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

ULearn05 Themes

- **Power** - The power to challenge existing beliefs, expectations and professional practices
- **Passion** - The passion to turn schools into inclusive learning communities
- **Promise** - The promise to use relevant learning data to make sound professional decisions
- **Practice** - Integrating ICT into effective teaching practice

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The Bottom Line:

- Pedagogical and theoretical justification for integrating digital storytelling into ePortfolios
- Creating student-centered ePortfolios
- Ian's goal: irritate you
- My goal: motivate & inspire you
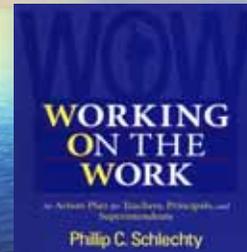

A tale of two paper portfolios

- 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

WOW

WORKING ON THE WORK

An Action Plan for Teachers, Principals, and Superintendents

Phillip C. Schlechty

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
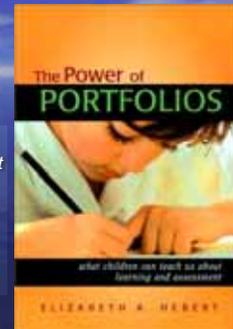
"Everything I know about portfolios was confirmed working with a kindergartener"

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
what children can teach us about learning and assessment
ELIZABETH A. HEBERT

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.

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)
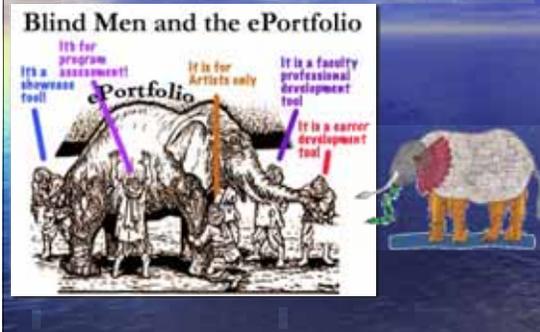
What is a Portfolio in Education? (2)

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)

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

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*

Reflection

Learning Portfolio

Documentation   Collaboration

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

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

More later!

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

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.

Overlap of Assessment Types*

Portfolios that support Assessment OF Learning

Portfolios that support Assessment FOR Learning

Institution-centered   Learner-centered

What is your portfolio philosophy?

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

or

- 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)
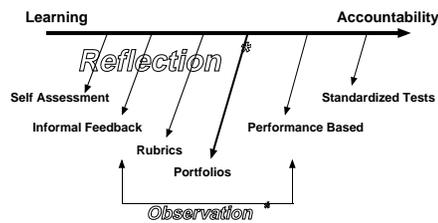- Student-centered
- Intrinsically motivating
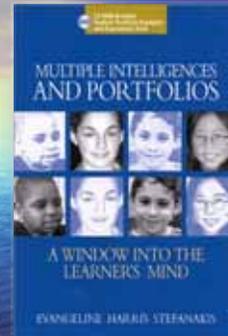
A Resource on K-12 Portfolios

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

MULTIPLE INTELLIGENCES AND PORTFOLIOS

A WINDOW INTO THE LEARNER'S MIND

EVANGELINE HARRIS STEFANAKIS

Assessment for Learning Continuum - Enhanced

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

Learning ——————————→ Accountability

Reflection

Self Assessment   Standardized Tests

Informal Feedback   Performance Based

Rubrics

Portfolios

Observation

Reflection

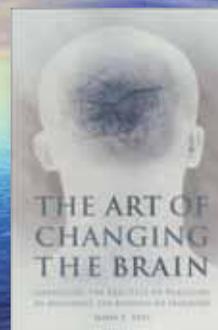## The "Heart and Soul" of a Portfolio

What is Reflection?

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

Resource on Biology of Learning

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

THE ART OF CHANGING THE BRAIN

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

Outside

Concrete experience

(Kolb, 1984, p.21)

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

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

Jennifer A Moon

Reflection in **Learning & Professional Development**

Theory & Practice
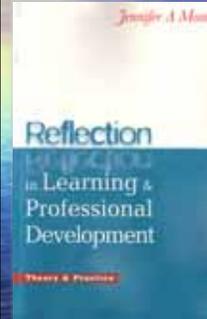
- Reflection is a form of mental processing – like a form of thinking – that we use to fulfill a purpose or to achieve some anticipated outcome. It is applied to relatively complicated or unstructured ideas for which there is not an obvious solution and is largely based on the further processing of knowledge 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
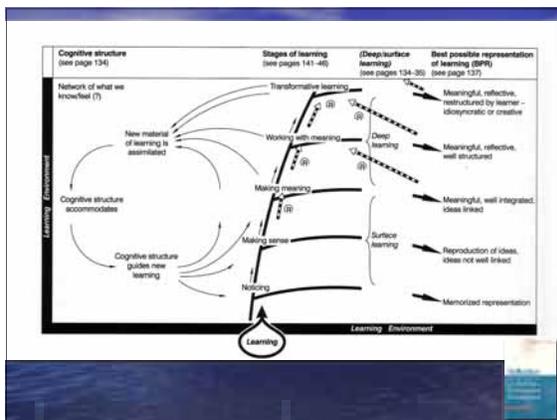
Storytelling as a Theory of Learning

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

Maxine Alterio, Helen Barrett, Janice McDrury
December 9, 2004 - Dunedin, New Zealand

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

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."

10

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."
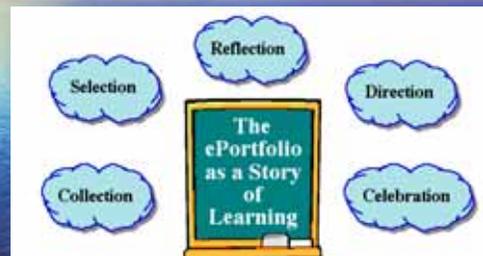
Storytelling as Reflection
(Schön, 1988)

"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	• Archiving
• Selecting	• Linking/Thinking
• Reflecting	• Storytelling
• Directing	• Collaborating
• Celebrating	• Publishing

Some concerns…

• **Assessment <u>for</u> Learning**

• **Portfolios <u>for</u> Learning**

• **What about Motivation?**

Components of Portfolio Development

- **Content**
- **Purpose**
- **Process**
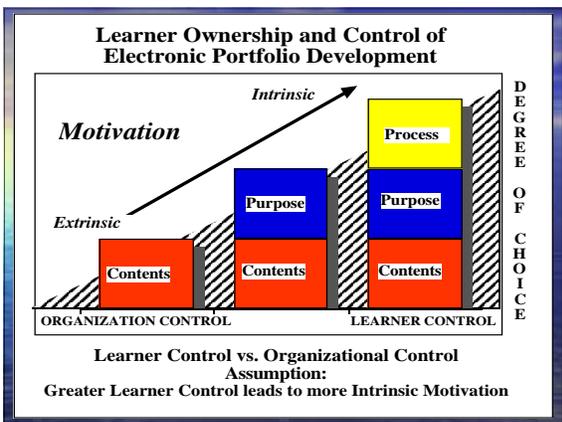
Components of Portfolio Development

- **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

Learner Ownership and Control of Electronic Portfolio Development

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

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 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

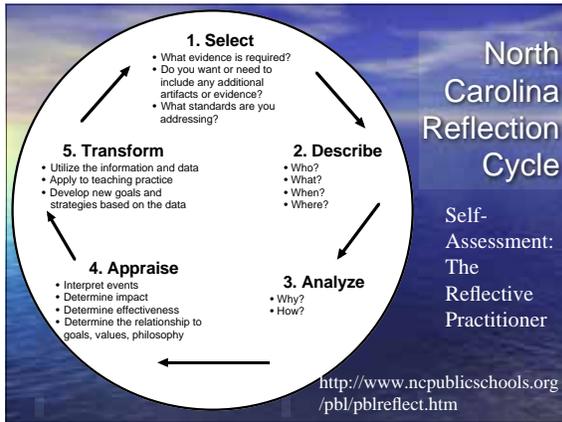## Helping Students to Reflect

- 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

* Internet Scout Report, December 3, 2004

North Carolina Reflection Cycle

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

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

2. Describe
- Who?
- What?
- When?
- Where?

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

3. Analyze
- Why?
- How?

Self-Assessment: The Reflective Practitioner

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

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

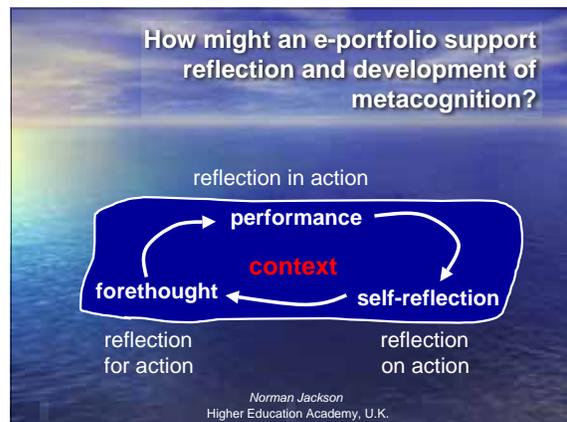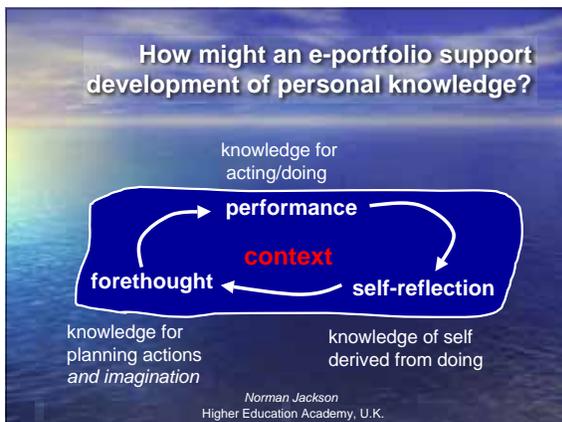http://www.ncpublicschools.org/pbl/pblreflect.htm

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**.

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)

How might an e-portfolio support development of personal knowledge?

knowledge for acting/doing

performance

context

forethought → self-reflection

knowledge for planning actions *and imagination*

knowledge of self derived from doing

Norman Jackson
Higher Education Academy, U.K.

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

reflection in action

performance

context

forethought → self-reflection

reflection for action

reflection on action

Norman Jackson
Higher Education Academy, U.K.

Digital Tools for Reflection

Digital Storytelling

Digital Storytelling Process

- **Learners create a 2-4 minute digital video clip**
  Anchorage
  8th grade
  – 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
http://electronicportfolios.org/digistory/tools.html

Macintosh
- *Audio recording* **Audacity**
- *Image editing* **iPhoto, GIMP**
- *Video editing* **iMovie**

Windows
- *Audio recording* **Audacity**
- *Image editing* **GIMP**
- *Video editing* **MovieMaker2**

Digital Stories

- Victoria: K, 1, 2

- Naya: 7th

Family Involvement

Digital Storytelling is BOTH…

HIGH TECH
and
HIGH TOUCH

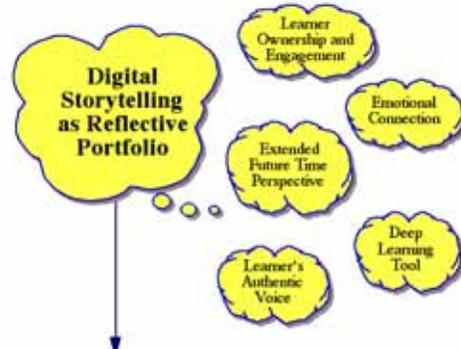
Center for Digital Storytelling

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"

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

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
- Jonathon

"Cradle to Grave"

From a Teacher Educator in Florida

- Each of my students this semester produced two digital stories, one focusing on their philosophy of teaching, and the other dealing with their field experience. We used PhotoStory 3 because it was a free Microsoft Download. I was most impressed with their efforts and they have told me it was a most meaningful activity.

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 manditory 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)

My Website and my CD

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

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
and **F**olios
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!

What's your digital story?

ULearn05 Themes: ePortfolios + Digital Storytelling

- Power
- Passion
- Promise
- Practice
- Empowerment
- Emotion
- Engagement
- Effectiveness

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"

The World Is Flat
Thomas L. Friedman

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/