ePortfolios:
Digital Stories of
Deep Learning

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Themes

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

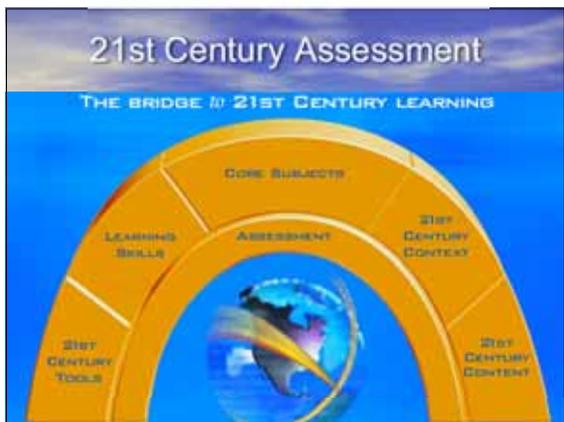*"Voice matters"*   *"Building meaning"*
"Building personal knowledge"

Context

Why
Electronic Portfolios
Now?

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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

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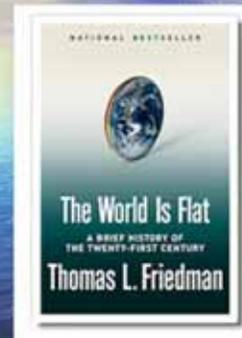
- Thomas Friedman, New York Times Columnist
- A look at the change and **globalization** since Y2K

The World Is Flat
A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY
Thomas L. Friedman

10 "Flatteners"
10 Major political events, innovations, companies

1. 11/9/89
2. 8/9/95
3. Work Flow Software
4. Uploading
5. Outsourcing
6. Offshoring
7. Supply-Chaining
8. Insourcing
9. In-forming
10. The Steroids

1. Walls down + Windows up
2. Netscape went public
3. Applications talk to each other
4. Online Communities [Web 2.0]: Open Source, Blogging, Wikipedia [social networks]
5. Y2K panic + help desks (India)
6. Shifting production (Asia)
7. Wal-Mart (China)
8. UPS
9. Google, Yahoo, WebSearch
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
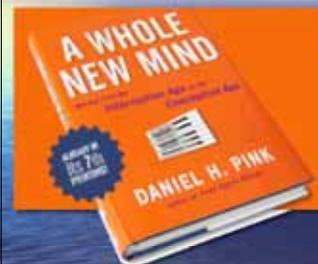
The Right Stuff - Learning in a Flat World

"**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

A WHOLE NEW MIND
DANIEL H. PINK

- 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

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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
Literacy Level

Product

Electronic
Portfolios
(Technology Matures)

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?

Is there really ONE portfolio for life?

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ePortfolio Technology over Time

Storage
- 1991: Desktop
- 1995: 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")

3

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

Metaphors!

- Mirror, Map, Sonnet
- C.V. or Multimedia Resume
- Test
- Story

- http://electronicportfolios.org/metaphors.html

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

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

Digital Preservation

- LPWS or DAL or "Digital Memex"
- Physical formats (CD, DVD, server space, other?)
- File formats
  - Text (ASCII TXT, PDF) [LOC]
  - Audio & Video?
- Interoperability
  - IMS, XML, RDF, RSS, FOAF, ???
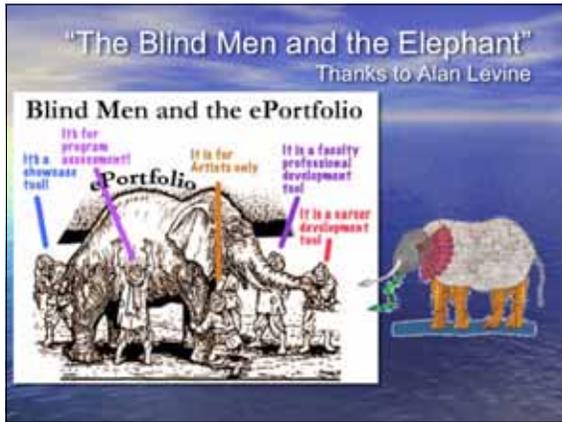
Process

Electronic

Portfolios

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)

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

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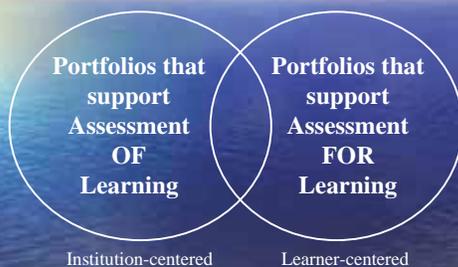
Assessment for Learning

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.

What is your portfolio philosophy?

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

or

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

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

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**

Reflection

The "Heart and Soul" of a Portfolio
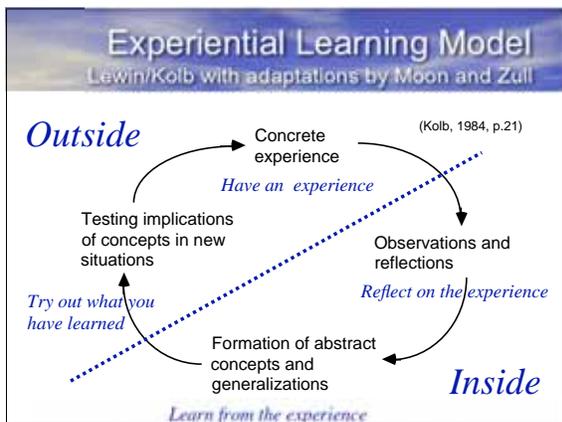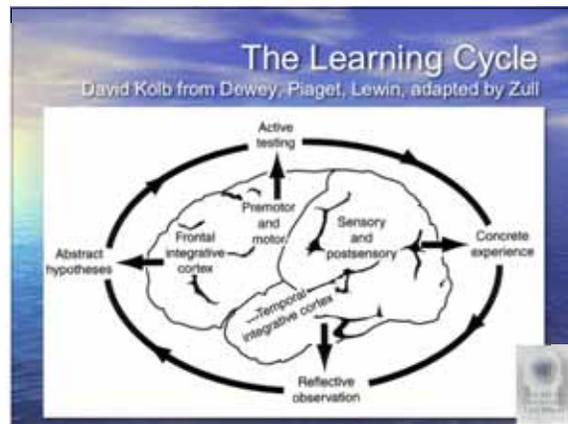

Reflective Questions that tie the Past to the Future

What? → Past → What have I collected about my life/work/learning? *(my artifacts)*

So What? → Present → What do those artifacts show about what I have learned? *(my current reflections on my knowledge, skills and dispositions)*

Now What? → Future → What direction do I want to take in the future? *(my future learning goals)*
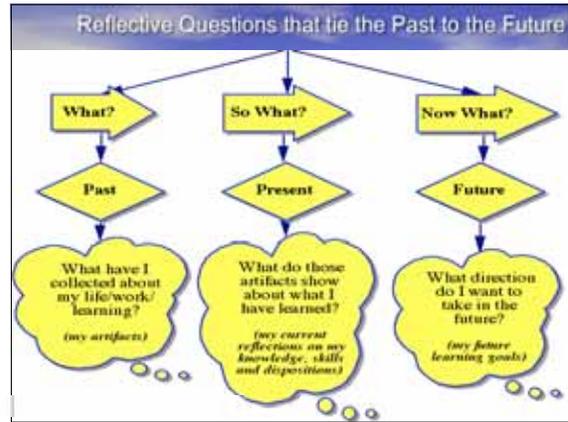
Resource on Biology of Learning

THE ART OF CHANGING THE BRAIN

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

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

Active testing

Premotor and motor

Frontal integrative cortex

Sensory and postsensory

Concrete experience

Abstract hypotheses

Temporal integrative cortex

Reflective observation

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

(Kolb, 1984, p.21)

Outside

Concrete experience
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

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)

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…

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 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

Storytelling as a Theory of Learning

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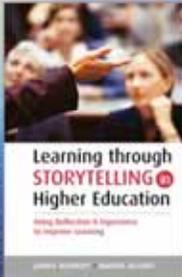
- Two educators from New Zealand - staff developer and health educator
- Relates storytelling to literature on learning and reflection
- Provides stages of storytelling related to reflection

Student Engagement

Reflection for Deep Learning

Digital Storytelling

Technology Integration

Project-Based Learning

Digital Storytelling is BOTH...

HIGH TECH

and

HIGH TOUCH

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)

Purposes of Digital Stories in ePortfolios

- Introduction
  - Voice & Personality
- Reflection
- Transition
- Benchmarking Development
- Memoir
- Biography
- Legacy
- Collaboration
- Decision
- Documentary

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.

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- http://electronicportfolios.org/