## Learn Yourself

Stephen Downes November 21, 2007 SMOOT

#### Learning...

Two major aspects:

 'knowledge' is to be organized in a certain way - 'knowing' is like 'recognizing', ie., pattern matching

#### Connectivism

- The theory that knowledge and learning can be described and explained using network principles
- 'Learning' is not to acquire a set of facts, but rather, to develop or 'grow' into a certain neural configuration

## Connectivist Learning theory

Based on principles of associationism
Four major ways to learn:

Simple (Hebbian) associationism
Accidental association (by proximity)
Back-Propagation
Boltzmann learning

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'

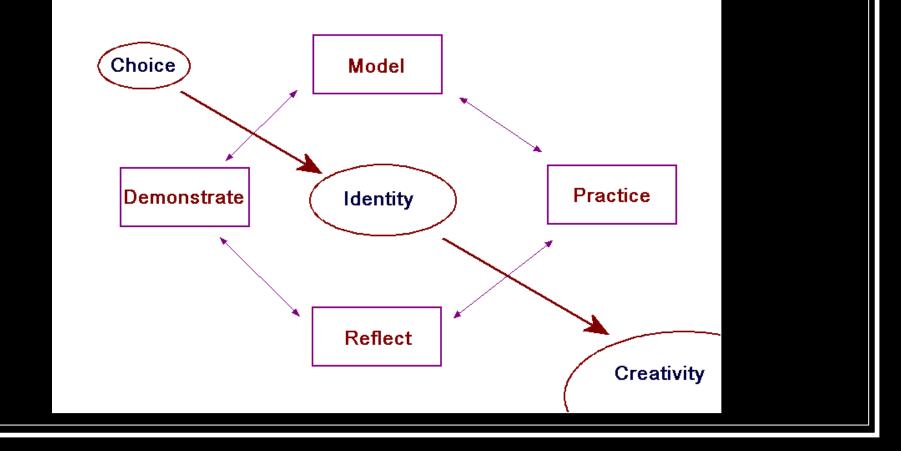
#### Role of the teacher

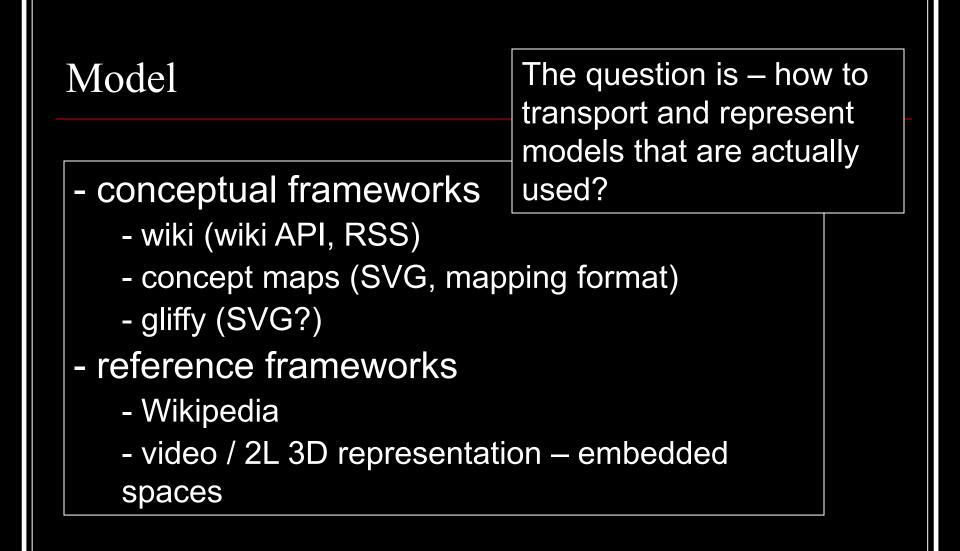
To practice one's work in an open manner; to work transparently
To 'work' is to engage in a community
To be openly reflective, eg., to write about the work

#### Role of the Learner

- To attach oneself to an authentic environment
- To observe and emulate successful practice
- To be 'reflective', ie., to engage in conversation about the practice

## The Connectivist Learning Model





#### Demonstrate

## 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?

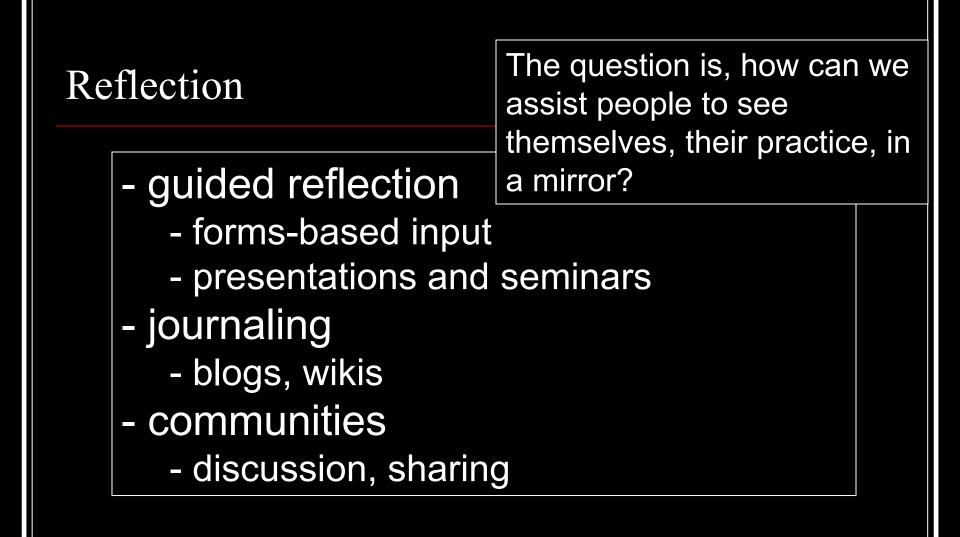
#### Practice

## - scaffolded practice

- game interfaces
- sandboxes
- job aids

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

- flash cards, cheat sheets
- games and simulations
  - mod kits, mmorpgs



#### Choice – Identity - Creativity

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

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

#### Personal Learning

 Interaction – participation in a learning community (or a community of practice)

<u>Usability</u> – 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...

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Relevance: principles
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Information is a <u>flow</u>, not a collection of objects

Don't worry about remembering, worry about repeated exposure to good information

Relevance is defined by <u>function</u>, 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.

# Examples

## Wiki...

Associative learning:
provides examples to follow
allows correction and criticism
rethinking and rewriting

## Wiki (cont)

Personal Learning:
engages interaction – genuine voice, experiences, opinions?
simple and consistent interface...?
accessible where & when I need it...?

## Wiki (cont)

#### Reliability...

- do I have diversity of sources (in wiki means a threshold number)
- are the sources autonomous
- connectedness links, etc?
- open can anyone contribute?

Image Samples...

Associative learning:
provides examples to follow
allows correction and criticism...?
rethinking and rewriting – is reuse allowed?

#### Image Samples (cont)

Personal Learning: engages interaction – genuine voice, experiences, opinions? personal photos? simple and consistent interface...? accessible where & when I need it...? API?

#### Image Samples (cont)

## Reliability...

- do I have diversity of sources (eg., Flickr?)
- are the sources autonomous
- connectedness links, etc? (tagging?

open – can anyone contribute?

#### Second Life...

Associative learning:
provides examples to follow?
allows correction and criticism...?
rethinking and rewriting – is reuse allowed?

#### Second Life (cont)

Personal Learning: engages interaction – genuine voice, experiences, opinions? personal identity? simple and consistent interface...? accessible where & when I need it...? API?

#### Second Life (cont)

## Reliability...

 do I have diversity of sources (inside SL, outside?)

are the sources autonomous (what is the role of the rules imposed by Linden?)

connectedness – links, etc?

open – can anyone contribute?

## Blogs...

Associative learning:
provides examples to follow
allows correction and criticism...?
rethinking and rewriting – a weakness of blogs?

## Blogs (cont)

- Personal Learning:
  - engages interaction genuine voice, experiences, opinions? Pull vs push
  - simple and consistent interface...? Blogger
  - accessible where & when I need it...? RSS, Blogger API

## Blogs (cont)

## Reliability...

- Am I reading a diversity of blogs
- are the sources autonomous not paid blogs?
- connectedness links, etc?
- Are they open can people comment, link?