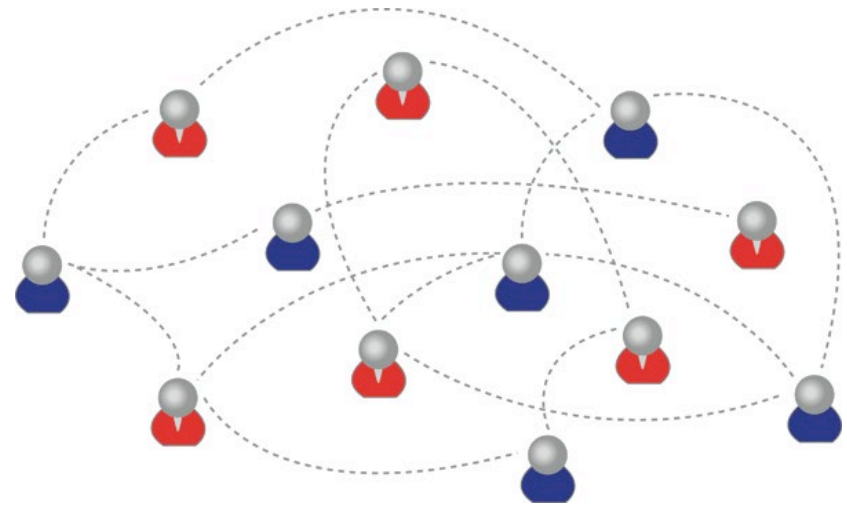
We recognize this

By perfomance in this

There are not specific bits of knowledge or competencies, but rather, personal capacities

Personal Knowledge

- Is not 'constructed'
- You do not 'make meaning' for yourself
- It is a matter of organic growth

(How do I know this? Research on how neural networks grow,
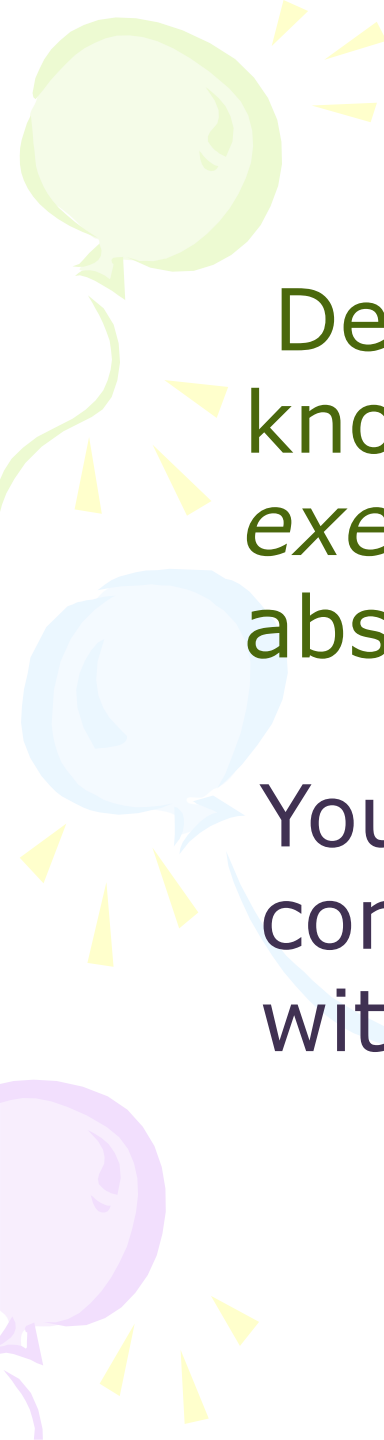
PLE as Exercise Machine

- A PLE is a tool intended to *immerse yourself* into the workings of a community

- Once immersed, you then *practice* being one of the people characteristic of the community

For example, you would learn philosophy by practicing 'being a philosopher' in a philosophical community
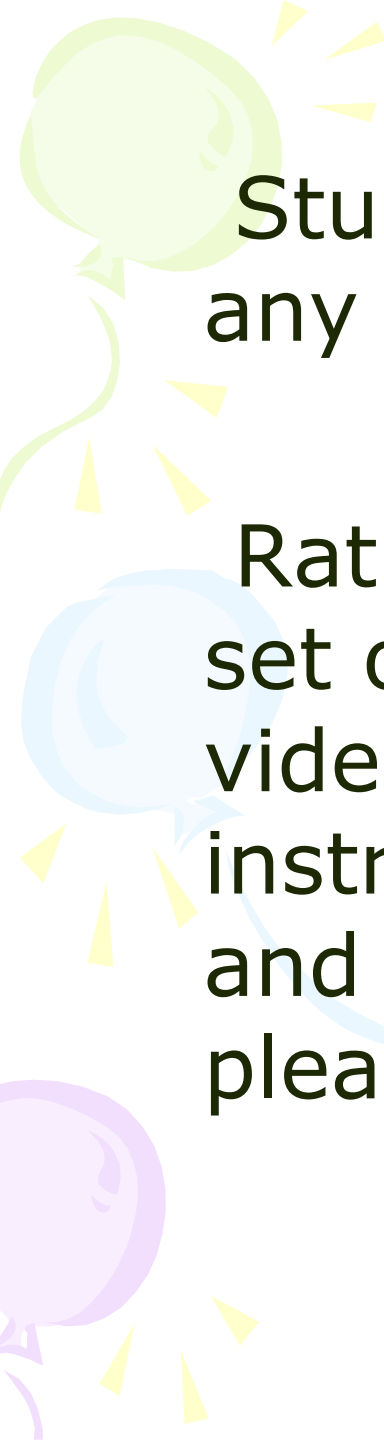
Developing personal knowledge is more like *exercising* than like inputting, absorbing or remembering

Your personal growth develops as a consequence of the interactions with that community

The Connectivist Course

Information is not 'taught' in a course offered using a personal learning environment. In the connectivist model of learning, course 'content' is created by the course participants themselves.

Students are not asked to perform any task in particular.

Rather, they are presented with a set of resources (readings, audio or video, email postings) from the instructors and other participants, and may do with these what they please.

Typically, a student in a connectivist course will:

- read (some of) the readings and listen to or watch some of the recordings
- post comments in threaded discussion forums
- create a blog and post comments and responses
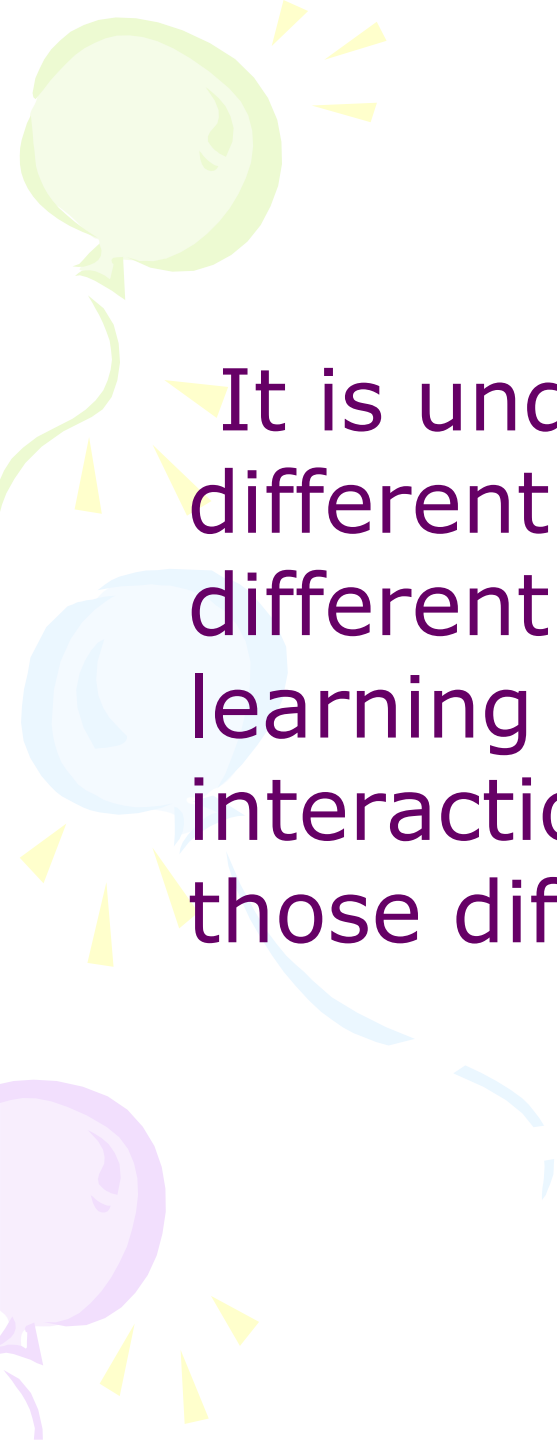- contribute content to the course wiki

In practice, students have engaged in a wide range of (generally unexpected) activities, such as:

- create a map of course participants
- establish, design and host seminars in a Second Life environment
- create videos of discussions
- Create Google or Yahoo groups
- organize translations of course materials
- create concept maps of course structures
- host live online forums

A connectivist course does not consist of a single identifiable group of people stepping through the same activity.
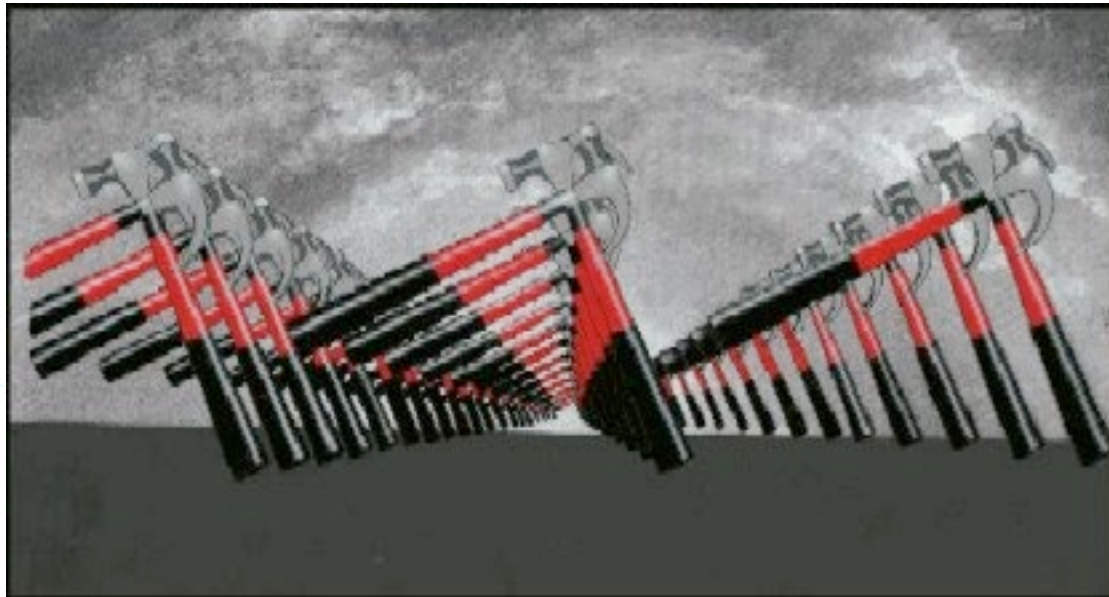
It is understood and expected that different students will undertake different activities, and that new learning will emerge through the interactions of students engaged in those different activities.

A Connectivist course therefore has two major modes:
1. a creation of an environment (and expectation) of great diversity, creating multiple points of view on an amorphous body of material, domain or discipline
2. creation of new and unexpected knowledge as a result of the interaction of participants from those different points of view

- Stephen Downes
- http://www.downes.ca

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