

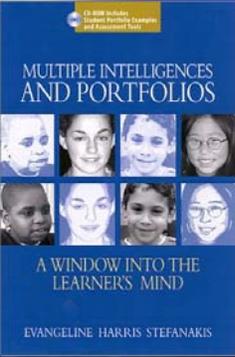
Supporting Reflection in Electronic Portfolios: Blogs, Wikis and Digital Storytelling

Dr. Helen Barrett
International Society for Technology in Education and
University of Alaska Anchorage

45 minutes

The ePortfolio as a Story of Deep Learning

Digital Storytelling as part of a Reflective Portfolio

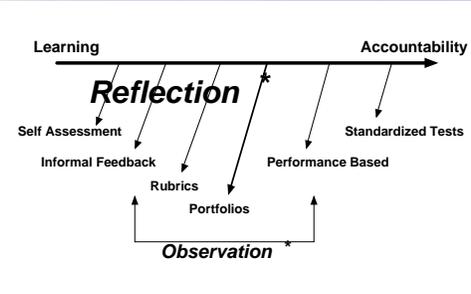


A Resource on K-12 Portfolios

- By Evangelina Harris Stefanakis
- Published by Heinemann
- Includes a CD-ROM with examples of student portfolios

Assessment for Learning Continuum - Enhanced

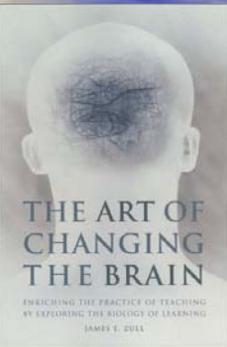
Stefanakis, Evangelina (2002) *Multiple Intelligences and Portfolios*. Portsmouth: Heinemann, p. 136



What is Reflection?

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

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

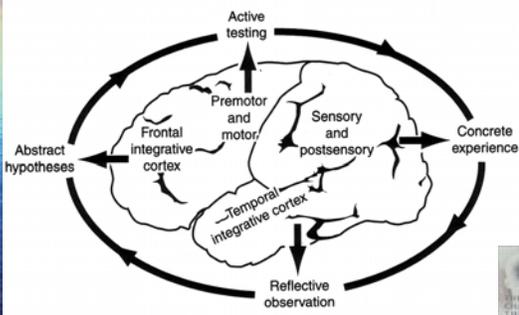
David Kolb from Dewey, Piaget, Lewin

- **Deep Learning** (learning for real comprehension) comes from a sequence of
 - Experience
 - Reflection
 - Abstraction
 - Active testing
- Zull: the learning cycle arises naturally from the structure of the brain (p.19)



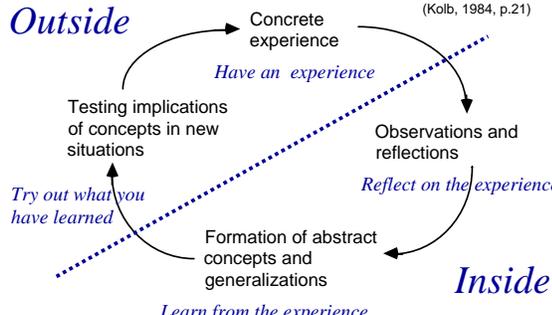
The Learning Cycle

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

- Even if we experience something that has happened to us before, it is hard to make meaning of it unless it engages our emotions. (p.166)
- Reflection is a search for connections. (p.167)
- Sleep researchers postulate that dreams help us make connections... We discover what is important to us, because we dream about what matters most. (p.168)
- For comprehension we need time. (p.168)



Reflection and Emotion

James Zull

- “Even if we were able to decrease our emphasis on speed and information and increase the possibilities for reflection, we still would have to give our students the kind of experience that would produce **dreams--experiences that engage their emotions.**” (p.168)
- “...our experiences must matter in our lives if we are to learn from them.” (p.168)
- “...it suggests how seriously we have to take emotion if we want to foster deep learning.” (p.169)



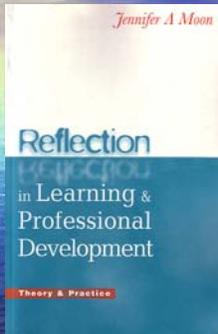
Stories and Learning

James Zull

- Roger Shank: importance of stories in learning
- Recalling and creating stories are part of learning
- Stories engage all parts of the brain
- Learning is deepest when it engages the most parts of the brain
- Teachers and students should:
 - Tell stories
 - Create stories
 - Repeat stories



Jennifer Moon's Definition



- 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)

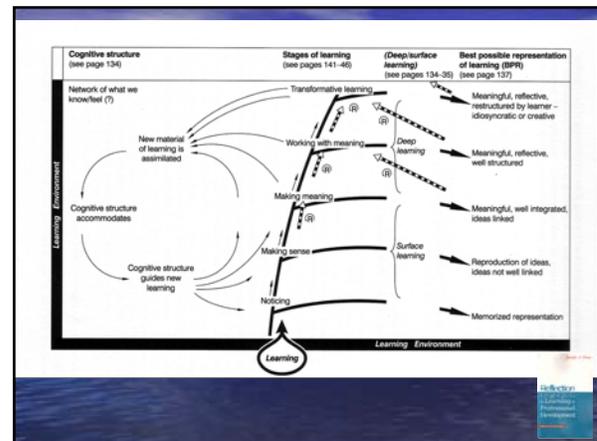
Moon on Reflection

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

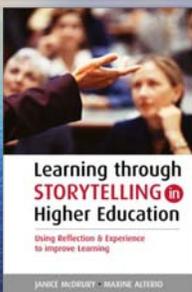
Moon's Qualities of Tasks that Encourage Reflection

- Ill-structured, 'messy' or real-life situations
- Asking the 'right' kinds of questions – no clear-cut answers
- Setting challenges can promote reflection
- Tasks that challenge learners to integrate new learning into previous learning
- Tasks that demand the ordering of thoughts
- Tasks that require evaluation

pp.175-6



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

Links between Learning and Storytelling

Map of Learning (Moon, 1999)	Learning through Storytelling (McDrury & Alterio, 2003)
• Noticing	• Story finding
• Making sense	• Story telling
• Making meaning	• Story expanding
• Working with meaning	• Story processing
• Transformative learning	• Story reconstructing

McDrury, J., Alterio, M. (2003) *Learning through Storytelling in Higher Education*. London: Kogan-Page, p.47

Reflective Process and Storytelling

- First stage: inner discomfort or surprise – “something” makes the experience memorable
- Second stage: events examined in detail – stories are shared, dialogue is formed
- Third stage: relates to outcomes – decision to change or gain knowledge through reflection

McDrury, J., Alterio, M. (2003) *Learning through Storytelling in Higher Education*. London: Kogan-Page, p.110-1

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
- Motivation for telling stories: to wrest meaning from experiences

Story = Unpretentious Narrative

Clandinin & Connelly in Schön (1991)

- A fundamental method of personal growth
- Reflection: preparation for the future
- Deliberation: past considerations

Storytelling as Reflection

(Schön, 1988)

“...for storytelling is the mode of description best suited to transformation in new situations of action.”

Storytelling as Reflection

(Schön, 1988)

“Stories are products of reflection, but we do not usually hold onto them long enough to make them objects of reflection in their own right.”

Storytelling as Reflection

(Schön, 1988)

“When we get into the habit of recording our stories, we can look at them again, attending to the meanings we build into them and attending, as well, to our strategies of narrative description.”

Constructed Meaning

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

Portfolio tells a Story

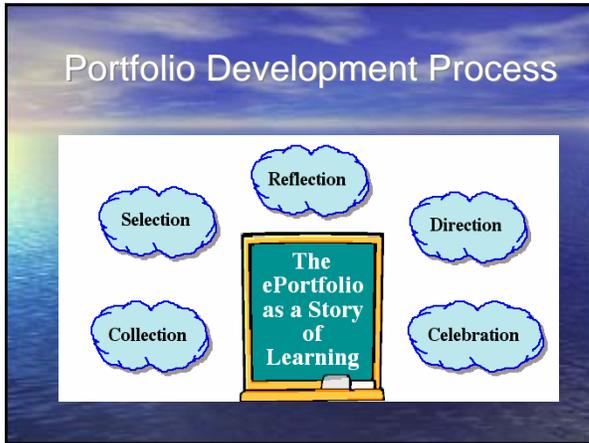
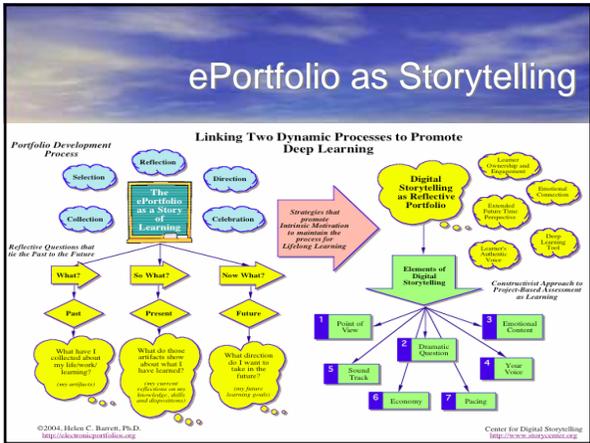
"A portfolio tells a story. It is the story of knowing. Knowing about things... Knowing oneself... Knowing an audience... Portfolios are students' own stories of what they know, why they believe they know it, and why others should be of the same opinion."
 (Paulson & Paulson, 1991, p.2)

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)

Linking Two Dynamic Processes to Promote Deep Learning

Portfolio Development Process
Digital Storytelling



Portfolio Processes

Traditional + Technology

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

Linked to...

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

Digital
Storytelling
Blogs &
Wikis
Games

Some concerns...

- Assessment for Learning
- Portfolios for Learning
- What about Motivation?

Components of Portfolio Development

- **Content**
- **Purpose**
- **Process**

Components of Portfolio Development

- **Content:**
evidence
(artifacts + reflections)

Components of Portfolio Development

- **Purpose:**
the reason for developing the portfolio – includes audience
 - Learning & professional development - Process
 - Assessment (of and for learning)
 - Showcase (Employment/Marketing)

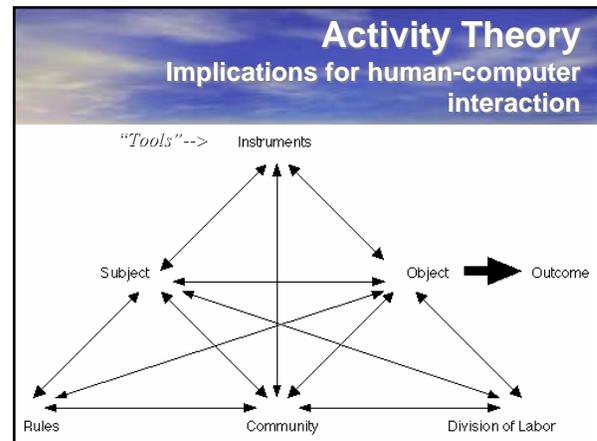
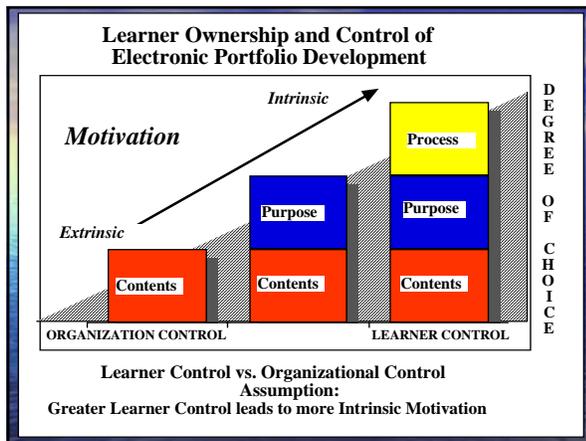
Components of Portfolio Development

• Process:

- tools used
- sequence of activities
- rules
- evaluation criteria (rubrics)
- collaboration/conversation

Developmental Levels of Portfolio Implementation

- **Extrinsic Motivation**
-institutional directed content, purpose & process – external locus of control
- **Mixed Motivation**
-learner ownership over one or two of the components
- **Intrinsic Motivation**
-learner ownership of content, purpose and process



Activity Theory

- **Subject** - the individual or group whose point of view is taken in the analysis of the activity
- **Object** (or objective) - the target of the activity
- **Instruments** - internal or external mediating artifacts which help to achieve the outcomes
- **Community** - one or more people who share the objective with the subject
- **Rules** - regulate actions and interactions within the activity system
- **Division of labor** - how tasks are divided horizontally between community members - any vertical division of power and status

Digital Tools for Reflection

Online Portfolios

Electronic Portfolio Development

Publishing environments:

Optical media (CD-R, DVD-R) or WWW

Authoring environments:

Common Tools or Customized Systems

Common Desktop Tools *with hyperlinks*

- Office - Word, Excel, Powerpoint
- Hypermedia authoring tools - HyperStudio
- Inspiration or Kidspiration (mind mapping)
- Adobe Acrobat
- HTML Editors - Front Page, Dreamweaver, Netscape/Mozilla Composer
- Multimedia Authoring
Macromedia Director & Flash, Ezedia

My evaluation study of online software, services, or strategies

- <http://electronicportfolios.org/myportfolio/versions.html>
- Under On-line Publications
- To date, recreating my new portfolio using **17 different software packages, services, or strategies**

Online Portfolio Tools

- Customized **Commercial Systems**
 - Higher Ed
 - General Hi-Ed: **nuVentive's iWebfolio**, ePortaro
 - Teacher Ed: **LiveText**, **TaskStream**, **FolioTek**, **McGraw-Hill's FolioLive**, Chalk & Wire
- Customized **ePortfolio Tools** developed **in-house**
 - **Maricopa CC, PLP (Vermont Institutes), MNSCU/AveNet**, Alverno DDP, Johns Hopkins, IUPUI Epsilon, UWashingon,,
- Open Source ePortfolio
 - **OSPI (rSmart/UMN)**, others in development

Online Portfolio Tool Characteristics

- **Custom-designed Electronic Portfolio Systems-** (A) system includes database to align artifacts to standards
- **Free Server Space**
- **Open Source Software**
- **Commercial Software** - primary market: Higher Ed, Teacher Ed, PK-12, Any
- **Content Management System (CMS)**
- **Web Log Software or Online Journals - "Blogs"**
- License agreement with - **individual or institution**
- Hosting - **Hosted**: resides on a centralized server; **Server**: software installed or data stored on own server space
- **Cost & Storage space** available

Conclusions

- Too early to judge
- Scales applied to each system
 - **"Trade-offs" - "Balance"**
 - Creativity
 - Ease of Use
 - Cost/Storage & ROI
 - Features
 - Flexibility/Customization Allowed
 - Integration with Assessment System
 - Transfer & technology skill development

"They each exhibit trade-offs between the flexibility inherent in an HTML-based tool with the relative ease-of-use but lack of creativity in a system built on a data-base."

Helping Students to Reflect

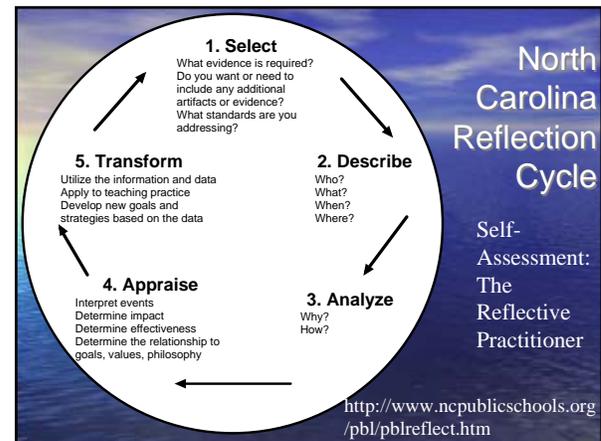
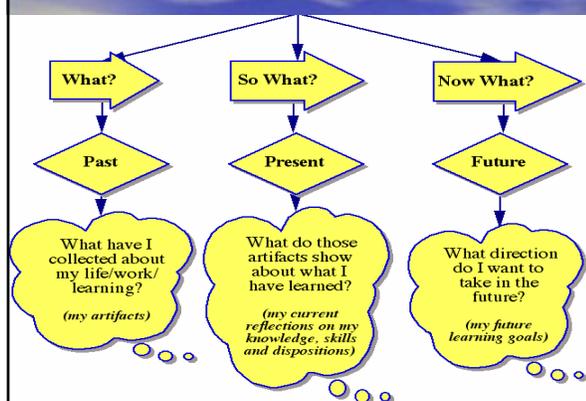
- Provide models and examples
- Begin with forms or prompts
- Move to journals/blogs
- Be careful that reflection in portfolios doesn't become an exercise in filling in the blanks on a web-based form.

Portfolios provide Encouragement for Reflection

1. ...provides both the discipline and the freedom of structure, allowing one to see one's own work. (Sonnet)
2. ...provides the opportunity to assess one's own strengths and weaknesses through examination of a collection of samples, as well as to get feedback on one's performance from others. (Mirror)
3. ...the process of self assessment leads one to setting goals for future development and professional growth. (Map)

(Mary Diez, 1994)

Reflective Questions that tie the Past to the Future



Writing a Reflection - 1

<http://www.ncpublicschools.org/pbl/pblreflect.htm>

1. **Select:** What evidence/artifacts have you included?
2. **Describe:** This step involves a description of the circumstances, situation or issues related to the evidence or artifact. Four "W" questions are usually addressed:
 - **Who** was involved?
 - **What** were the circumstances, concerns, or issues?
 - **When** did the event occur?
 - **Where** did the event occur?

Writing a Reflection - 2

<http://www.ncpublicschools.org/pbl/pblreflect.htm>

3. **Analyze:** "digging deeper."
 - "Why" of the evidence or artifact
 - "How" of its relationship to teaching practice
4. **Appraise:** *In the previous three steps, you have described and analyzed an experience, a piece of evidence, or an activity. The actual self-assessment occurs at this stage as you interpret the activity or evidence and evaluate its appropriateness and impact.*
5. **Transform:** This step holds the greatest opportunity for growth as you use the insights gained from reflection in improving and transforming your practice.

Digital Tools for Reflection

Blogs and Wikis

What is a blog?

- Abbreviation for “web log” which is an online journal organized in reverse chronological order...the most recent entry on top
- Emerging into the mainstream in the last 18 months
- Very popular with adolescent girls
- Free, open source and commercial tools available

Blogs* in Education

*Web logs=online journals



<http://www.weblogg-ed.com/>

What is a “wiki”

- Hawaiian term for “quick”
- A tool for collaborative writing
- Anyone who reads a wiki page can click the EDIT button and add or edit text
- Another “older” technology that is emerging into common use.

Digital Tools for Reflection

Digital Storytelling

Digital Storytelling Process

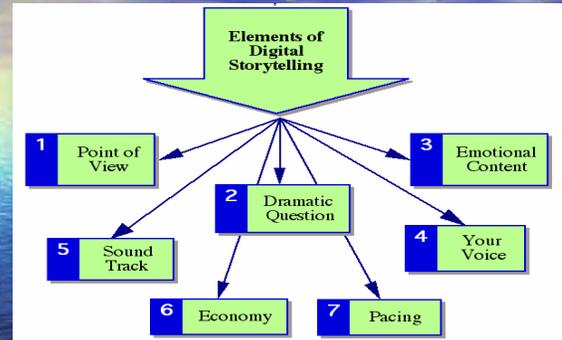
- Learners create a 2-4 minute digital video clip
 - First person narrative
 - Told in their own voice
 - Illustrated by (mostly) still images
 - Music track to add emotional tone

What is Digital Storytelling?

- Created by a student teacher in her first digital storytelling workshop
- Play video



Center for Digital Storytelling

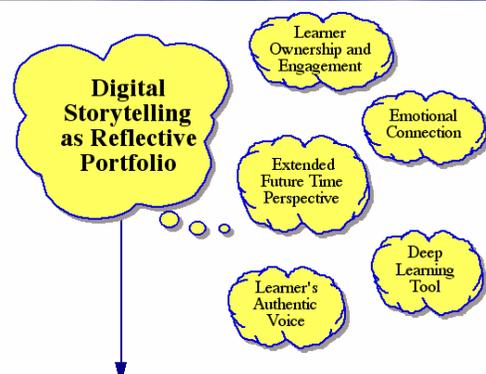


<http://www.storycenter.org>

Why include Digital Storytelling in ePortfolios?

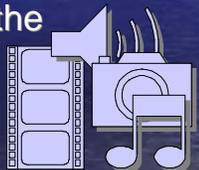
**Learner Motivation
and Affect
Brain Research on
Emotion in Learning**

Constructivist Approach to Project-Based "Assessment-as-Learning"



Learner Ownership and Engagement with Portfolio

- The tools should allow the learner to feel in control of the process, including the "look and feel" of the portfolio.



Deep Learning

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

Cambridge (2004)

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
- gives the feeling that the writer is talking directly to the reader/viewer

Digital Paper or Digital Story?

- If your e-portfolios are just digital paper (text and images on the screen) you are losing a wonderful opportunity to really tell your story **in your own voice**.
- With the capability to **add multimedia**, audio and video, we can truly create an **engaging environment** to document the **milestones** of our lives.

A Graduate Student's Letter to a Former Teacher

- Maybe you are a graduate student reflecting on what is drawing you into teaching (while displaying your photo portfolio)
- Play "Coming Full Circle"
- Or you are a teacher reflecting about teaching all of your students
- Play "Hakuin"



My own story

- ...or you are reaching another transition and decision point in a long career, reflecting on the milestones in your life
- Play "choices"



What's Your Story?

- We all have a story to add to our portfolios. These digital stories provide opportunities for a richness not possible in print.
- Some stories will represent the fresh innocence of youth, some will reflect the experiences of a rich life.
- The audiences might be worldwide, like the BBC Wales, but most likely the audiences will be small and intimate.

Digital Story as Legacy

- These digital stories aren't just for professional development
- They aren't just for skills-based portfolios
- They are our legacy for those who come after us...the stories of our lives we give to our children's grandchildren.

My Final Wish...

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

Presentation online and
stories are on my CD

- <http://electronicportfolios.org> and click **On-Line Publications**
“Electronic Portfolios as Digital Stories of Deep Learning”
- <http://electronicportfolios.org> and click **Recent Conference Presentations**
- My CD has examples of digital stories as well as hands-on activities to learn the process on Mac and Windows XP

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- <http://electronicportfolios.org/>