

ePortfolios and their role in Higher Ed:

Digital Stories of Deep Learning

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Themes

- **Context**
 - 21st Century Learning
- **Product (Electronic)**
 - Tools
 - Web 2.0 Pedagogy of Interaction
- **Process (Portfolio)**
 - Multiple Purposes
 - Assessment Management Systems
 - Portfolios and Reflection
 - Digital Storytelling

“Voice matters” *“Building meaning”*
“Building personal knowledge”

Context

Why Electronic Portfolios Now?

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



The Partnership for 21st Century Skills



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

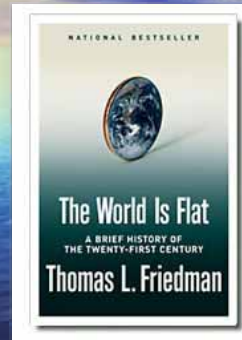
Partnership for 21st Century Skills
<http://www.21stcenturyskills.org/>

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

Friedman, 2006

The Right Stuff - Learning in a Flat World

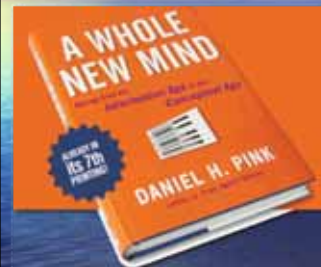
“How we educate our children may prove to be more important than **how much.**”

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*

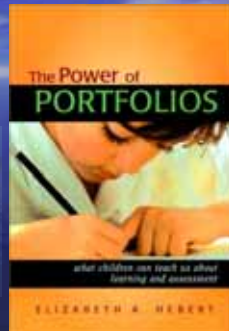
1. **Design** (not just function) - create objects beautiful, whimsical, emotionally engaging
2. **Story** (not just argument) - the ability to fashion a compelling narrative
3. **Symphony** (not just focus) - synthesis--seeing the big picture
4. **Empathy** (not just logic) - forge relationships - care 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.

Product

Electronic

Portfolios
(Technology Matures)

How do we move from this container to the WWW?



ePortfolio Technology over Time

Storage	Software
<ul style="list-style-type: none"> • 1991: Desktop • 1995: CD-R • 2000: Internet • 2005: DVD-R • 2006: Pocket Tech (PDAs, Flash drives, Phones, iPods) • What’s Next? 	<ul style="list-style-type: none"> • Common tools <ul style="list-style-type: none"> – Office & PDF – HTML Editors • Customized Systems <ul style="list-style-type: none"> – 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 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

Metaphors!

- Mirror, Map, Sonnet
- C.V. or Multimedia Resume
- Test
- Story
- <http://electronicportfolios.org/metaphors.html>

Web 2.0 Technologies

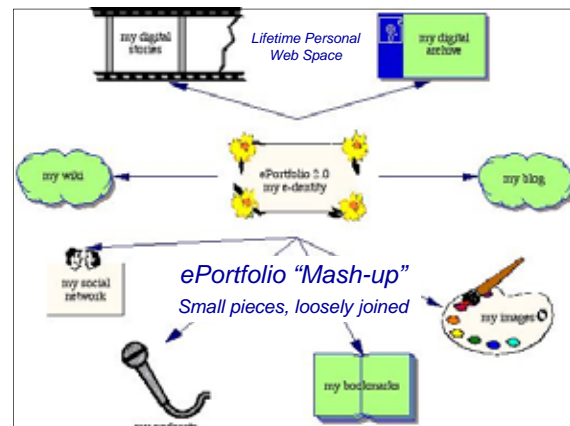
Advantages

- 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"



"Me" Publishing

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

Shared Writing

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

Architecture of Interaction
(Web 2.0)
allows a

Pedagogy of Interaction
(ePortfolio 2.0)

Emerging Models for Portfolios

- mPortfolios
- iPortfolios
- Digital Stories
- Mobility
- Interactivity
- Voice

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)

Portfolio Processes

Traditional + Technology

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

3 General Components of the Portfolio Development Process

- **Content:**
 - Learner's artifacts and reflections
- **Purpose**
 - Reason for creating the portfolio including learning, professional development, assessment, employment
- **Process**
 - Tools used
 - Sequence of activities
 - Rules established by educational institution
 - Reflections a learner constructs in developing the portfolio
 - Evaluation criteria
 - Collaboration or conversations about the portfolio

Learner Ownership and Control of Electronic Portfolio Development

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

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

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*

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

Learning Portfolios

- Support reflection which is central to learning
- **Reflections**
 - The Heart and Soul of the Portfolio
- An electronic portfolio without reflection is just a
 - Digital scrapbook
 - Fancy electronic resume
 - Multimedia Presentation
 - Personal web site

Showcase Portfolios

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

Assessment Portfolios

- A major movement in Teacher Education in U.S.
- A major new commercial market
- A primary motivator for organizations

More later!

Purposes for Assessment

Assessment **OF**
Learning
=
Summative Assessment

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

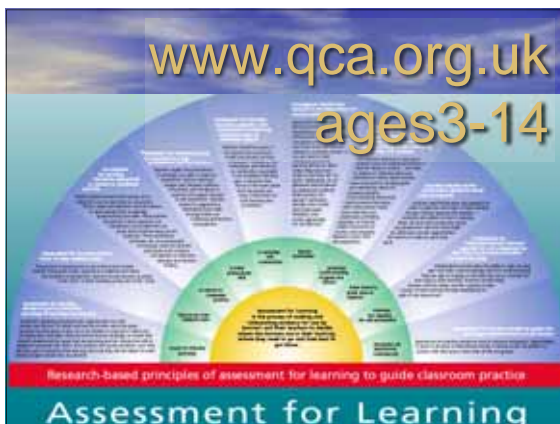
Past Present Future

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

www.qca.org.uk
ages3-14



Principles of Assessment FOR Learning

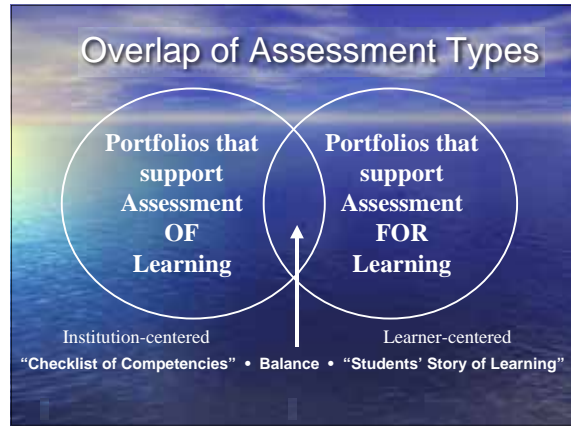
- **Definition:**
Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there.

What is your portfolio philosophy?

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

or

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

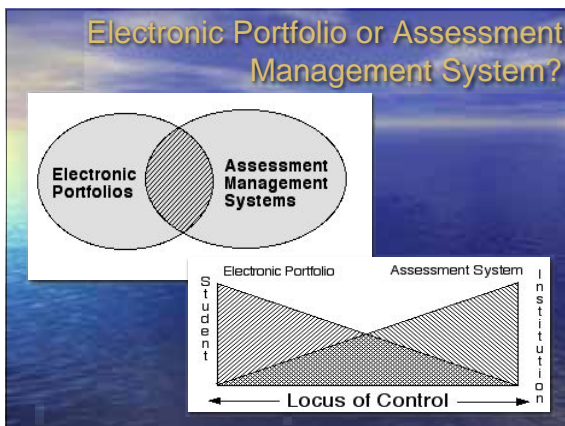


Portfolio Differences

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?

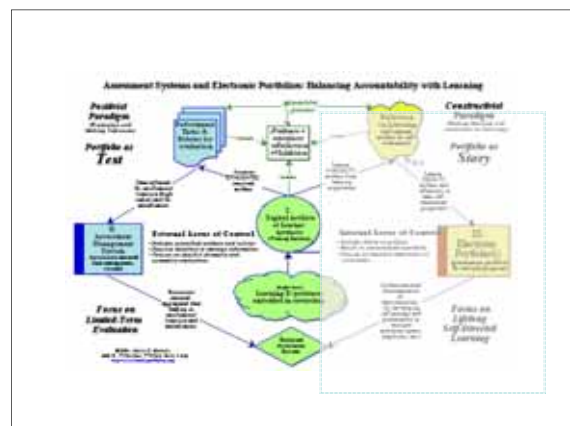
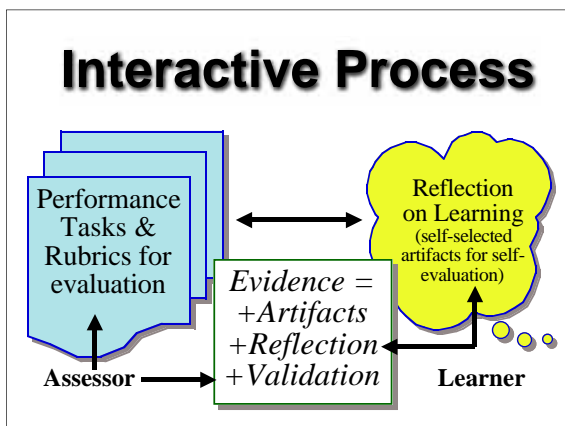
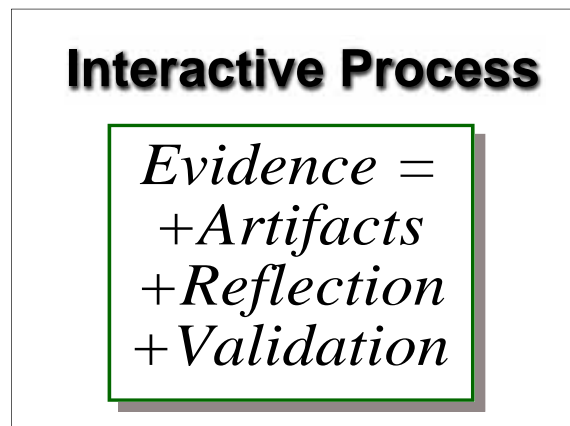
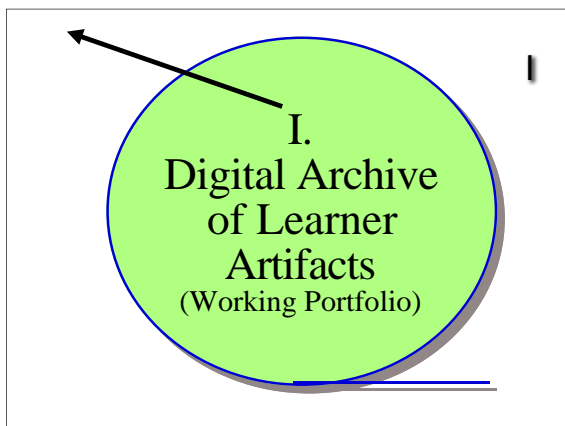
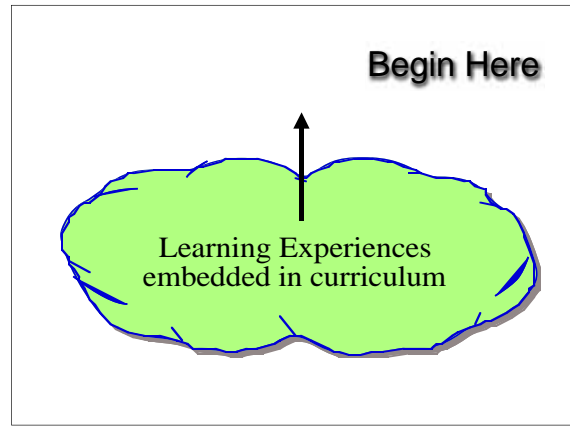
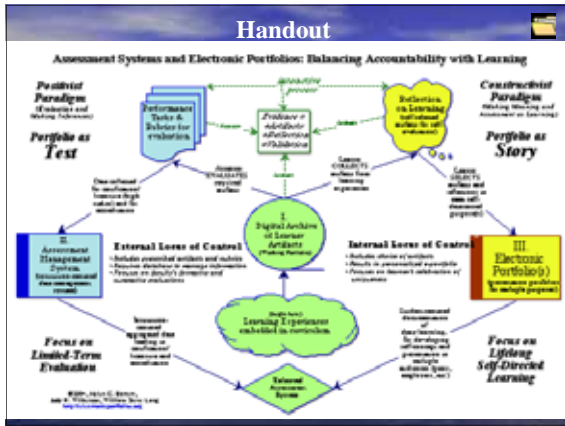
- Are you looking for an **electronic portfolio...**
- Or an **assessment management system?**
- What's the difference? Along a Continuum



How can we address both types of portfolios?

Use three different systems that are digitally linked:

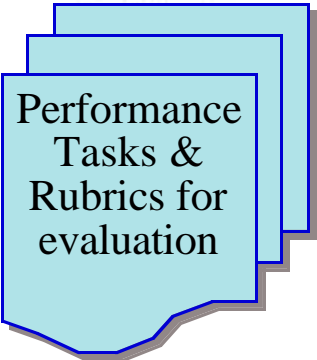
- I. A digital **archive** of a learner's work
- II. An institution-centered **database** to collect faculty-generated assessment data based on tasks and rubrics [i.e., Project Caliper]
- III. A student-centered **electronic portfolio**



**Positivist
Paradigm**
*(Evaluation and
Making Inferences)*

Portfolio as *Test*

**Assessor
EVALUATES
required
artifacts**



Performance
Tasks &
Rubrics for
evaluation

Data collected for
certification/
licensure
(high stakes)
and for
accreditation



II.
Assessment
Management
System
(institution-centered
data management
system)

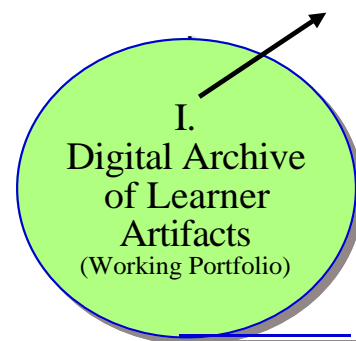
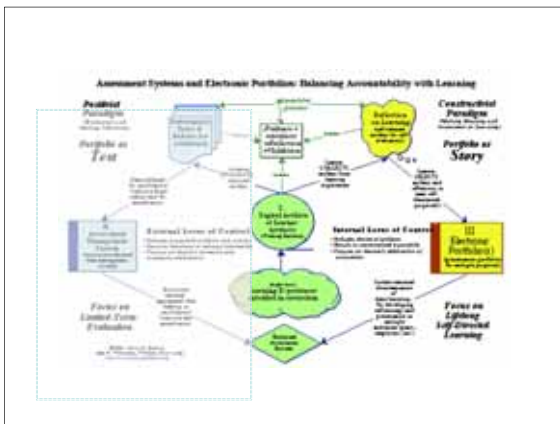
Resulting in...

**Institution-centered
aggregated data
leading to
certification/licensure
and accreditation**

Focus on Limited-Term Evaluation

External Locus of Control

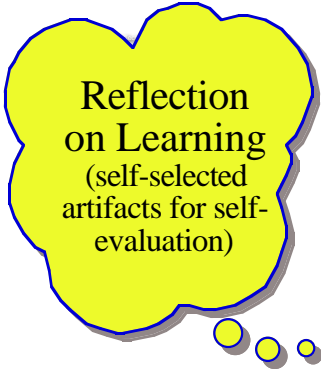
- Includes prescribed artifacts and rubrics
- Requires database to manage information
- Focuses on faculty's formative and summative evaluations



**Constructivist
Paradigm**
(Making Meaning and
Assessment as Learning)

Portfolio as Story

**Learner
COLLECTS
artifacts from
learning
experiences**



Reflection
on Learning
(self-selected
artifacts for self-
evaluation)

**Learner SELECTS
artifacts and
reflections to meet
self-determined
purpose(s)**



III.
**Electronic
Portfolio(s)**
(presentation portfolios
for multiple purposes)

Resulting in...

**Student-centered
documentation of
deep learning,**
for developing self-concept and
presentation to multiple
audiences (peers, employers, etc.)

***Focus on
Lifelong
Self-Directed
Learning***

**Internal Locus of
Control**

- *Includes choice of artifacts*
- *Results in personalized e-portfolio*
- *Focuses on learner's celebration of uniqueness*

Both approaches result in a:



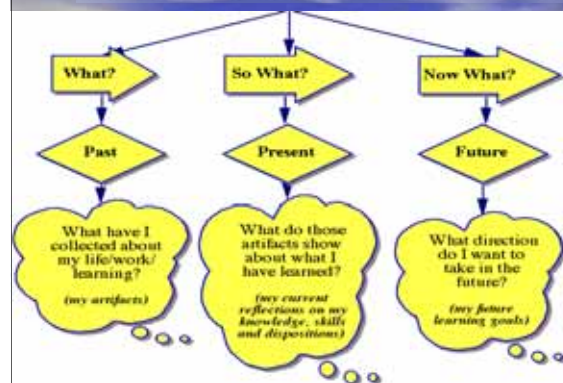
Quote from
Hartnell-Young
& Morriss (2007)
Digital Portfolios

- many issues that arise from the multiple purposes for developing electronic portfolios.
- “While these are legitimate uses for portfolios, when teachers perceive that accountability is viewed as more important than their knowledge and expertise, they can become cynical, and their portfolios tend to be heavy with documentation but light on passion.” (p.8)

Reflection

The “Heart and Soul”
of a Portfolio

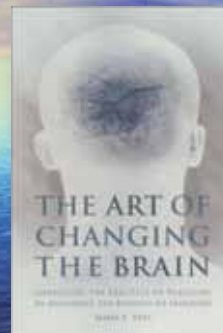
Reflective Questions that tie the Past to the Future



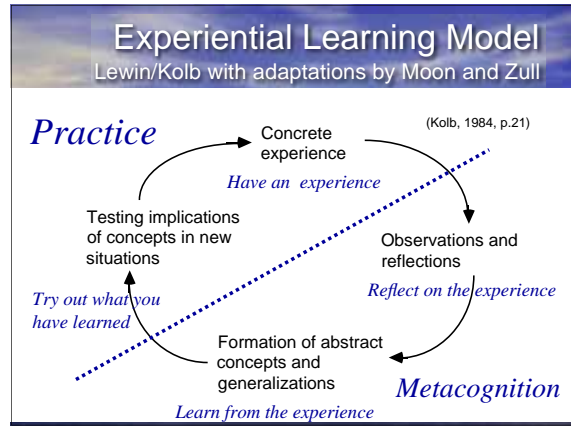
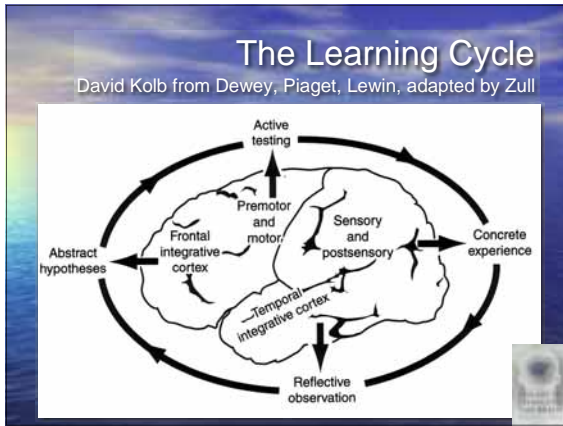
Now What?

- Future Learning Goals... turn **Portfolio Development**
- ...into powerful **Professional Development**
- and **Assessment FOR Learning**

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

1999

2004

- 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

Digital Tools for Reflection

Digital Storytelling and Engagement

Linked to...



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

“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?

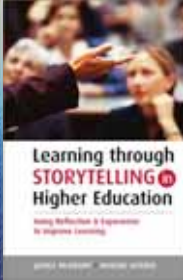
Digital Storytelling Process

YouTube meets "academic" MySpace

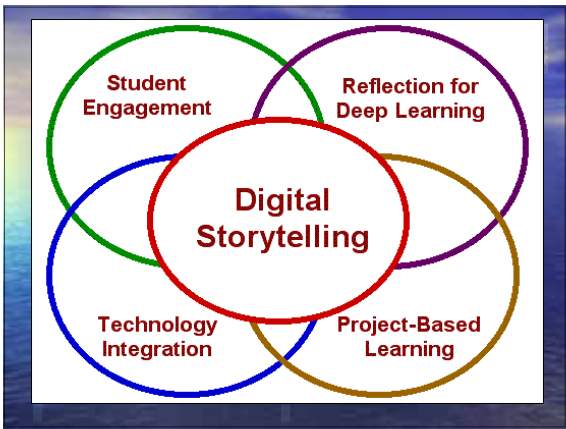
Anchorage
8th grade

- 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

Storytelling as a Theory of Learning



- 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



Digital Storytelling is BOTH...

HIGH TECH
and
HIGH TOUCH

Digital stories

- Student Teacher stories
 - Deana - A Journey to the Missing
 - Coming Full Circle
- My story

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 Paper or Digital Story?

Digital paper = text and images only

Digital story = tell your story **in your own voice.**

Multimedia = audio and video

Digital Stories and e-Portfolios

- highly motivating project-based learning activity
- powerful artifacts in electronic portfolios
- Importance of reflection in e-portfolios
- Tools for scaffolding reflection: blogging and digital storytelling
- Storytelling: reflection on experience to improve learning (McDrury & Alterio)
- the role of reflection in brain-based learning (Zull)

A Dozen Purposes for DS in EP

- **Introduction of Self**
 - Voice & Personality
 - Legacy
 - Biography
 - Memoir
- **Reflection**
 - Transition
 - Decision
 - Benchmarking Development
 - Change over Time
- **Artifacts**
 - Evidence of Collaboration
 - Documentary
 - Record of Experience
 - Oral Language

What's Your Story?

Richness not possible in print
Audiences worldwide but most likely small and intimate.

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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- eportfolios@comcast.net
- <http://electronicportfolios.org/>