LEARNING IN THE DIGITAL WORLD - CREATING A LEARNING ECOCOLOGY

Steps toward building a learning culture - rethinking learning, meaning and identity

ah, imagining new possibilities

yes, and honoring diversity
Some challenges we all face

- today’s digitally experienced students learn differently and they have new vernaculars.
- education is more important and costly than ever yet the public is less willing to pay for it.
- institutions of higher learning need to become learning institutions, yet institutional change is hard, hard, hard.

Any good news, jsb?

Yes, find ways to leverage naturally occurring assets.
Setting some context in the digital age and today's students

**emerging expectations**
- experiential
- interactive
- visual
- collaborative
- social life seamless with academic life
- early engagement in research

**emerging needs**
- systemic thinking
- career trajectories, (vs a career)
- multiple ways of knowing – interdisciplinary skills
- judgment (beyond google)
- how to make a difference – social entrepreneurialism
- communication and collaboration skills.

Fine, but how can we do all this?
The architecture studio--
the atelier form of learning
a powerful social learning environment

where work in progress is made public.
learning as enculturation into a practice.

Does this generalize?
MIT’s studio for 8.02 electricity and magnetism — technology enabled active learning (teal) following RPI’s studio physics

moving seamlessly between lecture, experiment & discussion and addressing the drop out rate
Animations/Simulations – some canned, some modified by students, others written entirely by students (Java applets)

Quick time movie

Faraday’s Law visualization, Mark Bessette

Partial diff-eqs come alive thru manipulating & extending simulation models
Rendering digital work in progress public –
a digitally enhanced collaboratory
or atelier

an immersive (digital) environment

but how would this all play out in a normal but wired classroom?

USC – interactive media division
Classrooms with students IMing and googling etc..

Professor more of a comedian/entertainer (poor idea)
Professor more of an orchestrator and socratic challenger (interesting idea)

Hmmm, getting students to think critically about what they find on the web – an important 21st century skill especially for our 21st century democracy.

And recontextualizing the role of the professor.
A key challenge: finding ways to have the virtual augment (not replace) the physical.

Ah, getting the best of both worlds – let alone the synergy!
Web+ as a flexible and transformative learning technology

honoring
◦ multiple forms of intelligence
◦ the vernacular of today’s student

New media creates new genres

New genres alter new media
I began to realize the potential for multimedia to enhance the learning process was just astronomical. I’m a big proponent of a new kind of grammar that goes beyond words. To tell a story now means grasping a new kind of language, which includes understanding how graphics, color, lines, music and words combine to convey meaning.
The Emerging Vernacular of the Digital Age

Screen language of cinema (cuts, montage, flashbacks)

Screen language of interactivity, entrainment and persistence - game ecologies

(beyond the web)

rich media

Navigation skills over the web

We have barely begun to understand interactivity and non-linear narrative.
Evolving forms of literacy -
the USC multimedia literacy program

• integrating a critical understanding of media through cinema and visual studies
• hands on authorship by students, TAs and faculty
• being able to read and write in emerging forms of media

english, philosophy, women’s studies, history sociology, political science, religion
and quantum mechanics

are new forms of scholarship being enabled?

Stephanie Barish - IML
New forms of scholarship

Publishing as a living document - website

New ways for students to engage in research

New forms of peer review

What will this mean for tenure?

Vectors - a pioneering e-journal (usc)
Salem Witch Trials
Documentary Archive and Transcription Project

Documents & Transcriptions
Court Records
Record Books
Personal Letters
More...

Historical Maps
Map of Salem Village, 1692
Map of Andover
Map of Witchcraft Accusations
More...

Archival Collections
Boston Public Library
Massachusetts Historical Society
Peabody Essex Museum
More...

Notable People
John Hale
Increase Mather
George Lincoln Burr

Project Mission
Educational Scholarship
Transcription Updates
Database Search
Site Map

Don’t forget open course-ware (OCW).
NCAR’s Scientific Computing Division

Cyber-infrastructure enabling high school, college, grad school, post docs, faculty, researchers from around the world to create simulation models of the climate.

BlueSky mega super computer
Cool examples, jsb. But let’s get practical. These are amazingly resource intensive!
A magical recipe:
create positive feedback (learning) loops where
students, researchers, teachers, practitioners reflect on, critique, modify, extend (networked) resources for learning - kind of like the sociology of science

And what would happen if each institution took responsibility for developing and curating a given resource - eg Decameron Web?

Ah, maybe institutions of higher learning could become learning institutions and think in a more systemic manner?
‘Modern’ kids from the global world growing up with mobile phones and internet

Do We Understand Them?

What creates meaning for them?
Some digital age shifts

- From text literacy to text + image literacy, then information navigation literacy, and finally rich immersive media.

- Learning has shifted from being told (authority-based) to discovery, experiential learning.

- Reasoning has evolved from deductive (linear) to judgment + bricolage (lateral).

- Action has moved from don’t know won’t try to don’t know link, lurk & try.

- Bricolage: the basis of the open source and the remix culture.

- Trust through triangulation—a new competency? And a basis for democracy.
Remixing at all ages in multiple media
mixing real and virtual elements

create: remix – tinker – remix – tinker – remix --> bricolage lives
Storytelling and collaboration

Harry Potter

Character in one of the hottest book series. The books are for children, but reportedly they are just plain good, regardless of reader age.

See also: IsWikiOnlyForMuggles, HarryPotterVsLordOfTheRings

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I'll confirm that. They have their flaws (and the flap about whether Potter should've beaten Harry's new Beowulf for the National Book Award strikes me as absurd) but they are great fun. I picked them up just after the birth of our second son; I was much too tired for anything very deep or complex, but I needed an escape. I thoroughly enjoyed the first three books and I'm looking forward to reading the new one. -- GlenaVanderburg

... they are just plain good regardless of reader age.

Aye! IMO the most original children's literature to be written in many years. -- DanielKiango. Original? I wouldn't say so. They're public school stories; there are many other rather similar books. Still, good fun, though, and don't push the parental/school-teacher view of what's "good behaviour" like the older books in the genre. -- PaulHudson

I take my 5-year-old to book stores every weekend.

Therefore, to keep ourselves safe, I've taught her, "Ashley, say 'Just Say No to Harry Potter!'"

This goes with the policy of constantly trying to talk her into liking Pokemon. -- PCP

So far, we have read the first three books for my son (age 8) as bedtime reading. As soon as we finish one, we go back to the beginning and read it again, and with the knowledge we now have, we can say Aye as we spot significant things we didn't notice the first time. Clearly, the books have been crafted as a whole; with some characters mentioned in passing long before they take centre stage. I take the point that...

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Blog/Wiki

book group metaphor

(www.mugglenet.com)

Designed and maintained by kids under the age of 18; 1200 hits/month
“This is a cool way to get into ‘it’ …instead of being stuck on the outside.”

Becky Stewart, 8th Grade, First Time Interviewer
Peace Rally, San Francisco, February 16, 2003

Ariel Stachel / Videographer
Becky Stewart / Interviewer
digital story telling – engaging kids all over the world
Life in the Digital Age - Tinkering, Learning And Sharing

A new twist to rip-mix-burn as one recontextualizes content & code. Sharing one's creations helps to create personal identity.

Open source as tip of a bigger phenomenon
Building Identity thru Creating Something — and by having it consumed (read) by others —

Digital technologies facilitate:
• production
• experimentation
• dissemination
• remix & appropriation
• feedback
• reputation/approval

And by having it appropriated, remixed or built on — especially within your community.

Oh, where recreation becomes re-creation.
Amateur Production

- Mediates subjectivity of consumer/learner and producer/teacher
- Appropriates, reshapes, repackages, “global” knowledge for local social networks
- Relies on mid-scale network of informed peers
- Peer-to-peer learning, assessment, and valuation—no external and formalized measures

Mmm, is this revisiting Dewey in the digital age? 
Grounding theory in practice and creating meaning and identity.
And making Atelier now more possible than ever.

Mimi Ito (USC)
Distributed learning ecology
weaving a fabric from/for learning and doing
The social life of learning

SCHOOL RELATED ("formal")
- Virtual Community
- Simulations for researchers and students
- Role playing games
- SimCity
- NCAR
- PDA
- Cell Phone

NON SCHOOL RELATED ("informal")
- Blogging
- Interactive Book
- NCAR
- PDA
- Cell Phone
- Music, Image, Movie

OUT OF SCHOOL
- America's Army Game
- MIT/Club House
- Everquest

IN SCHOOLS
- Simulation for researchers and students
- Role playing games
- SimCity
- NCAR
- PDA
- Cell Phone
- Music, Image, Movie
- Capture, Create, Simulate
- Free Content and Tools
A short, reflective video on her SAT scores (on coming to terms with her mother)
Thank you

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