Overview of Workshop

- Theoretical
  - Memex & LPWS
  - Lifelong & Life-wide Learning
  - Web 2.0
  - My LifeBits/Hits
- Practical
  - Hands-On ePortfolio 2.0 Mash-Up:
    - Blogs, Wikis, Google, YouTube, Flickr,
    - Social Networks, Virtual Storage,
    - Mobile Phones, and...???

What is a Portfolio?

- Dictionary definition: a flat, portable case for carrying loose papers, drawings, etc.
- Financial portfolio: document accumulation of fiscal capital
- Educational portfolio: document development of human capital

What is a Portfolio in Education?

A portfolio is a purposeful collection of student work that exhibits the student's efforts, progress and achievements in one or more areas [over time].

(Northwest Evaluation Association, 1990)

What is in an Education Portfolio?

The collection must include:
- student participation in selecting contents
- the criteria for selection
- the criteria for judging merit
- evidence of student self-reflection

(Northwest Evaluation Association, 1990)

Why use Portfolios?

provide a richer picture of student performance than can be gained from more traditional, objective forms of assessment
How do we move from this container to the WWW?

What is an Electronic Portfolio?
- Digital Documents
- Organized and presented with some type of "authoring" software
- Stored in an electronic container
  - CD-Recordable disc
  - DVD-Recordable disc
  - WWW

**ePortfolio Technology over Time**

**Storage**
- 1991: Desktop
- 1995: CD-R
- 2000: Internet
- 2005: DVD-R
- 2007: Pocket Tech (PDAs, Flash drives, Phones, iPods)
- What’s Next?

**Software**
- Common tools
  - Office & PDF
  - HTML Editors
- Customized Systems
  - Online data bases
  - Work Flow Management
  - Assessment Management
- Interoperability (currently in “silos”)

**E-Portfolio Components**
- Multiple Portfolios for Multiple Purposes
- Multiple Tools for Multiple Processes
- Single Digital Archive (for life?)

**Levels of ePortfolio Implementation**
- Working Portfolio (Digital Identity?)
  - The Collection
  - The Digital Archive
  - Repository of Artifacts
  - Personal Information
  - Reflective Journal (eDOL)
- Presentation Portfolio(s)
  - The “Story” or Narrative
  - Multiple Views (public/private)
  - Varied Audiences (varied permissions)
  - Varied Purposes

**Portfolio Processes**

Traditional + Technology
- Collecting
- Selecting
- Reflecting
- Directing
- Presenting
- Archiving
- Linking/Thinking
- Storytelling
- Collaborating
- Publishing

**Figure 1: Components of an e-portfolio system**

Space (local or remote) to store resources and an archive of evidence

(Becta, 2007)
Collection - Digital Archive

Turn your students into “digital packrats”!
Define where students will create appropriate digital artifacts for their electronic portfolios.
Store the artifacts in “lifetime personal web space” they will own once they leave institution.

eDOL = Electronic Documentation of Learning

- University of Calgary (April 2008)
- Recommendation: Start students with an eJournal (blog)
- Focus on REFLECTION over time
- Build a collection of documents and reflections on learning over time

Selection - Hyperlinking/Thinking

Identify outcomes, goals or standards and select artifacts to demonstrate them.
Students justify their selection (metacognition)

Structure of E-Portfolio Types

- Portfolio as Process
  - Organization: Chronological – eDOL (Electronic Documentation of Learning – U. of Calgary)
    Documenting growth over time for both internal and external audiences
  - Primary Purpose: Learning or Reflection
- Portfolio as Product
  - Organization: Thematic – Electronic Portfolio documenting achievement of Standards, Goals or Learning Outcomes for primarily external audiences
  - Primary Purpose: Accountability or Showcase

Reflection - Storytelling

The “Heart and Soul” of a Portfolio
Reflection in portfolios helps learners construct meaning.

Directing - Collaborating

“Now What?” Use the portfolio for Professional Development Planning.
Facilitate feedback through e-portfolios
Presenting - Publishing
Put a public face on the ePortfolio.

Multiple Purposes of E-Portfolios
- Learning/Process/Planning
- Marketing/Showcase
- Assessment/Accountability

Showcase Portfolios
- Marketing
- Employment
- Tell your story
- A primary motivator for many portfolio developers

Learning Portfolios
- *know thyself* = a lifetime of investigation
- self-knowledge as outcome of learning

Four key pillars of Lifelong Learning
(Barbara Stauble, Curtin University of Technology, Australia)

Process & Web 2.0 Tools
- Purpose
- Audience
- Collaboration
- Presentation
- Tags
- Web 2.0 tools for interaction
  - Blog
  - Wiki
  - GoogleDocs Document
  - Google Docs Presentation
  - Google Pages
Knowing the learner (Self-awareness)

- Understanding prior knowledge
- Motivation for and attitudes toward learning
- Portfolios = mirror
- Help learners understand themselves
- See their growth over time

Planning for learning (Self management)

- Setting goals
- Develop a plan to achieve these goals
- Portfolios = map for future learning

Understanding how to learn (Meta-learning)

- Awareness of learners to different approaches to learning
- Deep vs. Surface Learning, Rote vs. Meaningful Learning
- Different Learning Styles
- Portfolios = different artifacts
- Help learners recognize success
- Accommodate approaches that are not successful

Evaluating learning (Self monitoring)

- Systematic analysis of learners’ performance
- Responsibility to construct meaning
- Be reflective & think critically
- Portfolios = include reflective journals
- Learners construct meaning, monitor learning, evaluate own outcomes
- Align artifacts to outcomes, goals, standards

Deep Learning

- Involves reflection,
- Is developmental,
- Is integrative,
- Is self-directive, and
- Is lifelong


Purposes for Assessment

<table>
<thead>
<tr>
<th>Assessment OF Learning</th>
<th>Assessment FOR Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative Assessment</td>
<td>Formative Assessment</td>
</tr>
<tr>
<td>(Classroom-based)</td>
<td>(Classroom-based)</td>
</tr>
</tbody>
</table>

Past Present Future
www.qca.org.uk
ages3-14

Principles of Assessment FOR Learning

- Definition:
  Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there.

What is your portfolio philosophy?
- A standardized checklist of skills? (Positivist)
- A reflective story of deep learning? (Constructivist)

How do we find a balance between these two purposes for assessment?

Overlap of Assessment Types

How can we make ePortfolio development a natural process integrated into everyday life?

“every day-ness”

Lifelong and Life Wide Learning
Recent changes in technology

**Web 2.0: From Read-Only to Read/Write Engaging Students in Web-based Instructional Activities**

- Web 1.0 vs. 2.0
- Blogs
- Wikis
- Social Bookmarking
- RSS Subscriptions
- Instant Messaging

Web 2.0 Expo, April 2008: Tim O'Reilly, O'Reilly Media

Web 1.0 vs. Web 2.0

- DoubleClick
- Ofoto
- Akamai
- mp3.com
- Britannica Online
- personal websites
- domain name speculation
- page views
- screen scraping
- publishing
- content management systems
- directories (taxonomy)
- stickiness
- Netscape

- Google AdSense
- Flicker
- BitTorrent
- Napster
- Wikipedia
- blogging
- search engine optimization
- cost per click
- web services
- participation
- wikis
- tagging ("folksonomy")
- syndication
- Google

O'Reilly, T. (2005)

Conventional vs. Reform Instruction

- Teacher-directed
- Didactic teaching
- Short blocks of instruction on single subject
- Single media
- Individual work
- Teacher as knowledge dispenser
- Ability groupings
- Assessment of fact knowledge and discrete skills

- Student exploration
- Interactive modes of instruction
- Extended blocks of authentic and multidisciplinary work
- Multimedia
- Collaborative work
- Teacher as facilitator
- Heterogeneous groupings
- Performance-based assessment

SRI (1993)

Approach

Hierarchical vs. Network

- Structured
- Controlled
- Designed
- Managed
- Broadcast
- Courses
- Centralized LMS*
- Information Technology

- Networked
- Turbulent
- Emergent
- Adaptive
- Aggregation
- System
- Decentralized PLE*
- Environment
- Interaction Technology

Arina (2006)

Architecture of Interaction

Architecture of Participation (Web 2.0)

allows a

Pedagogy of Interaction

(ePortfolio 2.0)
Social Learning

How can we integrate ePortfolios with what we know about social learning and interactivity?

What is the best tool?

It Depends!

Accessibility from home computers
Connectivity with cell phones

Planning Issues

- What is your purpose?
  - authentic assessment (formative feedback)
  - showcasing best work and growth over time
- Software capabilities: allow interaction between teachers/coaches and learners around learning activities and products
- Internet access: slow or fast?

State of the Art of ePortfolio Development

- Publishing environments:
  - Optical media (CD-R, DVD-R)
  - WWW
- Authoring environments:
  - Common Software Tools
  - Customized (Commercial) Systems
  - Open Source Tools
  - Web 2.0 Technologies

Today's Tool Choices

Slow Internet Access?

- Microsoft Office
  - Word
  - Excel
  - PowerPoint
- Other Options:
  - Adobe Acrobat
  - Apple iLife06 (iDVD, iWeb)
- Web Page Editors
  - DreamWeaver
  - FrontPage
- These tools do not require Internet access to create electronic portfolios.
- Ideal for publishing on CD
- NOT interactive!
Office (Word, Excel, PowerPoint), Adobe Acrobat, Web Authoring

Advantages
- On most personal computers
- Common toolset
- Easy to create hyperlinks
- Easy to add comments
- Does not require Internet access to develop portfolios (students work off-line)

Disadvantages
- Set up own system for storing and organizing files, and managing the feedback on student work (probably using Track Changes in Word or Comments in all tools)
- Data aggregation must be set up by teacher with another tool, like Excel, not automated
- Files should be translated into Web-compatible format before posting online (HTML or PDF)

Better for publishing on CD

Today’s Tool Choices

Fast Internet Access?
- Any commercial fee-based system
- GoogleDocs & Apps (free)
  - Document (Word Processing)
  - Presentation
  - Page Builder
- Web 2.0 tools (free)
  - Blog
  - Wiki

These tools require only a browser and good Internet access to create electronic portfolios because they are Application Services Providers (ASP) - the software is on the remote server.

Web 1.0 vs. Web 2.0

1996
- Social affiliation
- Online services
- Self expression
- Mass communication
- Self-governing
- 45 million users

2006
- Social affiliation
- Online services
- Self expression
- Mass communication
- Self-governing
- Mostly not secure
- Mostly not secure
- 1 billion users

Web 1.0
- The old web was made from bits
- The web was a place to get information

Web 2.0
- The web is a place to make information
- Use the web as an e Already, platforms

Web 2.0 Technologies
electronicportfolios.org/Montreal/

Advantages
- Free, often open-source tools on the WWW
- “Me Publishing (blog and wiki)
- Shared Writing (GoogleDocs)
- Web Publishing (Google Pages)

Disadvantages
- May require higher technology competency
- Mostly not secure websites

“Small Pieces, Loosely Joined”

Online Class:
http://electronicportfolios.org/web2/class/

A very rough draft of an online class about Web 2.0 tools, using Web 2.0 tools
**Blogs**

**Advantages**
- Quickly, easily create a learning journal, documenting growth over time with entries that are date-stamped.
- WordPress allows additional pages and sub-pages.
- Interactivity is maintained through RSS feeds and Comments that can be added.
- WordPress file limit 3 GB!
- WordPress blogs can be password-protected.

**Disadvantages**
- Prescribed order (reverse-chronological) of entries.
- Does not allow organizing attached files into folders.
- Limited attachments in Blogger.

**Hands-on activity:**

Set up a Blogger account
OR
Set up a Wordpress.com account

Create entries with hyperlinks in your blog to document the learning activities in this workshop.

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**Wikis**

**Advantages**
- Free (for education) online system.
- Wikispaces allows 2 GB online storage (PBWiki limits 50 MB).
- Page can be edited by approved members.
- Discussion link on top of every page.
- Saves draft pages and keeps versions.
- Allows embedding media and building tables on pages.

**Disadvantages**
- Set up own system for managing the feedback on student work.
- Does not allow organizing files into folders.
- Archived version does not save navigation menu.

**Hands-on Activity:**

Set up a Wikispaces account
OR
Set up a PBWiki account

Create the basic structure of a portfolio using your chosen wiki.

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**GoogleDocs**

**Advantages**
- Documents, presentations or spreadsheets can be edited.
- Maintains a record of all revisions, with identity of author.
- Interactivity is maintained through comments and co-authoring.
- Easily embed presentations into blog.
- Convert all documents to Microsoft Office or OpenOffice or PDF.

**Disadvantages**
- Set up own system for managing the feedback on student work.
- Requires full time high speed Internet access.
- No attachments, only hyperlinks to documents.

**Hands-on Activity:**

Set up a Google account

Create a Document with the basic structure of a portfolio.
Create a Presentation with the basic structure of a portfolio.
GooglePages

**Advantages**
- Free website builder
- Easy-to-use
- Flexibility and creativity in portfolio authoring.
- Helps students build technology skills.
- Automatically store pages online.
- 100 MB limit on uploaded attachments.

**Disadvantages**
- No Interactivity
- Set up own system for managing the feedback on student work.
- More of a web page builder than a portfolio program.

Hands-on Activity: GooglePages

With your Google Account, activate a Google Pages account. Create a Cover Page for a presentation portfolio.

Validating my dissertation research

- When learning new **tools**, use familiar **tasks**
- When learning new **tasks**, use familiar **tools**

Formative Assessment (Feedback)

"Harvesting" Gradebook under development with Microsoft & WSU

- "Right now at WSU, one of the things we're developing in collaboration with Microsoft is a "harvesting" gradebook. So as an instructor in an environment like this, my gradebook for you as a student has links to all the different things that are required of you in order for me to credit you for completing the work in my class. But you may have worked up one of the assignments in Flickr, another in Google Groups, another in Picasa, and another in a wiki. Maybe you've also made some significant contributions to Wikipedia. So, I need a gradebook where I have the link you've provided me, rather than a copy of the work, and the gradebook should be capable of pulling in all of these various sources."

Gary Brown, WSU "The Future of Web 2.0" Campus Technology 2/27/08
A question to ponder

What could happen if every citizen were issued personal web server space that they would own for a lifetime?

What's the Future?

- **Lifetime Personal Web Space!**
- **Educational Continuity:** Less Knowledge Left Behind
- **A Convenient One-Stop Shop**
- **Community-Building**
  - Link individuals to larger communities (e.g. ELGG, Facebook)

Cohn & Hibbitts (2004)

Online Storage Systems

Virtual Storage (coming!)
(Wall Street Journal, November 27, 2007)

Online Storage Providers (Free)

- **“Cloud” Computing**
  - Google (coming)
  - Microsoft Windows Live SkyDrive (5 GB)
  - Amazon S3 (30 GB/month)
  - AOL Xdrive (5 GB)
  - Yahoo! Briefcase (30 MB)
  - IBM Global Business Continuity and Resiliency Services
  - Wells Fargo Bank (digital safe deposit box – not free)

- **Smaller Services**
  - box.net (1 GB)
  - allmydata.com (1 GB)
  - 4shared.com (5 GB)
  - openmy.com (1 GB)
  - thelinkup.com (25 GB)
  - scribd.com (unlimited docs/pdfs – no audio/video)

Source: electronicportfolios.org/web2/

Portfolios “in the Cloud” support Lifelong & Life-Wide Learning
Institutional Portfolios

- What happens when a learner leaves or transfers?

Learners’ Digital Archives
- Blogs
- Faculty-generated evaluation data
- Institutional data
- Limited Time Frame

Class portfolios
- Guidance portfolios

Employment portfolios
- Institutional server or online service

Academic focus

Social networks

Separate Systems

Learners maintain collection across the lifespan, institutions maintain evaluation data & links

Learners’ Digital Archive & Blog
- Learner-owned Lifelong Web Space
- Meta-data

Guidance portfolio
- Faculty-generated evaluation data
- Limited Time Frame

Institution’s data

Social networks

Microsoft’s MyLifeBits Research

- An experiment in lifetime storage
- Lifetime store of everything using Gordon Bell’s life work

- A software research effort
- Leverages SQL server to support:
  - Hyperlinks
  - Annotations
  - Reports
  - Saved queries
  - Annotations
  - Record;
    - web pages
    - IM transcripts

What about “My Life HITS?”

- Selection with Reflection and Direction
Hands-on Activity: Online Storage

Set up an account on one of the online storage services and upload a few files, copy the hyperlinks to your blog:
- box.net (1 GB)
- allmydata.com (1 GB)
- divshare.com (5 GB)
- 4shared.com (5 GB) (expires 30 days of non-use)
- openomy.com (1 GB)

Final Discussion
- What are your impressions of these tools?
- What are your next steps?
- Continued research

Collaborative Research Agenda
- a long-term research proposal
- a proposed implementation plan
- evaluation study using Web 2.0 tools
- find out what strategies work under what conditions to support the vision
- Join me! http://groups.google.com/group/web2eportfolios/
- Google Group: web2eportfolios

Age & Social Technology Adoption

Isn’t this Web 2.0 thing just a fad?

Telling about Interview with TV producer

cognitive surplus
looking for the mouse

Web 2.0 Expo, April 2008, Clay Shirky
Author of the book Here Comes Everybody

My Final Wish...

May all your electronic portfolios become dynamic celebrations and stories of deep learning across the lifespan.
Dr. Helen Barrett

- Researcher & Consultant
  Electronic Portfolios & Digital Storytelling for
  Lifelong and Life Wide Learning

- eportfolios@mac.com
- http://electronicportfolios.org/