

Role and Implementation of Electronic Portfolios: Digital Stories and Web 2.0

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Electronic Portfolios and Digital Storytelling for
Lifelong and Life Wide Learning

Based on 2 papers on my website

- ❖ Authentic Assessment with Electronic Portfolios using Common Software and Web 2.0 Tools
– <http://electronicportfolios.org/web20.html>
- ❖ Purposes of Digital Stories in ePortfolios
– <http://electronicportfolios.org/digistory/purposes.html>

Themes

- ❖ **Context**
– 21st Century Learning
- ❖ **Product**
– Digital Archive for Life
- ❖ **Process**
– Portfolios and Reflection
– Digital Storytelling
- ❖ **Examples**

“Voice matters”

*“Building meaning”
“Building personal knowledge”*

Context

Why
Electronic Portfolios Now?

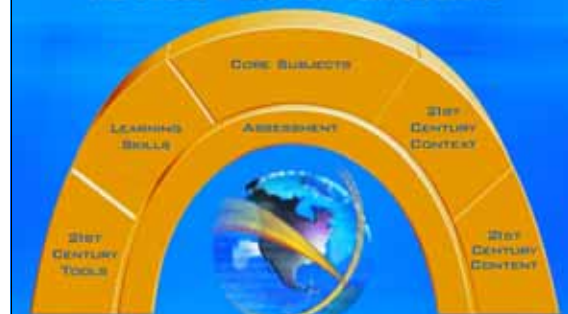
<http://www.21stcenturyskills.org/>



The
Partnership
for 21st
Century
Skills

21st Century Assessment

THE BRIDGE TO 21ST CENTURY LEARNING



6 Key Elements of 21st Century Learning

1. Emphasize core subjects
2. Emphasize learning skills
3. Use 21st century tools to develop learning skills
4. Teach and learn in a 21st century context
5. Teach and learn 21st century content
6. Use 21st century assessments that measure 21st century skills

Partnership for 21st Century Skills
<http://www.21stcenturyskills.org/>

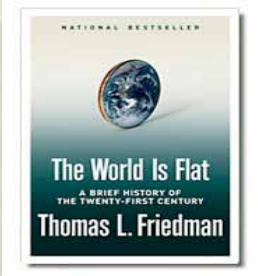
21st Century Learning Skills

- ❖ Information and Media Literacy Skills
- ❖ Communication Skills
- ❖ Critical Thinking and Systems Thinking
- ❖ Problem Identification, Formulation and Solution
- ❖ Creativity and Intellectual Curiosity
- ❖ Interpersonal and Collaborative Skills
- ❖ Self-Direction
- ❖ Accountability and Adaptability
- ❖ Social Responsibility

Partnership for 21st Century Skills
<http://www.21stcenturyskills.org/>

The World is Flat

- ❖ Thomas Friedman, New York Times Columnist
- ❖ A look at the change and globalization since Y2K



Friedman, 2006

10 "Flatteners"

10 Major political events, innovations, companies

1. 11/9/89	1. Walls down + Windows up
2. 8/9/95	2. Netscape went public
3. Work Flow Software	3. Applications talk to each other
4. Uploading	4. Online Communities [Web 2.0]; Open Source, Blogging, Wikipedia [social networks]
5. Outsourcing	5. Y2K panic + help desks (India)
6. Offshoring	6. Shifting production (Asia)
7. Supply-Chaining	7. Wal-Mart (China)
8. Insourcing	8. UPS
9. In-forming	9. Google, Yahoo, WebSearch
10. The Steroids	10. Digital, Mobile, Personal, Virtual

Friedman, 2006

Skills for jobs in a flat world "in the new middle"

❖ Collaborator	❖ Think across disciplines
❖ Leverager	❖ Able to tell stories
❖ Adapter	❖ Build things with intelligence in them
❖ Explainer	❖ Create networks
❖ Synthesizer	❖ Aggregate pieces horizontally
❖ Model builder	❖ Creativity
❖ Localizer	
❖ Personalizer	

Friedman, 2006

The Right Stuff - Learning in a Flat World

"How we educate our children may prove to be more important than how much."

Abilities for a flat world:

1. Learn how to learn
2. CQ (curiosity) + PQ (passion) > IQ
3. People Skills
4. Right Brain Stuff

Friedman, 2006

A Whole New Mind

- ❖ Daniel Pink
- ❖ Balancing Right-Brain skills for the “Conceptual Age” with Left-Brain skills from the “Information Age”



Causes of shift from LEFT to RIGHT Brain

- ❖ Abundance
- ❖ Asia
- ❖ Automation

Pink, 2004

6 Essential High-Concept, High Touch Aptitudes

Dan Pink, *A Whole New Mind*

1. **Design** (not just function) - create objects beautiful, whimsical, emotionally engaging
2. **Story** (not just argument) - the ability to fashion a compelling narrative
3. **Symphony** (not just focus) - synthesis--seeing the big picture
4. **Empathy** (not just logic) - forge relationships - care for others
5. **Play** (not just seriousness) - laughter, lightheartedness, games, humor
6. **Meaning** (not just accumulation) - purpose, transcendence, and spiritual fulfillment.

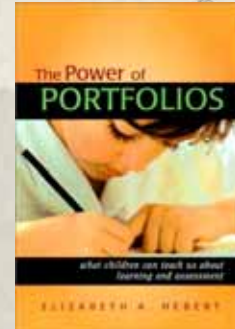
The Power of Portfolios

what children can teach us about learning and assessment

Author: Elizabeth Hebert

Publisher: Jossey-Bass

Picture courtesy of Amazon.com



The Power of Portfolios



Author:
Dr. Elizabeth
Hebert,
Principal
Crow Island
School,
Winnetka,
Illinois

Picture taken by Helen
Barrett at AERA,
Seattle, April, 2001



From the Preface (1)



Hebert, Elizabeth (2001) *The Power of Portfolios*. Jossey-Bass, p.ix

“Portfolios have been with us for a very long time. Those of us who grew up in the 1950s or earlier recognize portfolios as reincarnations of the **large memory boxes** or drawers where our parents collected starred spelling tests, lacy valentines, science fair posters, early attempts at poetry, and (of course) the obligatory set of plaster hands. Each item was selected by our parents because it represented our acquisition of a new skill or our feelings of accomplishment. Perhaps an entry was accompanied by a special notation of praise from a teacher or maybe it was placed in the box just because we did it.”



From the Preface (2)

Hebert, Elizabeth (2001) *The Power of Portfolios*. Jossey-Bass, p.ix

“We formed part of our identity from the contents of these memory boxes. We recognized each piece and its **association with a particular time or experience**. We shared these collections with grandparents to reinforce feelings of pride and we reexamined them on rainy days when friends were unavailable for play. **Reflecting on the collection** allowed us to attribute importance to these artifacts, and by extension to ourselves, as they gave witness to **the story** of our early school experiences.”



From the Preface (3)

Hebert, Elizabeth (2001) *The Power of Portfolios*. Jossey-Bass, p.ix-x

“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?

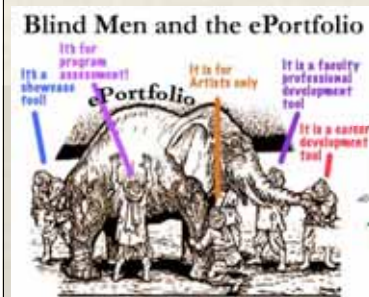
The power of portfolios [to support deep learning] is personal.

What is a Portfolio?

- ❖ A purposeful collection of work that demonstrates efforts, progress and achievement in one or more areas [over time]
- ❖ Multiple purposes
 - Learning/Process (“Know Thyself”)
 - Assessment/Accountability
 - Marketing/Employment

“The Blind Men and the Elephant”

Thanks to Alan Levine



Definitions

- ❖ **Artifact:** a piece of student work
- ❖ **Captions:** brief explanatory reflection on a piece of work in a portfolio
- ❖ **Evidence of Learning in a Portfolio**
 - Artifact
 - + Reflection (Student's Rationale)
 - + Validation (Teacher's Evaluation)

Purposes for Assessment

Assessment OF Learning	Assessment FOR Learning
=	=
Summative Assessment	Formative (Classroom-based) Assessment

Past Present Future

Authentic Assessment

- ❖ **where students generate**
- ❖ **rather than choose a response**

❖ "The terms alternative assessment, authentic assessment, or performance-based assessment are often used synonymously "to mean variants of performance assessments that require students to generate rather than choose a response"

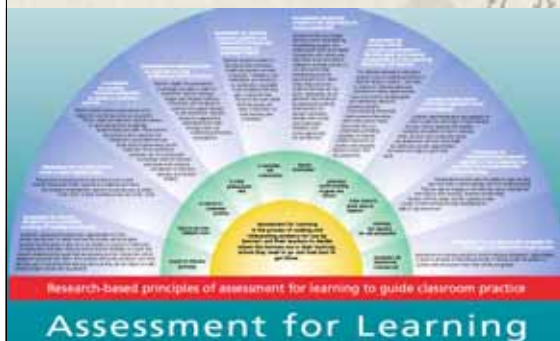
(Herman, Aschbacher, and Winters, 1992, p. 2).

Conventional vs. Reform Instruction

- | | |
|--|---|
| ❖ Teacher-directed | ❖ Student exploration |
| ❖ Didactic teaching | ❖ Interactive modes of instruction |
| ❖ Short blocks of instruction on single subject | ❖ Extended blocks of authentic and multidisciplinary work |
| ❖ Single media | ❖ Multimedia |
| ❖ Individual work | ❖ Collaborative work |
| ❖ Teacher as knowledge dispenser | ❖ Teacher as facilitator |
| ❖ Ability groupings | ❖ Heterogeneous groupings |
| ❖ Assessment of fact knowledge and discrete skills | ❖ Performance-based assessment |

SRI (1993)

www.qca.org.uk (ages3-14)



Metaphors for portfolios

- ❖ Checklist of skills/competencies
- ❖ Resume/C.V. on steroids
- ❖ Test
- ❖ Story of deep learning

Electronic Portfolios

- ❖ What are they?
 - Definitions
 - Process and Product
- ❖ Technology
 - Tool Choices
 - Planning Issues

*How do we
move from
this container
to the WWW?*



What is an Electronic Portfolio?

- ❖ uses electronic technologies as the container (CD, DVD, WWW)
- ❖ which allows students/teachers to collect and organize portfolio artifacts in many media types (audio, video, graphics, text)
- ❖ using **hypertext links** to organize the material
- ❖ connecting evidence to appropriate outcomes or learning goals

Planning Issues

- ❖ What is your **purpose**?
- ❖ **Software capabilities**: allow **interaction** between faculty and students around learning activities and products
- ❖ **Internet access**? Poor or good?

What is your purpose?

- ❖ authentic assessment (formative feedback)
- ❖ showcasing best work and growth over time
- ❖ When used in formative, classroom-based assessment, teachers (and peers) can review the portfolio document, and provide formative feedback to students on where they could improve.

An electronic portfolio provides an environment where students can:

- ❖ **collect** their work in a digital archive
- ❖ **select** specific pieces of work (hyperlink to artifacts) to highlight specific achievements
- ❖ **reflect** on the learning demonstrated in the portfolio, in either text or multimedia form
- ❖ set goals for future learning (or **direction**) to improve
- ❖ celebrate achievement through **sharing** this work with an audience, whether real or virtual

Portfolio Processes

Traditional + Technology

- ❖ Collecting
- ❖ Selecting
- ❖ Reflecting
- ❖ Directing
- ❖ Celebrating
- ❖ Archiving
- ❖ Linking/Thinking
- ❖ Storytelling
- ❖ Collaborating
- ❖ Publishing

ePortfolio Technology over Time

Container

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

Authoring Software

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

Levels of ePortfolio Implementation

- ❖ **Working Portfolio**
 - The Repository
 - The Digital Archive
 - The Artifacts (meta-tagged)
 - Personal Information
 - Reflective Journal
- ❖ **Presentation Portfolio(s)**
 - The “Story” or Narrative
 - Multiple Views (public/private)
 - Varied Audiences (permissions)
 - Varied Purposes

What is the best tool?
It Depends!

State of the Art of e-Portfolio Development

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

Software capabilities

- ❖ allow **interaction** between teachers and students around learning activities and products:
 - **Students:** create, store artifacts and reflections and organize their work, preferably with hyperlinks
 - **Teachers:** review the work and provide feedback in narrative form (based on a rubric, if available)

Today's Tool Choices

Poor Internet Access?

- ❖ **Microsoft Office**
 - Word
 - Excel
 - PowerPoint
- ❖ **Other Options:**
 - Apple iLife06
 - iDVD
 - iWeb
- ❖ **Web Page Editors** (DreamWeaver, Front Page)

These tools do not require Internet access to **create** electronic portfolios.

Good Internet Access?

- ❖ **TaskStream** or any commercial fee-based system
- ❖ **Open Source Systems**
- ❖ **Web 2.0 Tools**

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 company server.

Web 2.0 Technologies

Advantages

- ❖ Free, often open-source tools on the WWW
- ❖ “Me Publishing
- ❖ Shared Resources
- ❖ Shared Writing
- ❖ Media Creation Online

Disadvantages

- ❖ Requires higher technology competency
- ❖ Mostly not secure websites

“Small Pieces, Loosely Joined”

Free Online Portfolio Tools

- ❖ Blog with pages
www.wordpress.com
- ❖ Almost any Wiki
pbwiki.com or wikispaces.com
- ❖ KEEP Toolkit
www.cfkeep.org
- ❖ GoogleDocs
docs.google.com/

“Me” Publishing

- ❖ Blogs
 - Blogger, WordPress
- ❖ Social Networking
 - MySpace, Friendster, Elgg
- ❖ Content Management Systems
 - Plone, Drupal

Shared resources

- ❖ **Photo Sharing**
 - Flickr, PhotoBucket
- ❖ **Media Sharing**
 - vimeo.com, ourmedia.org, youtube.com, video.google.com
- ❖ **Bookmarks**
 - BackFlip.com, iKeepBookmarks.com, del.icio.us

Shared Writing

- ❖ **Wikis**
 - **WikiSpaces** (hosted site with free subscriptions for teachers)
 - **MediaWiki** (Open Source - used by Wikipedia)
- ❖ **Online Word Processors**
 - **GoogleDocs**
 - **Zoho** tools

Media Creation Online

❖ Video

–BubbleShare, JumpCut,
PrimaryAccess

❖Podcasts (audio)

–odeo, podomatic

Open Source ePortfolio Tools

❖ The Open Source Portfolio (OSPI)

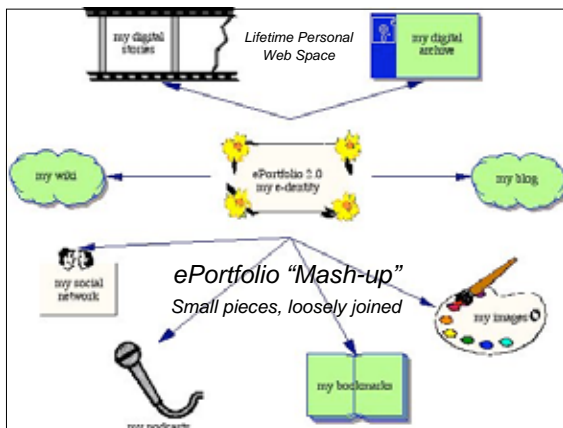
– Created by U.S. higher education for college students
– Integration with Sakai

❖ Elgg

– Created as a combined blog and social networking tool
– Allows students to create groups, integration with Moodle

❖ Open University (U.K.)

– Under development - integration with Moodle



“every day-ness”

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

Lifelong and Life Wide Learning

Social Learning

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

Architecture of Interaction

(Web 2.0)

allows a

Pedagogy of Interaction

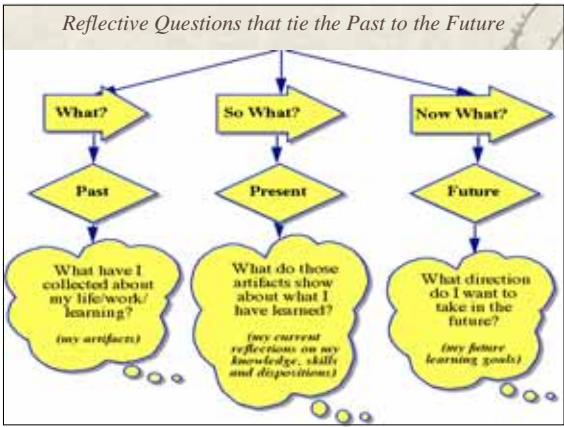
(ePortfolio 2.0)

Emerging Models for Portfolios

- ❖ mPortfolios ❖ Mobile
- ❖ iPortfolios ❖ Interactive
- ❖ Digital Stories ❖ Voice

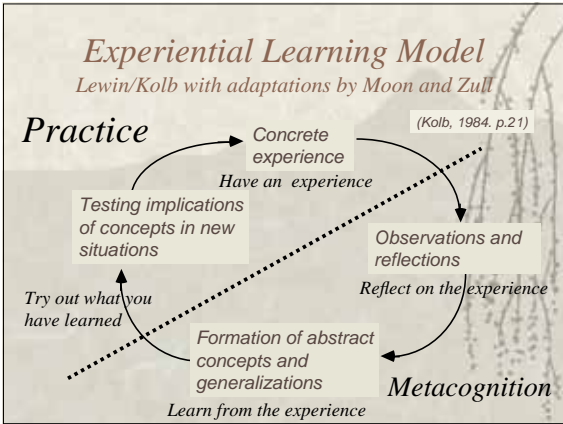
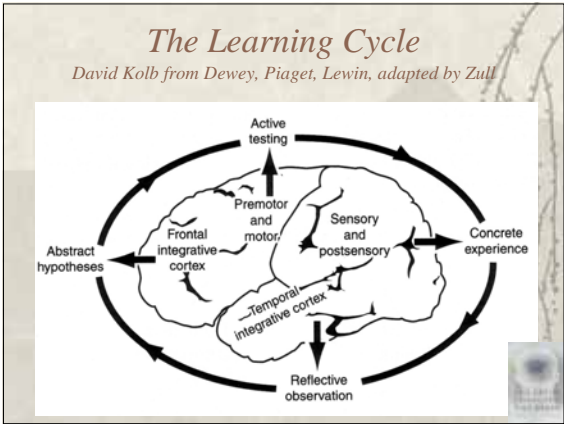
Reflection

The “Heart and Soul” of a Portfolio



Resource on Biology of Learning

- ❖ Enriching the Practice of Teaching by Exploring the Biology of Learning
- ❖ James E. Zull
- ❖ Stylus Publishing Co.



Jennifer Moon on Reflection

- ❖ Reflection is a form of mental processing – like a form of thinking – that we use to fulfill a purpose or to achieve some anticipated outcome. It is applied to relatively complicated or unstructured ideas for which there is not an obvious solution and is largely based on the further processing of knowledge and understanding and possibly emotions that we already possess (based on Moon 1999)



Moon on Reflection

- ❖ One of the defining characteristics of surface learning is that it does not involve reflection (p.123)

Deep Learning

- ❖ involves reflection,
- ❖ is developmental,
- ❖ is integrative,
- ❖ is self-directive, and
- ❖ is lifelong

Cambridge (2004)

Portfolio tells a Story

"A portfolio tells a story. It is the story of knowing. Knowing about things... Knowing oneself... Knowing an audience... Portfolios are students' own stories of what they know, why they believe they know it, and why others should be of the same opinion."
(Paulson & Paulson, 1991, p.2)

Helping Students Tell Their Stories

- ❖ **COLLECT** more than text documents
 - Pictures
 - Audio
 - Video
- ❖ Focus on **REFLECTION** over time
- ❖ Help students make **CONNECTIONS**
- ❖ Support multimedia presentation formats

Linked to...

Strategies that promote Intrinsic Motivation to maintain the process for Lifelong Learning

Online Portfolios
Digital Storytelling
Blogs & Wikis
Games

Examples of Electronic Portfolios

- ❖ Mine (2 versions)
- ❖ Josh (student teacher)

Digital Tools for Reflection

Digital Storytelling and Engagement

Voice

Individual Identity
Reflection
Meaning Making

Why Digital Stories in ePortfolios?

- ❖ Reflection is the “heart and soul” of portfolios
- ❖ Digital Stories can humanize any model of ePortfolio
- ❖ Digital Stories add **VOICE**

Reflection in a Digital Story

- ❖ Full Circle or Choices or Deana

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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