

ePortfolios: Digital Stories of Deep Learning

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

Themes

- 21st Century Learning
- Electronic Portfolios
- Assessment for Learning
- Reflection
- Storytelling
- Digital Storytelling
- Examples

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



The Partnership for 21st Century Skills

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

6 Key Elements of 21st Century Learning

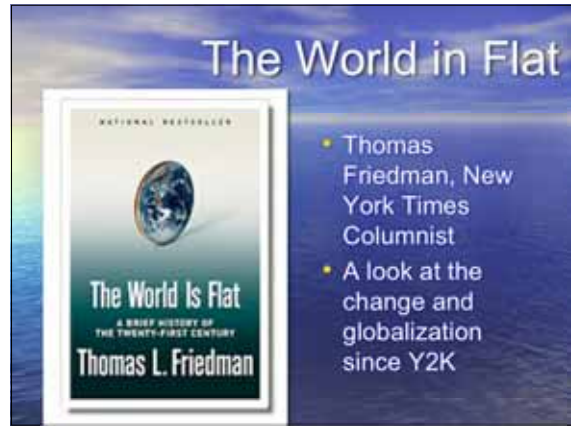
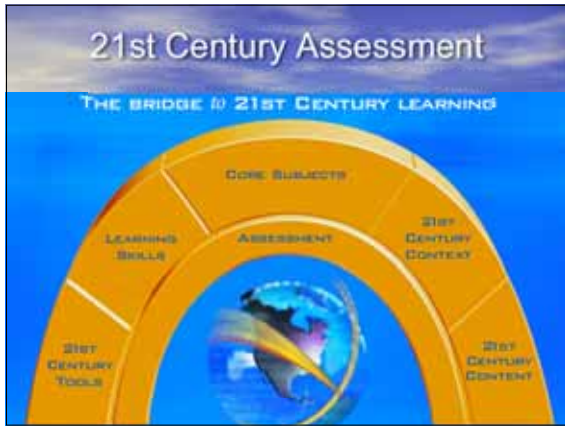
1. Emphasize core subjects
2. Emphasize learning skills
3. Use 21st century tools to develop learning skills
4. Teach and learn in a 21st century context
5. Teach and learn 21st century content
6. Use 21st century assessments that measure 21st century skills

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

21st Century Learning Skills

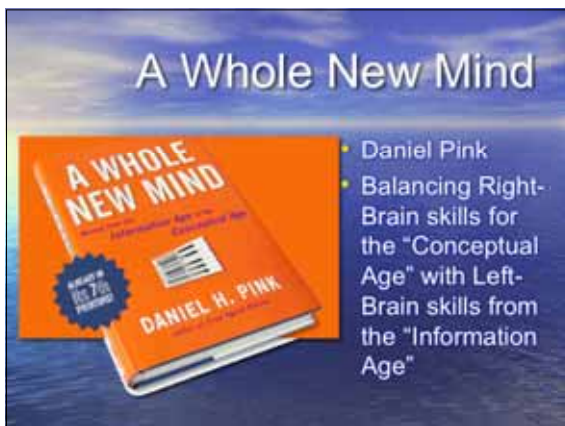
- Information and Media Literacy Skills
- Communication Skills
- Critical Thinking and Systems Thinking
- Problem Identification, Formulation and Solution
- Creativity and Intellectual Curiosity
- Interpersonal and Collaborative Skills
- Self-Direction
- Accountability and Adaptability
- Social Responsibility

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



- ## 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 |

- ## The Quiet Crisis
- Need young people to constantly innovate new products, services = middle class
 - Critical shortage of scientists & engineers capable of innovation - the "perfect storm"
 - Dirty little secrets - gaps threaten our standard of living
 1. The Numbers Gap - science/engineering/IT
8x more engineering degrees in Asia than US
 2. The Ambition Gap - motivation & work ethic - goals
 3. The Education Gap - declining # K-12 students prepared for math, science, technology hi-ed



- ## 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.

Digital Tools for Reflection

Electronic Portfolios and Engagement

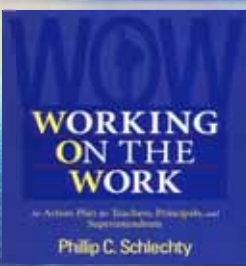
A tale of two paper portfolios

- High School graduates in Washington state (and Utah, too!)
- High school freshman in NY (Jim Mahoney, *Power and Portfolios* published by Heinemann) 

What's the difference between those two stories?

- What are the variables that produce these extremes in attitudes toward ownership of portfolios?

Schlechty Center's Theory of Engagement

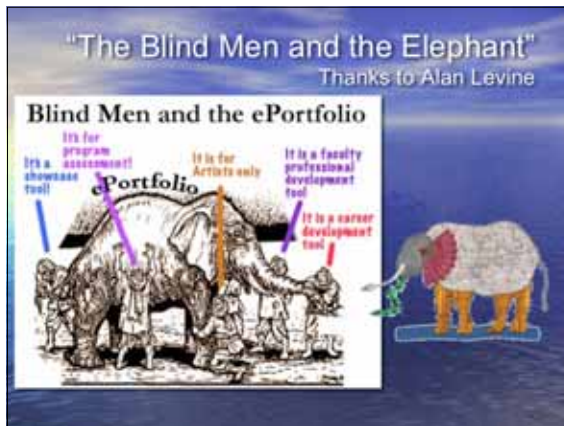


1. Engagement
 - Learn at high levels/ profound grasp
 - Retain what they learn
 - Transfer to new contexts
2. Strategic Compliance
3. Ritual Compliance
4. Retreatism
5. Rebellion

Flow

- by Mihaly Csikszentmihalyi
- Based on more than 30 years of research
- Connections between satisfaction and daily activities
- A flow state ensues when one is engaged in self-controlled, goal-related, meaningful actions.





Eskimos and "Snow"

- Eskimos having 49 different words for "snow"
- Those who don't live in that environment tend to see it all as the same cold white stuff
- Same goes with "portfolio"

Metaphors!

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

Constructed Meaning

"The portfolio is a **laboratory** where students **construct meaning** from their accumulated experience."
(Paulson & Paulson, 1991, p.5)

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)

Portfolios tell a Story

"A portfolio is opinion backed by fact... Students prove what they know with samples of their work."
(Paulson & Paulson, 1991, p.2)

Purpose & Goals for the portfolio (Determine Content)

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

A few thoughts about Assessment -- What Type?

- Assessment OF Learning? or
- Assessment FOR Learning?

Purposes for Assessment

- Assessment OF Learning = Summative Assessment
- Assessment FOR Learning = Formative (Classroom-based) Assessment
- Past-to-Present
- Present-to-Future

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

Overview

	Assessment OF Learning	Assessment FOR Learning
Reason	Check Status	Improve Learning
To Inform	Others about students	Students about themselves
Focus	Standards	Enabling targets

Rick Stiggins
Assessment Training Institute

Rick Stiggins
Assessment Training Institute

	Assessment OF Learning	Assessment FOR Learning
Example	High stakes external assessments, Classroom tests used for grading	Assessments that diagnose needs or help students see themselves improve
Place in time	An event after learning	A process during learning

The essential question

- Can we use assessment to help our students want to learn?

Rick Stiggins
Assessment Training Institute

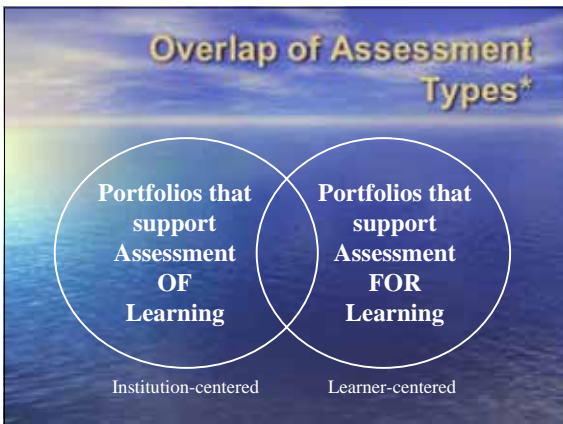
- ## Assessment FOR Learning Strategies
1. Student-friendly targets from the beginning (no surprises, no excuses)
 2. Models of strong and weak work
 3. Continuous descriptive feedback
 4. Teach self-assessment and goal setting
 5. Teach one facet of quality at a time
 6. Teach focused revision (how to improve their work one facet at a time)
 7. Teach self-reflection to track growth
- Rick Stiggins
Assessment Training Institute

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 |



- ### Portfolio Processes
- Traditional + Technology**
- Collecting
 - Archiving
 - Selecting
 - Linking/Thinking
 - Reflecting
 - Storytelling
 - Directing
 - Collaborating
 - Celebrating
 - Publishing

Reflection

The "Heart and Soul"
of a Portfolio

- ### What is Reflection?
- Major theoretical roots:
 - Dewey
 - Habermas
 - Kolb
 - Schön
 - Dewey: "We do not learn from experience... we learn from reflecting on experience."

Jennifer Moon on Reflection

1999

2004

- Reflection is a form of mental processing – like all forms 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).


Resource on Biology of Learning

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

The Learning Cycle

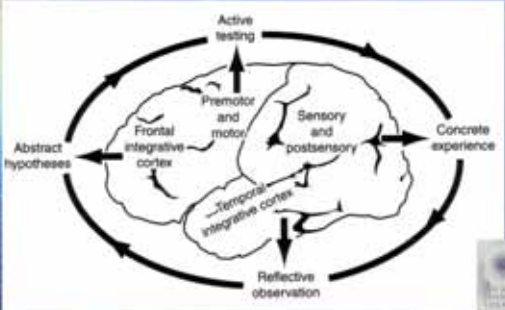

David Kolb from Dewey, Piaget, Lewin

- **Deep Learning** (learning for real comprehension) comes from a sequence of
 - Experience
 - Reflection
 - Abstraction
 - Active testing



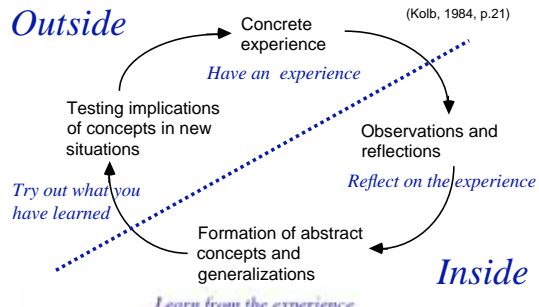
The Learning Cycle

David Kolb from Dewey, Piaget, Lewin, adapted by Zull

Experiential Learning Model


Lewin/Kolb with adaptations by Moon and Zull



Reflection and Emotion

James Zull

- Hard to make meaning of experience unless it engages our emotions. (p.166)
- Reflection: a search for connections
- Sleep researchers: dreams help us make connections... we dream about what matters most. (p.168)
- For comprehension we need time. (p.168)



Moon on Reflection

- One of the defining characteristics of surface learning is that it does not involve reflection (p.123)
- Conditions for Reflection:
 - Time and space
 - Good facilitator
 - Curricular or institutional environment
 - Emotionally supportive environment



How might an e-portfolio support development of personal knowledge, reflection, and metacognition?



Norman Jackson
Higher Education Academy, U.K.

Digital Stories

- Chevak



Linked to...



- Online Portfolios
- Digital Storytelling
- Blogs & Wikis
- Games

Digital Tools for Reflection

Digital Storytelling and Engagement

How can you leverage the technologies students own?

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

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 Storytelling Process

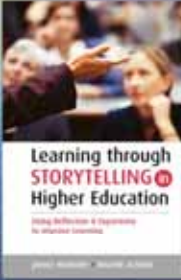
- Learners create a 2-4 minute digital video clip
 - First person narrative [begins with a written script ~ 400 words]
 - Told in their own voice [record script]
 - Illustrated (mostly) by still images
 - Music track to add emotional tone

Anchorage 8th grade

"Free" Digital Storytelling Tools
<http://electronicportfolios.org/digistory/tools.html>

<p>Macintosh</p> <ul style="list-style-type: none"> • Audio recording Audacity • Image editing iPhoto, GIMP • Video editing iMovie 	<p>Windows</p> <ul style="list-style-type: none"> • Audio recording Audacity • Image editing GIMP • Video editing MovieMaker2
--	---

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


Storytelling = Narrative Inquiry
Mattingly in Schön (1991)

- Aristotle: narrative – natural framework for representing world of action
- Everyday sense-making role of storytelling
- Stories reveal the way ideas look in action
- Narrative provides explanation



A Graduate Student's Letter to a Former Teacher

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



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

What's Your Story?

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

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

The REFLECT Initiative

reflect@taskstream.com
<http://electronicportfolios.org/reflect/>

A research project to assess the impact of electronic portfolios on student learning, motivation and engagement in secondary schools




Professional Development in The REFLECT Initiative

Philosophy & Pedagogy	Student-Centered Learning
-----------------------	---------------------------

- Teachers in Professional Learning Communities
- 21st Century Learning
- Assessment FOR Learning
- Electronic Portfolios
- Student Engagement
- Project-Based Learning
- Technology Integration
- Reflection for Deep Learning
- Digital Storytelling

Professional Learning Communities



- On Common Ground
- "The Power of Professional Learning Communities"
- Well-known authors in school reform

Digital Stories and e-Portfolios

- highly motivating project-based learning activity
- powerful artifacts in electronic portfolios
- the importance of reflection in e-portfolios
- tools for scaffolding reflection: blogging and digital storytelling
- overview of the literature on reflection and learning
- some new perspectives on storytelling as reflection on experience to improve learning (McDrury & Alterio)
- the role of reflection in brain-based learning (Zull)

My own story



- "One good example is worth 1000 theories" ->
- The issue of time and learning - reaching another transition and decision point in a long career, reflecting on the milestones in my life
- Play "choices"



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