

E-Learning in Easy Pieces

Stephen Downes

Darwin, Australia

September 24, 2004

Stages...

- Technology advances in stages...
- First Stage: emulating the old technology
 - The *ice box* for example
 - Or the *horseless carriage*
- Second Stage: leveraging the new tech
 - *Ice-makers, Mr. Freeze, the Zamboni*
 - *Coaches, transports, 747s*

In With the Old...

- E-Learning is busy completing the first stage...
 - The traditional classroom is being replaced with the electronic ‘classroom’
 - Online courses, complete with lesson, quizzes and even attendance sheets
 - Textbooks and exercises being replaced with ‘learning objects’

State of the Art...

- Interoperability – big pieces tightly joined
http://standards.edna.edu.au/idea/evan_arthur.pdf
- Frameworks, technical architectures, and common services http://standards.edna.edu.au/idea/kerry_blinco.pdf
- Repositories and the Federation
http://standards.edna.edu.au/idea/john_townsend.pdf
- Digital rights expression and management
http://standards.edna.edu.au/idea/jon_mason.pdf
- Learning Activity Sequences and Content Design http://standards.edna.edu.au/idea/james_dalziel.pdf

Affordances...

- That is, what does the new technology buy us that the old technology didn't?
 - Autonomy... have laptop, will travel
 - Choice... a billion channels and counting
 - Power... load sharing... the web is distributed
 - Nearly free content... 'nuff said
 - Shared spaces, communication, virtual worlds, simulations, and all that open-ended stuff

The Sticking Point...

- In a word, you can't get there from here
- In more words...
 - The 'state of the art' runs counter to the affordances of the internet at every step
 - In particular, it represents the centralized, controlled, standardized and mechanized processes that characterize the industrial age of learning

Five Steps Forward

1. Learning Objects – the new holy grail
2. Repositories – a place to store the dishes
3. Syndication – learning to share
4. Personalization – a mug of your own
5. Learning Environments – setting the table

Step Three

- We need to make the leap from repositories to syndication (the anti-library view of the net, the anti-AOL view)
- This is *already happening* (not that it has any official support or sanction)
- Many ways to characterize this shift – for example, from a *broadcast* model to a *network* model

Some Examples...

- *Weblogs*... four million (or so) angst-ridden teen-aged girls can't be wrong
- *RSS* – we can't agree on what it's called, much less how it should be designed, but it works
- *Open Archives Initiative* – the radical proposal that people who pay for content should be allowed to read it
- *Instant Messaging, Wiki, PostNuke, more...*

What's the Difference?

- Linear → Multi-threaded
- Content Delivery → immersive, interactive
- Static, paced → dynamic, unpaced
- Demonstration → experience
- Learning objectives → learner goals
- Motivation → desire

Spot the Pigeon

- **Federated Search**

- Large repositories join a network
- Searches are propagated through the network
- No ranking or 3rd part interference allowed

- **Harvest Search**

- ‘Aggregators’ harvest from everyone
- Single search point
- Expect thinks like ratings, PageRank

Aggregate, Re-aggregate

- While federated search is a single-layered search (the library mode), the harvest search is multilayered
- Think, for example, of *Google Hacks*
- My own contributions... Edu_RSS
http://www.downes.ca/xml/edu_rss.htm and DLORN
<http://www.downes.ca/cgi-bin/dlorn/dlorn.cgi>
- Syndication, realized... <http://www.bloglines.com>
<http://www.technorati.com> <http://www.feedster.com>

Easy Pieces

- All those standards... and still no way to create learning objects
- What learning objects *should* look like...
<http://www.downes.ca/dnd>
- Be ready for (or maybe help build) the ‘blogger’ of learning objects

Practical Steps...

- Eschew Big Ed – spending time and money on major LMS systems is like trying to patch the Titanic
- If you must use such systems...
 - Use open source ones, like Moodle
 - Expect and demand *true* content syndication
 - If it requires specific software (yes, even Microsoft) to run, it's broken

Practical Steps (2)

- Start building small pieces...
 - Empower yourselves, your staff, with blogs and wikis (or even PostNuke or Drupal)
 - Learn XSLT and start using it...
 - Be sure you offer RSS feeds for all your content
 - Register your RSS in places like DLORN

Practical Steps (3)

- Embrace Open Access – use Creative Commons, open source software (Apache, MySQL, Firefox, Thunderbird, more...)
- Be ready for the next wave... read books like *Six Degrees* <http://www.wwnorton.com/catalog/fall03/032542.htm>
- Play video games and learn about self-directed environments (then read some Seymour Papert) <http://www.papert.org/>

<http://www.downes.ca>