Slide 1

Electronic Portfolios: Digital Stories of Deep Learning

Dr. Helen Barrett
Research Project Director
The REFLECT Initiative
sponsored by TaskStream
University of Alaska Anchorage (retired)

Slide 2

Themes

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

Slide 3

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
what children can teach us about learning and assessment
ELIZABETH A. HEBERT

Slide 4

The Power of Portfolios

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

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

Slide 5

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."

Slide 6

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.11-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.

Context

Why
Electronic Portfolios
Now?

http://www.21stcenturyskills.org/

The Partnership for 21st Century Skills

21st Century Assessment

THE BRIDGE to 21ST CENTURY LEARNING

CORE SUBJECTS
LEARNING SKILLS
ASSESSMENT
21ST CENTURY CONTEXT
21ST CENTURY TOOLS
21ST CENTURY CONTENT
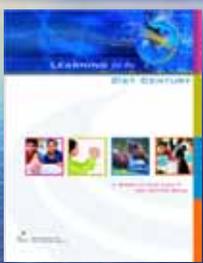
Education that…

- Connects to students' lives
  - Reduces GAP between how students live and how they learn
- Reflects "How People Learn"
  1. Uses prior knowledge to build new understanding
  2. Able to organize knowledge within conceptual framework
  3. Metacognitive approach, take control of learning, monitor progress, improve achievement

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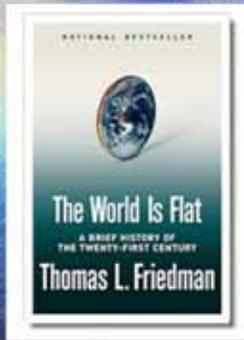
- Thomas Friedman, New York Times Columnist
- A look at the change and **globalization** since Y2K

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.	Open-Sourcing	4.	Self-Organizing Collaborative Communities
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

A Whole New Mind
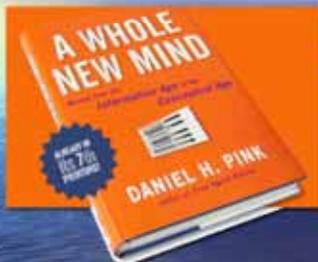
- Daniel Pink
- Balancing Right-Brain skills for the "Conceptual Age" with Left-Brain skills from the "Information Age"

Causes of shift from LEFT to RIGHT Brain

- Abundance
- Asia
- Automation

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.

Context for ePortfolios

- Purpose(s)
- Audience(s)
- Ownership
- Tools

- Competitive Edge for Lifelong Learning
- Home to School to Work

Product

Electronic

Portfolios
(Technology Matures)

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ePortfolio Technology over Time

Storage
- 1991: Desktop
- 1996: CD-R
- 2000: Internet
- 2005: DVD-R
- 2006: **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")

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

A question to ponder

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

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"

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)

Benefits of LPWS

- Educational Continuity: Less Knowledge Left Behind
- A Convenient One-Stop Shop
  - Structured according to the user's unique concept map and learning style, not by predetermined institutional or commercial templates
  - Crosses institution & sector boundaries
- Community-Building
  - link individuals to larger communities (e.g. ELGG, Facebook)
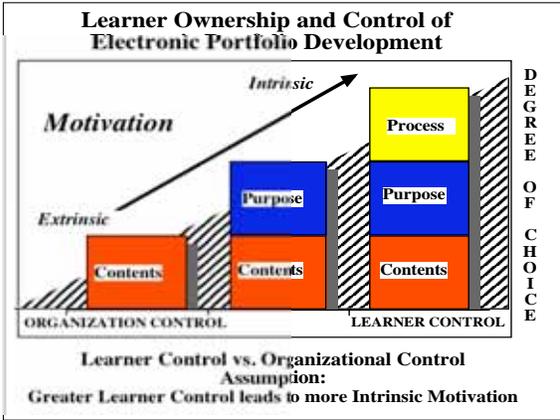
Cohn & Hibbitts (2004)

Digital Archive for Life (DAL)

- space to store the 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

Memories Lost

- Physical/Analog Documents
  - Hurricane Katrina
  - Floods, Earthquakes, Fire
- Virtual/Digital Documents
  - Pervasive use of digital cameras
  - Massive hard drive crash
  - a "hole in history"
- Ourmedia.org & archiving Internet

If *we* build it, will *they* use it?

And *HOW* will they use it?

What about the users?
Why would learners want to use an ePortfolio?

Learner Ownership and Control of Electronic Portfolio Development

Learner Control vs. Organizational Control
Assumption:
Greater Learner Control leads to more Intrinsic Motivation

Process
Electronic
Portfolios

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 a Portfolio in Education? (2)

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)

NLII e-Portfolio Definition

- a collection of authentic and diverse evidence,
- drawn from a larger archive representing what a person or organization has learned over time
- on which the person or organization has reflected, and
- designed for presentation to one or more audiences for a particular rhetorical purpose.

Portfolio Processes

Traditional + Technology

- Collecting
- Selecting
- Reflecting
- Directing
- Celebrating

- Archiving
- Linking/Thinking
- Storytelling
- Collaborating
- Publishing

"The Blind Men and the Elephant"
Thanks to Alan Levine

Blind Men and the ePortfolio

Purpose & Goals for the portfolio (Determine Content)

- Multiple purposes:
  - Learning/Process
  - Assessment
  - Marketing/Showcase

Learning Portfolios

- "know thyself" = a lifetime of investigation
- self-knowledge as outcome of learning

Reflection

Learning Portfolio

Documentation

Collaboration

The Learning Portfolio (Zubizaretta, 2004, p.20)

www.qca.org.uk
ages3-14

Research-based principles of assessment for learning to guide classroom practice

Assessment for Learning

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.

Crucial Distinction

- **Assessment OF Learning**
  How much have students learned as of a particular point in time?

- **Assessment FOR Learning**
  How can we use assessment to help students learn more?

  Rick Stiggins
  Assessment Training Institute

Purposes for Assessment

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

Past   Present   Future

What is your portfolio philosophy?

- A standardized **checklist** of skills? (Positivist)

or

- A reflective **story** of deep learning? (Constructivist)

Tension between two approaches

"The two paradigms produce portfolio activities that are entirely different."

"The positivist approach puts a premium on the selection of items that reflect **outside standards and interests**."

"The constructivist approach puts a premium on the selection of items that reflect learning **from the student's perspective**."

F. Leon Paulson & Pearl Paulson (1994)
"Assessing Portfolios Using the Constructivist Paradigm"
in Fogarty, R. (ed.) (1996) *Student Portfolios*.
Palatine: IRI Skylight Training & Publishing

Overlap of Assessment Types*

Portfolios that support Assessment OF Learning

Portfolios that support Assessment FOR Learning

Institution-centered   Learner-centered

Portfolio Differences

| Assessment OF Learning	Assessment FOR Learning
Purpose prescribed	Purpose negotiated
Artifacts mandated - scoring for external use	Artifacts chosen - feedback to learner
Organized by teacher	Organized by learner
Summative (Past to present)	Formative (Present to future)
Institution-centered	Student-centered
Requires extrinsic motivation	Intrinsically motivating

Which approach should you take?

- Are you looking for an **electronic portfolio...**
- Or an **assessment management system**?
- What's the difference? Along a Continuum

Electronic Portfolio or Assessment Management System?

Electronic Portfolio	Assessment Management System
Multiple purposes: Learning, Assessment, Employment	Single purpose: Formative and Summative Assessment
Data structure varies with tools used to create the portfolio; common data formats (converted to HTML, PDF)	Data structure most often uses a relational database to record, report data
Primary type of data: qualitative	Primary type of data: qualitative and quantitative
Data storage in multiple options: CD-ROM, videotape, DVD, WWW server, LAN	Data storage primarily on LAN or on secure WWW server
Visual design and hyperlinks often under control of portfolio developer	Visual design and hyperlinks controlled by database structure
Learner choice of artifacts	**Institutional** choice of artifacts
Learner-Centered	Institution-Centered

Electronic Portfolio or Assessment Management System?
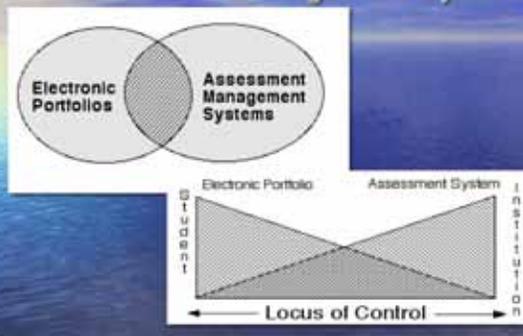
How can we address both types of portfolios?

Use three different systems that are digitally linked:

I. A digital **archive** of a learner's work
II. An institution-centered **database** to collect faculty-generated assessment data based on tasks and rubrics
III. A student-centered **electronic portfolio**

Reflection

The "Heart and Soul" of a Portfolio

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."
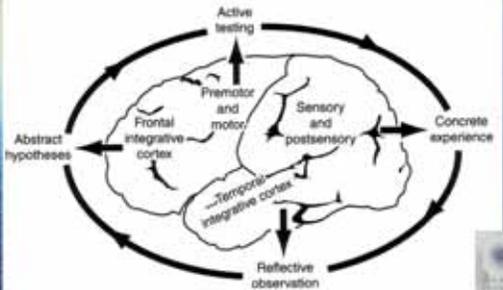(Paulson & Paulson, 1991, p.2)

Resource on Biology of Learning
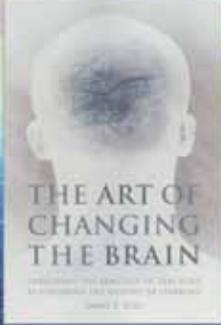
- Enriching the Practice of Teaching by Exploring the Biology of Learning
- James E. Zull
- Stylus Publishing Co.
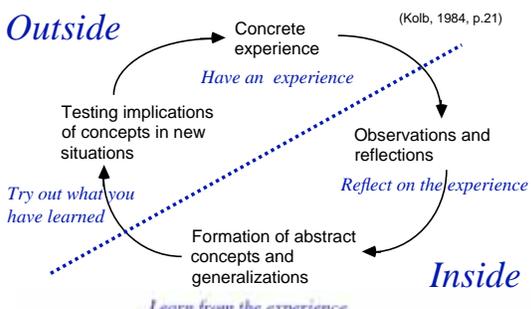
THE ART OF CHANGING THE BRAIN

The Learning Cycle
David Kolb from Dewey, Piaget, Lewin, adapted by Zull

Experiential Learning Model
Lewin/Kolb with adaptations by Moon and Zull

Outside

Concrete experience

(Kolb, 1984, p.21)

Have an experience

Testing implications of concepts in new situations

Observations and reflections

Reflect on the experience

Try out what you have learned

Formation of abstract concepts and generalizations

Inside

Learn from the experience

Jennifer Moon on Reflection

1999   2004

Reflection

in Learning & Professional Development
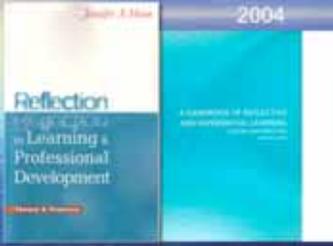
- Reflection is a form of mental processing – like a form of thinking – that we use to fulfil a purpose or to achieve some anticipated outcome. It is applied to relatively complicated or unstructured ideas for which there is not an obvious solution and is largely based on the further processing of knowledge 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)

Linked to…

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

Online Portfolios

Digital Storytelling

Blogs & Wikis

Games

How can you leverage the technologies students own?

- Accessibility from home computers
- Connectivity with cell phones & PDAs (digital images, reflections)
- Video storage (iPod) or streaming video
- **Podcasting** = audio-only digital stories and blogs

Digital Tools for Reflection

Digital Storytelling and Engagement

Digital Storytelling Process

- Learners create a 2-4 minute digital video clip
  - First person narrative [begins with a written script ~ 400 words]
  - Told in their own voice [record script]
  - Illustrated (mostly) by still images
  - Music track to add emotional tone

Voice = Authenticity

- multimedia expands the "voice" in an electronic portfolio (both literally and rhetorically)
- personality of the author is evident
- gives the reflections a uniqueness

Digital Story as Legacy

Not just for professional development
Or skills-based portfolios

Digital Storytelling Becomes a Lifelong Skill

- Cousin of scrapbooking and genealogy
- Cross-age collaborations
- Children interview elders
- Illustrate with family photos

Digital Storytelling Becomes a Lifelong Skill

- **Digital Family Stories** from birth to end-of-life
- **Digital Family Stories** help people **reflect** on life transitions
- **Digital Family Stories** preserve multimedia memories as a legacy for future generations

Digital Paper or Digital Story?

Digital paper = text and images only
Digital story = tell your story **in your own voice**.
Multimedia = audio and video

Storytelling as a Theory of Learning

Learning through
STORYTELLING in
Higher Education
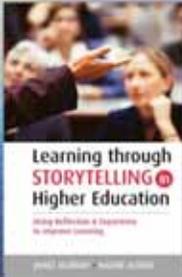
- Two educators from New Zealand – staff developer and health educator
- Relates storytelling to literature on learning and reflection
- Provides stages of storytelling related to reflection

Student Engagement

Reflection for Deep Learning

Digital Storytelling

Technology Integration

Project-Based Learning

A Graduate Student's Reflective Digital Story

- Maybe you are a graduate student reflecting on what is drawing you into teaching
- Play "Deana" and "Coming Full Circle"

My Website and my CD

A brief look at the tools
More in-depth tutorials and examples
Self-directed tutorials on e-portfolio
development and digital storytelling

TaskStream
Tools of Engagement

THE REFLECT INITIATIVE

Researching
Electronic
*port***F**olios:
Learning,
Engagement,
Collaboration *through*
Technology

A public-private partnership with secondary schools

The Goal:

- To collect data and draw conclusions about the impact of electronic portfolio on:
  - student learning
  - Motivation
  - Engagement
...in secondary schools

Overall Cohort

- 14 Active Projects
  - Arizona (3)
  - New Jersey
  - California (5)
  - Florida
  - Maryland
  - New Jersey
  - Brazil
  - Tennessee
- 31 Active Schools
  - 15 in Arizona DOE Project
  - 4 in New Jersey DOE Project
  - 1 Elementary School
  - 1 Intermediate School
  - 29 High Schools
  - 2 Private Schools (MD & FL)
- ~133 Active Teachers
- ~3100 Students (Fall Semester)
  - Could double in Year 2

My Final Wish...

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

Dr. Helen Barrett

- Research Project Director, The REFLECT Initiative sponsored by TaskStream
- eportfolios@comcast.net
- http://electronicportfolios.org/