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
  - 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

The Connectivist Learning Model
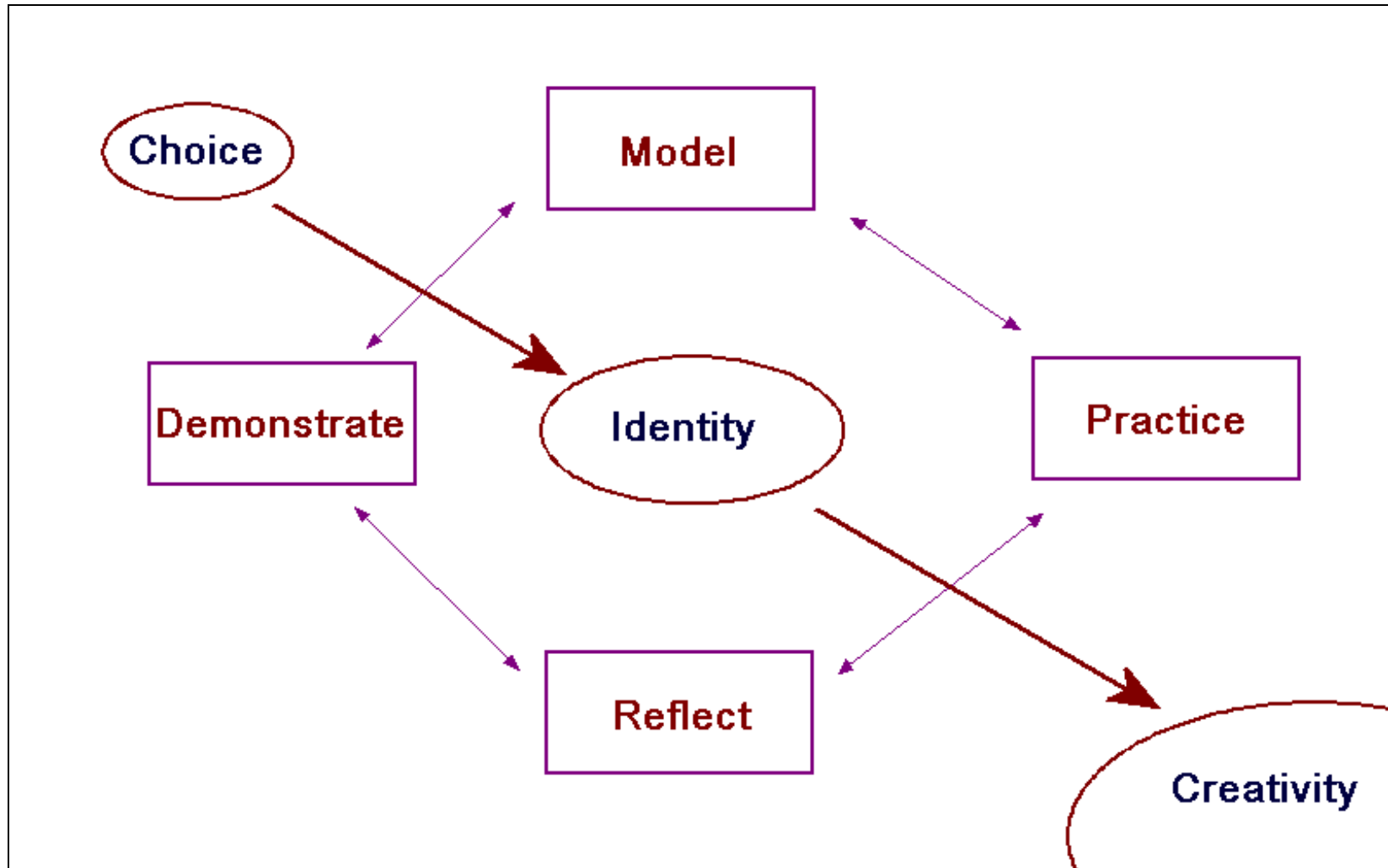
Model

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

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

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

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?

Reflection

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

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

Choice – Identity - Creativity

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

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

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

- <u>Pull</u> is better than <u>push</u>…

- 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 <u>flow</u>, not a collection of objects

    – Don't worry about remembering, worry about <u>repeated exposure</u> to good information

- Relevance is defined by <u>function</u>, not topic or category

- Information is relevant only if it is available <u>where it is needed</u>

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?