Digital Storytelling for Reflection and Deep Learning in ePortfolios
Dr. Helen Barrett
University of Alaska Anchorage (retired)
The REFLECT Initiative

Based on my online articles
- Electronic Portfolios as Digital Stories of Deep Learning
  - Emerging Digital Tools to Support Reflection in Learner-Centered Portfolios
- White Paper for TaskStream
- http://electronicportfolios.org/
  - Under Online Publications
  - Slides under Recent Conference Presentations

Themes
- Portfolios
- Assessment for Learning
- Reflection
- Storytelling
- Digital Storytelling
- Examples

The Bottom Line:
- Pedagogical and theoretical justification for integrating digital storytelling into ePortfolios
- Creating student-centered ePortfolios
- My goal: motivate & inspire you

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

Legacy from the Portfolio Literature

- Much to learn from the literature on paper-based portfolios
- As adult learners, we have much to learn from how children approach portfolios
- “Everything I know about portfolios was confirmed working with a kindergartener”

From the Preface (1)

“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)

“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.”

The Power of Portfolios

What children can teach us about learning and assessment

Author: Elizabeth Hebert
Publisher: Jossey-Bass

Picture courtesy of Amazon.com

From the Preface (1)

“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)

“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)

“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.

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.

The collection must include:
- student participation in selecting contents
- the criteria for selection
- the criteria for judging merit
- evidence of student self-reflection

The power of portfolios (to support deep learning) is personal.

“The Blind Men and the Elephant”

Thanks to Alan Levine

Blind Men and the ePortfolio

Portfolios

It is for program assessment.
It is for student writing.
It is for faculty professional development.
It is a career development tool.

(Northwest Evaluation Association, 1990)
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
  - Assessment
  - Marketing/Showcase
Learning Portfolios

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

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

Reflection
Learning Portfolio
Documentation
Collaboration

Learning Portfolios

- Support reflection which is central to learning
  - "Folio Thinking"
- Reflection:
  - 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

Think about the differences between:

- Learning Portfolio and Portfolio Learning
- Assessment Portfolio and Portfolio Assessment
- Portfolio = Concept, Product, and Process

A few thoughts about Assessment -- What Type?

- Assessment OF Learning? or
- Assessment FOR Learning?
Purposes for Assessment

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

Overlap of Assessment Types*

- Portfolios that support Assessment FOR Learning
- Portfolios that support Assessment OF Learning

What is your portfolio philosophy?

- A standardized checklist of skills? (Positivist)
- A reflective story of deep learning? (Constructivist)

Portfolio Differences

- Assessment OF Learning
  - Purpose prescribed
  - Artifacts mandated - scoring for external use
  - Organized by teacher
  - Summative (Past to present)
  - Institution-centered
  - Requires extrinsic motivation

- Assessment FOR Learning
  - Purpose negotiated
  - Artifacts chosen - feedback to learner
  - Organized by learner
  - Formative (Present to future)
  - Student-centered
  - Intrinsically motivating
A Resource on K-12 Portfolios
• By Evangeline Harris Stefanakis
• Published by Heinemann
• Includes a CD-ROM with examples of student portfolios

Assessment for Learning Continuum - Enhanced

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.”

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

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, adapted by Zull

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

Concrete experience
- Observations and reflections
  - Formation of abstract concepts and generalizations
- Testing implications of concepts in new situations
- Try out what you have learned

Outside

-Kolb, 1984, p.21

Inside

Learn from the experience

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)

Reflection and Emotion
James Zull

- Decrease our emphasis on speed and information
- Increase the possibilities for reflection
- 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)

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

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”
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

Maxine Alterio, Helen Barrett, Janice McDrury
December 9, 2004 - Dunedin, New Zealand
Links between Learning and Storytelling

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Noticing</td>
<td>Story finding</td>
</tr>
<tr>
<td>Making sense</td>
<td>Story telling</td>
</tr>
<tr>
<td>Making meaning</td>
<td>Story expanding</td>
</tr>
<tr>
<td>Working with meaning</td>
<td>Story processing</td>
</tr>
<tr>
<td>Transformative learning</td>
<td>Story reconstructing</td>
</tr>
</tbody>
</table>

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

Storytelling = Narrative Inquiry

- 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

Story = Unpretentious Narrative

- 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.”

Linking Two Dynamic Processes to Promote Deep Learning

Portfolio Development Process
Digital Storytelling

Portfolio Development Process

Portfolio Processes

Traditional + Technology

- Collecting
- Selecting
- Reflecting
- Directing
- Celebrating

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

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)

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

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

Learner Ownership and Control of Electronic Portfolio Development

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Intrinsic</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic</td>
<td>Purpose</td>
<td>Purpose</td>
</tr>
<tr>
<td>Contents</td>
<td>Purpose</td>
<td>Purpose</td>
</tr>
<tr>
<td>Contents</td>
<td>Purpose</td>
<td>Purpose</td>
</tr>
</tbody>
</table>

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

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 or streaming video
- **Podcasting** = audio-only digital stories and blogs
Digital Tools for Reflection

Online Portfolios

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

Open Source & Free Online Portfolio Tools I Tried

Open Source
• Mozilla Composer
• Plone (CMS)
• OSPI 1.5
• (to come) Elgg

Free Tools
• GeoCities
• Tripod
• Maricopa CC
• eFolio Minnesota

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.

“Blog” #1 word of 2004

• Merriam-Webster: top 10 "words of the year" list
• immensely popular "blog" taking the number one place

"Blog" #1 word of 2004

"Blog" #1 word of 2004

* Internet Scout Report, December 3, 2004

North Carolina Reflection Cycle

Self-Assessment: The Reflective Practitioner

1. Select
• What evidence is required?
• Do you want or need to include any additional artifacts or evidence?
• What standards are you addressing?

2. Describe
• What?
• Where?

3. Analyze
• Why?

4. Appraise
• Interpret events
• Determine impact
• Determine effectiveness
• Determine the relationship to goals, values, philosophy

5. Transform
• Utilize the information and data
• Apply to teaching practice
• Develop new goals and strategies based on the data

http://www.ncpublicschools.org/pbl/pblreflect.htm
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)

Digital Tools for Reflection

Digital Storytelling

- 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

“Free” Digital Storytelling Tools

Digital Stories

- Victoria: K, 1, 2
- Naya: 7th

Family Involvement
Digital Storytelling is BOTH...
HIGH TECH
and
HIGH TOUCH

Why include Digital Storytelling in ePortfolios?

Learner Motivation and Affect
Brain Research on Emotion in Learning

Deep Learning
• involves reflection,
• is developmental,
• is integrative,
• is self-directive, and
• is lifelong


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

Center for Digital Storytelling
http://www.storycenter.org

Constructivist Approach to Project-Based “Assessment-as-Learning”
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

More Digital Stories

• Legacy
  “Cradle to Grave”
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

A high school student inquiry

I am a student in high school. Why is it mandatory for me to make a proficient on my portfolio for me to graduate? I have all of my credits to graduate, but if I make lower than proficient I don’t get to graduate.

How would you answer this student?
Read my complete answer in my blog: http://electronicportfolios.org/blog

My final advice to that student:

Remember, you are telling us a story, and not just any story. Your portfolio is meant to be your story of your life over the last four years as well as the story of where your life might be going during the next four years: tell it with pride!

(adapted from the Mead School District’s DRAFT Guidelines for Culminating Project)

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)

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

Researching Electronic Portfolios Learning Engagement Collaboration Technology
The REFLECT Initiative

Vision ... in a nutshell:

To provide teachers with the professional development and students with the tools:
• to tell their stories with pride!
• to put heart and soul and voice into their portfolios!

Professional Development in The REFLECT Initiative

Philosophy & Pedagogy
• Teachers in Professional Learning Communities
• 21st Century Learning
• Assessment FOR Learning
• Electronic Portfolios

Student-Centered Learning
• Student Engagement
• Project-Based Learning
• Technology Integration
• Reflection for Deep Learning
• Digital Storytelling

Recommended Reading

My Website and my CD

A brief look at the tools
More in-depth tutorials and examples
DVD coming soon

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@mac.com
• http://electronicportfolios.org/