Lifelong Personal Learning Environments
Structuring Electronic Portfolios for Lifelong and Life-Wide Learning

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

Overview of Presentation

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

Questions to Ponder

- What happens to electronic portfolios once learners leave an institution?
- Can learners continue to maintain their own "digital documentation of development" throughout their lifetime? (Do they even want to?)
- Has the process of reflective practice become a habit of mind that will support lifelong learning?

Cognitive Dissonance

Another question to ponder

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

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 as Process
Portfolio as Product

Structure of E-Portfolios

- Portfolio as Process
  - Organization:
    - Chronological – eDOL (Electronic Documentation of Learning – U. of Calgary)
  - Documenting growth over time for both internal and external audiences
  - Purpose:
    - Learning or Reflection

- Portfolio as Product
  - Organization:
    - Thematic – Electronic Portfolio documenting achievement of Standards, Goals or Learning Outcomes for primarily external audiences
  - Purpose:
    - Accountability or Showcase
E-Portfolio Components

- Multiple Portfolios for Multiple Purposes
- Multiple Tools for Multiple Processes
- Single Digital Archive (for life?)

Educause Quarterly 2004

- “Beyond the Electronic Portfolio: A Lifetime Personal Web Space” [LPWS]
  - Ellen R. Cohn and Bernard J. Hibbitts (University of Pittsburg)
- “Rather than limit people to the e-portfolio model, why not develop a model providing a personal Web space for everyone, for their lifetimes and beyond?”

MEMEX

- “A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory.”
- Vannevar Bush (1945) “As We May Think” Atlantic Monthly

LPWS

- organized more like our brains than our file cabinets
- available anywhere, any time
- universally accessible to everyone, any ability, even the homeless
- can survive as an historical record of a person’s body of work
- Cohn & Hibbitts (2004)

Digital Archive for Life (DAL)

- space to store raw materials for e-portfolios
- archives of family records, genealogy and digital stories, autobiographies, child development data
- evidence of personal and professional accomplishments, and all kinds of personal information
- Personal archive/content management system

Four key pillars of Lifelong Learning

- Barbara Stauble, Curtin University of Technology, Australia

**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

**Process & Web 2.0 Tools**

- Web 2.0 tools for interaction
  - Blog
  - Wiki
  - Google Docs
  - Presentation
  - Google Pages

[Diagram of Process & Web 2.0 Tools]
Ownership of Data

- Institution-centered vs. Learner-centered
- Time-limited vs. Lifelong
- Need to separate individual space from institutional needs
- Artifacts have unique identifier
- Use in a variety of contexts
- Meta tags, keywords

Institutional Portfolios

- What happens when a learner leaves or transfers?

Separate Systems Learner-Centered

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

Online Storage Systems

Virtual Storage (coming!)

<table>
<thead>
<tr>
<th>Service</th>
<th>Price</th>
<th>Features/Connectivity</th>
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</thead>
<tbody>
<tr>
<td>Onedrive.com</td>
<td>1 GB</td>
<td>For free; 10-100 GB per year</td>
</tr>
<tr>
<td>Bluenet</td>
<td>1 GB</td>
<td>For free; 51-1 GB worth 1 GB/month</td>
</tr>
<tr>
<td>Adrives.com/SkyDrive</td>
<td>5 GB</td>
<td>For free; 1 GB for 256 GB/month</td>
</tr>
<tr>
<td>Google</td>
<td>1 GB</td>
<td>For free; paid versions</td>
</tr>
</tbody>
</table>

Online Storage Providers

- "Cloud" Computing
  - Google (coming)
  - Microsoft Windows SkyDrive
  - Amazon S3 (Simple Storage Service)
  - AOL Xdrive
  - Yahoo Notebook
  - IBM Global Business Continuity and Resiliency Services

- Smaller Services
  - Wells Fargo Bank (digital safe deposit box)
  - Mozy.com
  - Box.net
  - Onmdrive
  - Adrive
  - Ensnips
  - MediaMax

Wall Street Journal, November 27, 2007
Web 2.0 tag cloud

Re-conceptualizing E-Portfolios using RSS feeds

Digital Archive for Life with tags

Institutional portfolios organized like del.ici.ous

Recent changes in technology

Architecture of Interaction (Web 2.0)

allows a Pedagogy of Interaction (ePortfolio 2.0)

ePortfolio 1.0 – ePortfolio 2.0

• Hierarchical, Designed
• Metaphor: Portfolio as Test
• Data-driven
• Focus on Templates, Standardization
• Feedback from Authority Figures
• Large, complex systems
• Networked, Emergent
• Metaphor: Portfolio as Story
• Learner-driven
• Focus on Individuality, Creativity
• Feedback from Community of Learners
• Small pieces, loosely joined - “Mash-ups”

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

ePortfolio 1.0 – ePortfolio 2.0 (continued)

• Web-based Form
• Positivist
• Accountability-driven
• Proprietary
• Digital Paper (text & images)
• Local Storage (hard drives, CD, DVD)

• Blog or Wiki
• Constructivist, Connectivist
• Learning-focused
• Open Standards
• Digital Story (multimedia)
• Network Storage (Lifetime Personal Web Space)
**Favorite Free Web 2.0 Tools**

- Blog with pages [www.wordpress.com](http://www.wordpress.com)
- Wiki [www.pbwiki.com](http://www.pbwiki.com) [www.wikispaces.com](http://www.wikispaces.com)
- GoogleDocs & Apps [docs.google.com/](http://docs.google.com/)
- Google Pages [pages.google.com](http://pages.google.com)

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**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
    - Record:
      - Web pages
      - IM transcripts

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**What about “My Life HITS?”**

- **Selection** with Reflection and Direction
Begin process early in life

The Power of Portfolios

From the Preface (1)

From the Preface (2)
From the Preface (3)

“Our parents couldn’t possibly envision that these memory boxes would be the inspiration for an innovative way of thinking about children’s learning. These collections, lovingly stored away on our behalf, are the genuine exemplar for documenting children’s learning over time. But now these memory boxes have a different meaning. It’s not purely private or personal, although the personal is what gives power to what they can mean.”

Let’s get personal… Think for a minute about:

Something about your COLLECTIONS:
Suggested topics:
- If you are a parent, what you saved for your children
- What your parents saved for you
- What you collect…
- Why you collect…

Some issues to consider

☐ What do your collections say about what you value?
☐ Is there a difference between what you purposefully save and what you can’t throw away?
☐ How can we use our personal collections experiences to help learners as they develop their portfolios?

The power of portfolios [to support deep learning] is personal.

Lifelong Life-Wide Scenario

Lifelong, life-wide approach to:
- Lifetime personal web space
- Electronic portfolios
- Online Videos
- Digital Stories

Families are the Centerpiece

Early Childhood Portfolios
Children enter school

My Electronic Portfolio for Kindergarten 2000-2001

Victoria Barrett

Children take on responsibility

Scenario

Windows Live Folders


Example - Victoria 2nd Grade

Student-Led Conference

Victoria's Second Grade Portfolio

7-12 Student Portfolio Examples

- NCLB has depressed the use of portfolios in K-12 schools since 2001
- Key Learning Community (Indianapolis, Indiana)
  - Two student presentations videotaped/year
  - ePortfolios developed with iWeb – secure server
- Navigation 101 (Washington state)
  - Counseling curriculum includes Advisories, Planning Portfolios, Student-Led Conferences, Student-Centered Scheduling
Personalizing & Goal Setting

Higher Education: Assessment Portfolio Systems

- Two approaches
  - Formative
  - Summative
- Institution-centered

Post-Secondary - Benchmarks

Portfolios in the Work Place

- Less well-defined
- Some professions produce digital products
  - Music
  - Art
  - Website design
- Accreditation of prior learning
- Personnel Evaluation?

Digital Stories - Legacies

Logistics

…of a lifelong, life-wide online personal learning environment
How would we manage such a system?

- Who would offer digital archive space?
  - Governments
  - Schools
  - Private Companies
- Advantages
- Problems

How would we get the systems to work together?

- Open ID
- RSS
- Tags
- Portfolio Specifications

Open ID
- Authentication
- Share logon ID

RSS
- Event notification and aggregation
- Really Simple Syndication

Tags

Portfolio Specifications
- IMS eportfolio specification
- Few vendors have adopted it
- JISC Cetis
- UK’s Leap 2.0

IMS eportfolio specification
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ePortfolios should be:

1. **Portable**: no single institution or system
2. **Personal**: ownership and customizable
3. **Generic**: no specific curriculum or content
4. **Web 2.0**: accessible and interactive
5. **MIS-free**: not tied to institutional infrastructure
6. "**Light**": not everything – a "transit camp"
7. **Lifelong**: Continuity "5-95" (all ages)
8. **Life-wide**: not just academic
9. **Accessible**: common standards of accessibility
10. **Credible**: any high-stakes evidence linked to a secure repository

Tolley, 2008

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Challenges

- User Interface of Web 2.0 tools
- Security Concerns in Schools
- Quality of artifacts online
- Socio-Cultural

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Security

- Issues of secure access must be addressed
- Most e-portfolios inside school firewall
- Not accessible from home
- Need appropriate safeguards

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Quality of Artifacts

- Online storage lower quality than hard drive or CD or DVD
  - Photo storage: Flickr or Picasa vs. iPhoto
  - Video storage: YouTube or Google Video vs. hi-def or DVD
- Acceptable tradeoffs in quality
Socio-Cultural Issues

- Not a technical issue
- Raising awareness
  - Why?
  - How?
- Usability
- Cost-benefit
- Efficacy
- Impact on learning & achievement
- Acceptance by employers or other stakeholders

Age & Social Technology Adoption

Age is a major driver of adoption

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<tr>
<th>Generation</th>
<th>Under 24</th>
<th>25-34</th>
<th>35-49</th>
<th>50-64</th>
<th>65+</th>
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<tbody>
<tr>
<td>Creators</td>
<td>14%</td>
<td>12%</td>
<td>10%</td>
<td>8%</td>
<td>5%</td>
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<tr>
<td>Entrepreneurs</td>
<td>13%</td>
<td>11%</td>
<td>10%</td>
<td>8%</td>
<td>5%</td>
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<tr>
<td>Generators</td>
<td>11%</td>
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<tr>
<td>Producers</td>
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<tr>
<td>Consumers</td>
<td>11%</td>
<td>10%</td>
<td>9%</td>
<td>8%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Base: US online consumers
Source: Forrester's "Who's Hot in Social Technology Adoption Across Generations 2010: Youth, Young Adults, and Olders"
Note: hot indicates high adoption intensity (% of people using)

“every day-ness”

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

Lifelong and Life Wide Learning

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

My Final Wish...

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

Dr. Helen Barrett

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