



**NRC-CNRC**

*Institute for  
Information  
Technology*

# How I Learn

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National Research  
Council Canada

Conseil national  
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## Three Principles of Effective E-Learning:

- **Interaction** – participation in a learning community (aka a community of practice)
- **Usability** – simplicity and consistency
- **Relevance** – aka 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...*

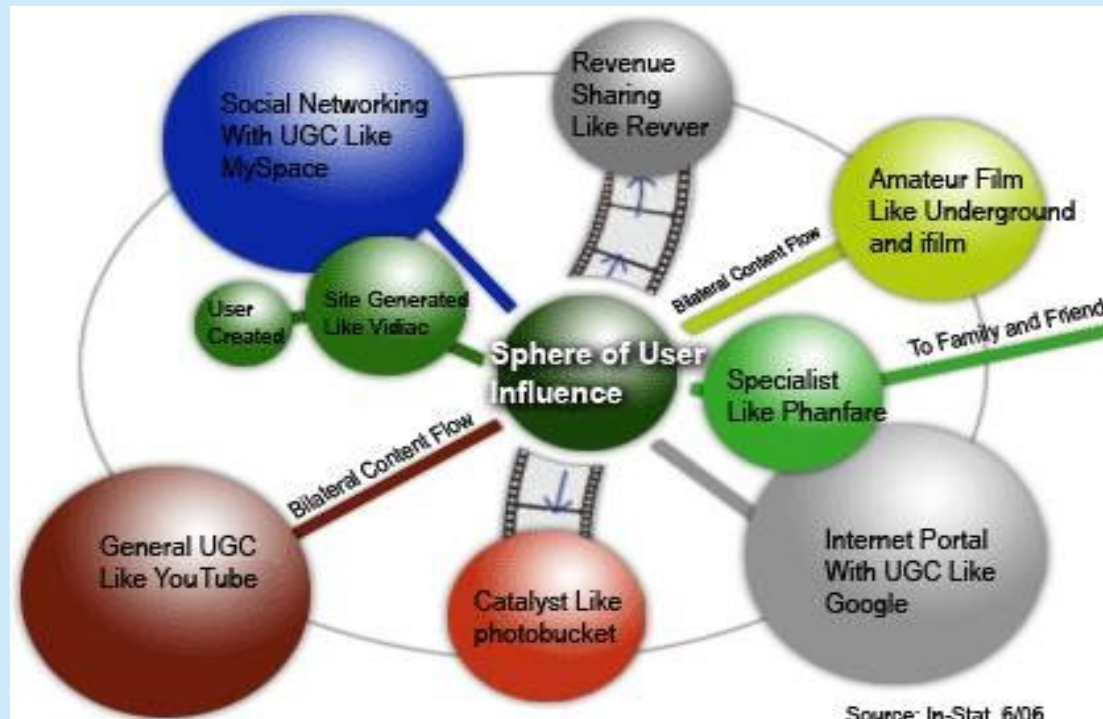
– **Human content** ... *teach me...*

## **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

## •Building my own interaction network

–I Place myself, not the content, at the centre



Source: In-Stat, 6/06

## Interaction: My Personal Network

- **Email and mailing lists – eg., DEOS, wwvedu, ITForum, online-news, RSS-DEV... Google Groups, Yahoo Groups**

<http://www.ed.psu.edu/acsde/deos/deos.asp>

<http://it.coe.uga.edu/itforum/>

<http://groups.google.com/>

<http://groups.yahoo.com/>

- **Weblogging – reading your subscriptions, leaving comments, longer responses in your own blog - Blogger, edublogs**

<http://www.blogger.com>

<http://edublogs.org/>

<http://www.livejournal.com/>



- **Personal communication – instant messaging, Skype**

<http://www.skype.com/>

<http://www.icq.com/>

- **Online Forums – Using, eg., Elluminate, Centra, Adobe Connect – examples, CIDER, Net\*Working, Ed Tech Talk**

<http://auspace.athabascau.ca:8080/dspace/handle/2149/1484>

<http://www.flexiblelearning.net.au/flx/go>

<http://www.edtechtalk.com/>

## Interaction: Principles

- Pull is better than push... this is the idea of *subscriptions*
- Bloglines - <http://www.bloglines.com>
- Google Reader - <http://www.google.com/reader>
- Feed Readers - [http://en.wikipedia.org/wiki/List\\_of\\_feed\\_aggregators](http://en.wikipedia.org/wiki/List_of_feed_aggregators)

- **Speak in your own (genuine) voice (and listen for authenticity)**

- Audio - podcasting - Odeo

<http://odeo.com/>

- Video - YouTube, Google Video

<http://www.youtube.com>

<http://video.google.com>

- **Share**

- Your knowledge, your experiences, your opinions
- Open Educational Resources (OERs) -
  - OER Commons <http://www.oercommons.org/>
  - OCW <http://ocw.mit.edu/>
  - UNESCO <http://oerwiki.iiep-unesco.org>
- Creative Commons <http://creativecommons.org/>
  - CC searches <http://www.flickr.com/creativecommons/>

- **Make it a habit and a priority**

<http://www.downes.ca/me/presentations.htm>

## Interaction: Tactics

- **If interaction isn't provided, I create it...**
  - Eg., at a lecture like this, blog it
- **If my software doesn't support interaction, I add it**
  - Eg., embed Javascript comment, RSS in LMS pages
- **I Use back-channels**
  - Private lists, Gmail accounts, Flickr, IM, Twitter, more...

## 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...*



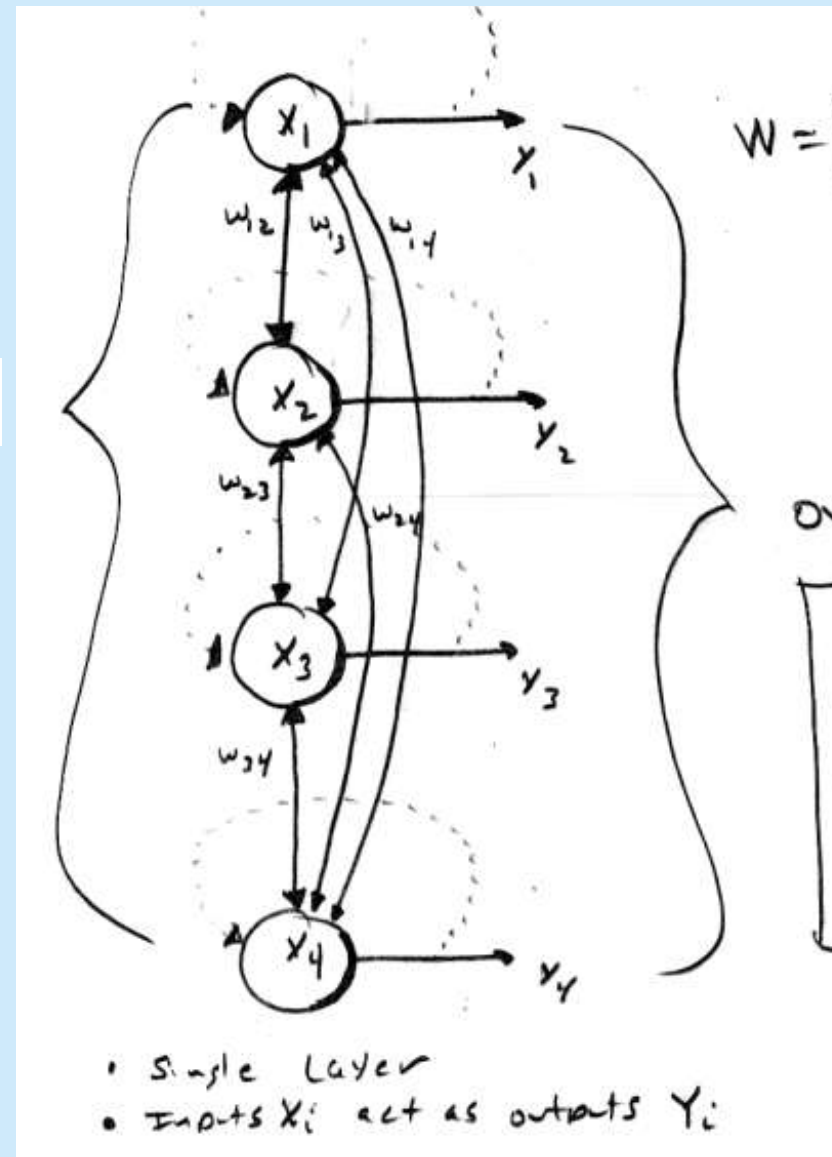
## Consistency? As a Learner?

- Yes! Take charge of your learning...
- Clarify first principles...
  - for example, how do you understand learning theory?

## For me, this...

Inputs

- Hebbian associationism
  - based on concurrency
- Back propagation
  - based on desired outcome
- Boltzman
  - based on 'settling', annealing



## Leads to This...

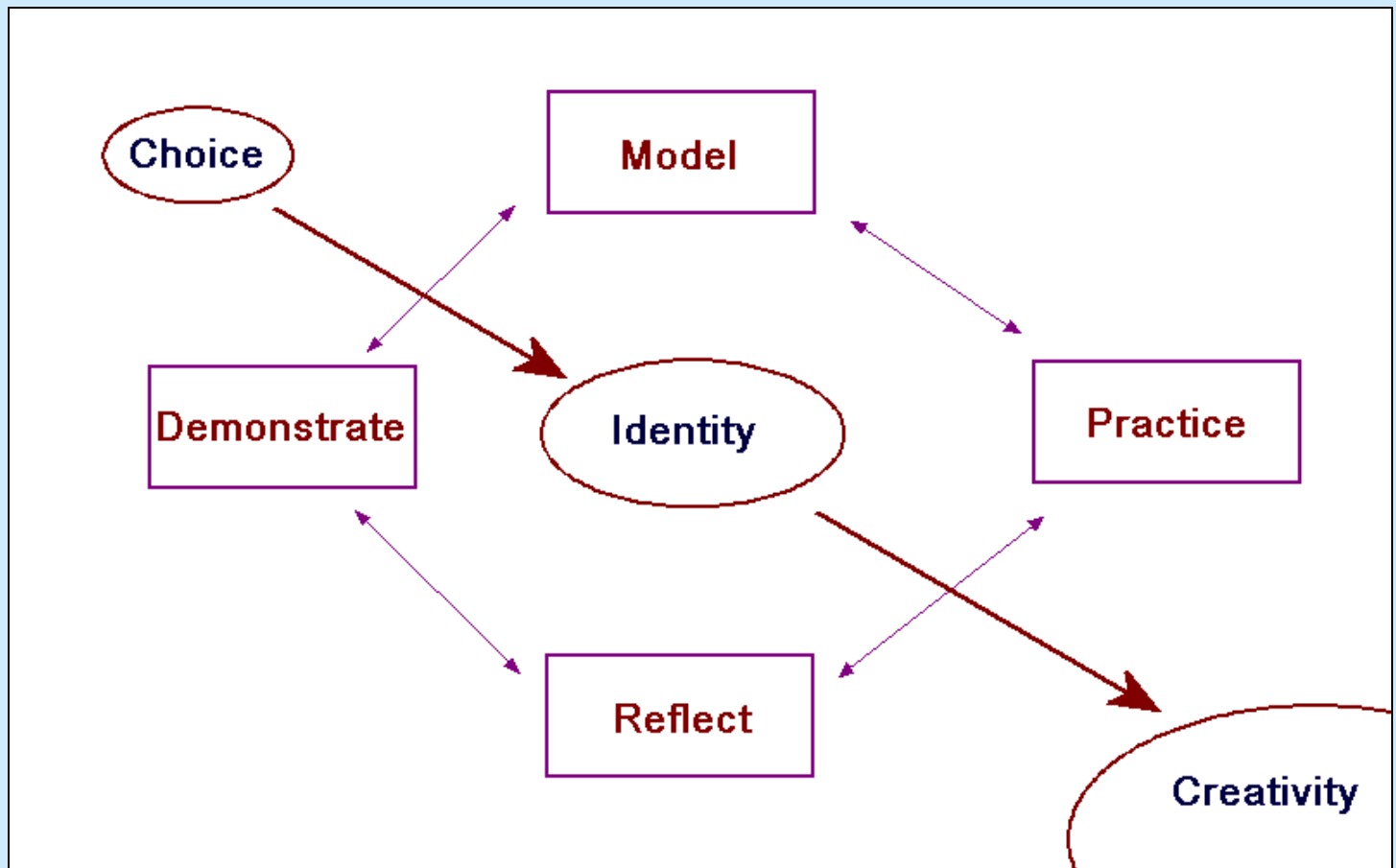
## Personal Learning...

To *teach* is to *model* and to *demonstrate*

To *learn* is to *practice* and *reflect*



# Leads to This...



- **Organize knowledge**

- For example, build your own CMS

- using, say, Drupal <http://www.drupal.org> or Joomla <http://www.joomla.org/>

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

## Simplify the Message

- **Summarize, summarize, summarize**
  - (and then put it into my own knowledge base)
- **Use your own vocabulary, examples**
  - You own your language – don't let academics and (especially) vendors tell you what jargon to use
  - Folksonomy - <http://en.wikipedia.org/wiki/Folksonomy>

## Principles of Usability

- **Usability is Social: I learn from the masters**
  - Can I search your own learning?
  - Do I represent similar things in similar ways?
- **Usability is Personal: I listen to myself**
  - Being reflective – eg., is my desktop working for me? Do I need new information sources? Am I still learning?



## Usability: Tactics

- **Important**: creating my own *distributed* knowledge management system...
  - A blog on Blogger, just to take notes
  - Photos on Flickr <http://www.flickr.com>
  - Google calendar <http://calendar.google.com>
  - (Maybe) use Google desktop search <http://desktop.google.com>



## Using tools that work for me...

- Google Docs <http://docs.google.com>
- Zoho Presentation <http://www.zoho.com>
- Gliffy <http://www.gliffy.com>
- Jotspot Wiki <http://www.jotspot.com>

## Relevance:

- “... learners should get what they want, when they want it, and where they want it “
- *Generating Relevance*
  - **Content** ... *getting what I want*
  - **Location, location, location**... *getting it where I want it*
  - *Wifi - iPod Touch - the future of mobile*

## Getting What You Want

- **Step One**: maximize sources – today’s best bet is RSS – go to Bloglines or Google Reader, set up an account, and search for topics of interest
- **Step Two**: filter ruthlessly – if I don’t need it now, I delete it (it will be online somewhere should you need it later)
- **Important**: I don’t let someone else dictate my information priorities – only you know what speaks to you

## Getting It Where (and When) I Want

- I shun formal classes and sessions in favour of informal activities
- I do connect to my work at home (and even on vacation) – *but* – I feel free to sleep at the office
  - Most work environments are dysfunctional
  - My best time is not 9 to 5 ...
  - Ideas (and learning) happen when they happen

## Principles of Relevance

- Information is a flow, not a collection of objects
  - I don't worry about remembering, I worry about repeated exposure to good information
- Relevance is defined by function, not topic or category - what does it *do* for me? What do I *do* with it?
- Information is relevant only if it is available where it is needed

## Relevance: Tactics

- **I develop unofficial channels of information (and disregard most of the official ones)**
  - For example, I scan, then delete, almost all institutional emails (and everything from the director)
- **I create ‘project pages’ on my wiki (or my website, or SourceForge, or Google Docs)**
- **I expect (and ask for) internet access**

## What I'm Really Saying Here...

1. You are at the centre of your own *personal learning network*
2. To gain from self-directed learning you must *be self-directed*
3. These principles should guide *how we teach* as well as how we learn

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