

## What is your e-Portfolio? a High-Stakes Test or a Story of Deep Learning?

**Dr. Helen Barrett**

University of Alaska Anchorage  
The REFLECT Initiative

1

## 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

2

## 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)

3

## What's the difference between those two stories?

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

4

## 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)

5

## 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)

6

## Purpose & Goals for the portfolio (Determine Content)

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

7

Think about the differences  
between:

- Learning Portfolio *and* Portfolio Learning
- Assessment Portfolio *and* Portfolio Assessment
- One is more **Product**, the other is more **Process**

8

## Learning Portfolios

- *“know thyself” = a lifetime of investigation*
- *self-knowledge as outcome of learning*



9

## Learning Portfolios

- Support reflection which is central to learning
- Reflections
  - 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

10

## Showcase Portfolios

- Marketing
- Employment
- Tell your story
- A primary motivator for many portfolio developers

11

## Assessment Portfolios

- A major movement in Teacher Education in U.S.
  - A major new commercial market
  - A primary motivator for organizations
- More later!

12

## A few thoughts about Assessment -- What Type?

- Assessment OF Learning? or
- Assessment FOR Learning?

13

[www.qca.org.uk](http://www.qca.org.uk)

ages 3-14

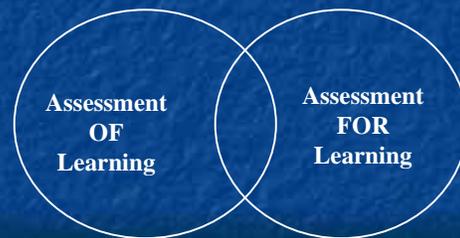


## Principles of Assessment FOR Learning

- **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.

15

## Overlap of Assessment Types\*



\*Alberta Assessment Consortium 16

## Portfolios used for Assessment OF Learning

- Purpose of portfolio prescribed by institution
- Artifacts mandated by institution to determine outcomes of instruction
- Portfolio usually developed at the end of a class, term or program - time limited
- Portfolio and/or artifacts usually "scored" based on a rubric and quantitative data is collected for external audiences
- Portfolio is usually structured around a set of outcomes, goals or standards
- Sometimes used to make high stakes decisions
- Summative - what has been learned to date? (Past to present)
- Requires Extrinsic motivation
- Audience: external - little choice

17

## Portfolios that support Assessment FOR Learning

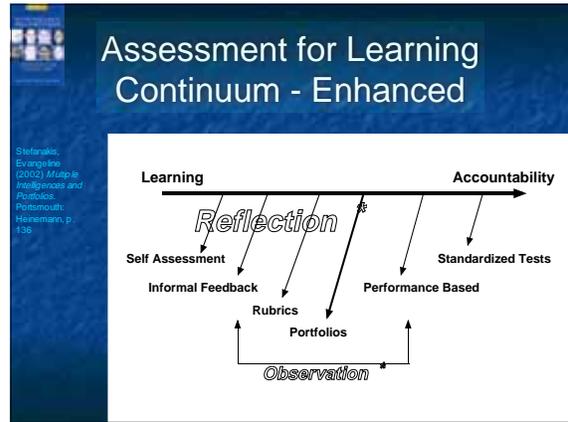
- Purpose of portfolio agreed upon with learner
- Artifacts selected by learner to tell the story of their learning
- Portfolio maintained on an ongoing basis throughout the class, term or program - time flexible
- Portfolio and artifacts reviewed with learner and used to provide feedback to improve learning
- Portfolio organization is determined by learner or negotiated with mentor/advisor/teacher
- Rarely used for high stakes decisions
- Formative - what are the learning needs in the future? (Present to future)
- Fosters Intrinsic motivation - engages the learner
- Audience: learner, family, friends - learner can choose

18

### A Resource on K-12 Portfolios

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

19



### Which approach should you take?

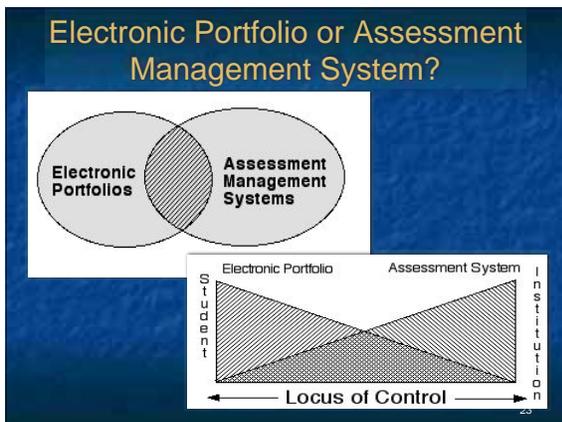
- Are you looking for an **electronic portfolio...**
- Or an **assessment management system?**
- What's the difference? Along a Continuum

21

### Electronic Portfolio or Assessment Management System?

Electronic Portfolio	Assessment Management System
Multiple purposes; Learning, Assessment, Employment	Single purpose: Formative and Summative Assessment
Data structure varies with tools used to create the portfolio; common data formats (converted to HTML, PDF)	Data structure most often uses a relational database to record, report data
Primary type of data: qualitative	Primary type of data: qualitative and quantitative
Data storage in multiple options: CD-ROM, videotape, DVD, WWW server, LAN	Data storage primarily on LAN or on secure WWW server
Visual design and hyperlinks often under control of portfolio developer	Visual design and hyperlinks most often controlled by database structure
<b>Learner</b> choice of artifacts	<b>Institutional</b> choice of artifacts
Learner-Centered	Institution-Centered

22



### Contrasting Paradigms of Portfolios

- Positivism**
- Constructivism**

F. Leon Paulson & Pearl Paulson (1994) "Assessing Portfolios Using the Constructivist Paradigm" in Fogarty, R. (ed.) (1996) *Student Portfolios*. Palatine: IRI Skylight Training & Publishing

24

## Tension between two approaches

“The two paradigms produce portfolio activities that are entirely different.”

“The positivist approach puts a premium on the selection of items that reflect **outside standards and interests.**”

“The constructivist approach puts a premium on the selection of items that reflect learning **from the student’s perspective.**”

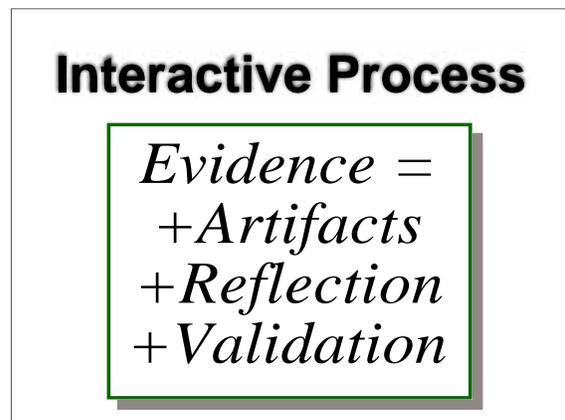
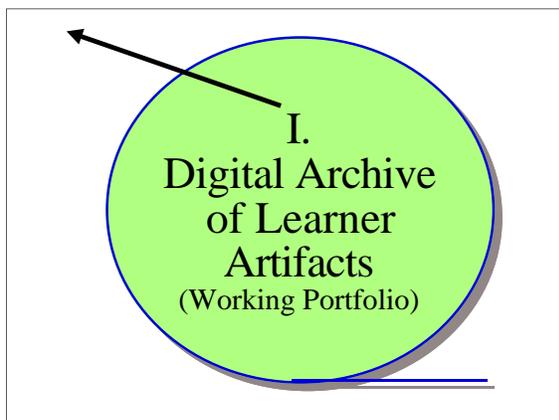
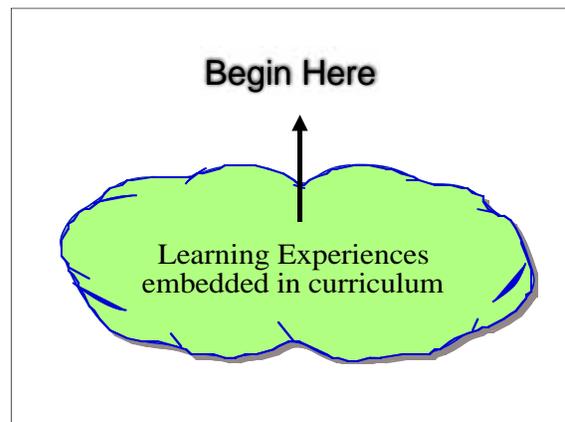
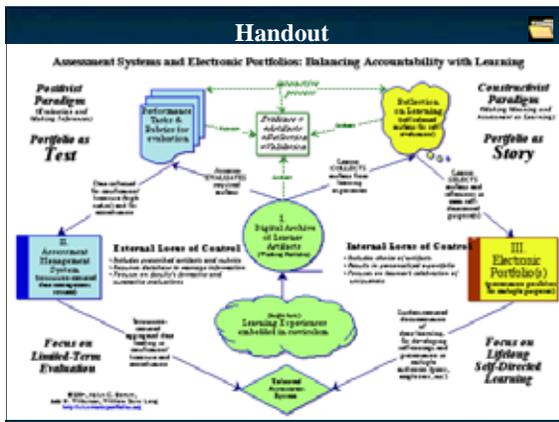
F. Leon Paulson & Pearl Paulson (1994)  
 “Assessing Portfolios Using the Constructivist Paradigm”  
 in Fogarty, R. (ed.) (1996) *Student Portfolios*.  
 Palatine: IRI Skylight Training & Publishing

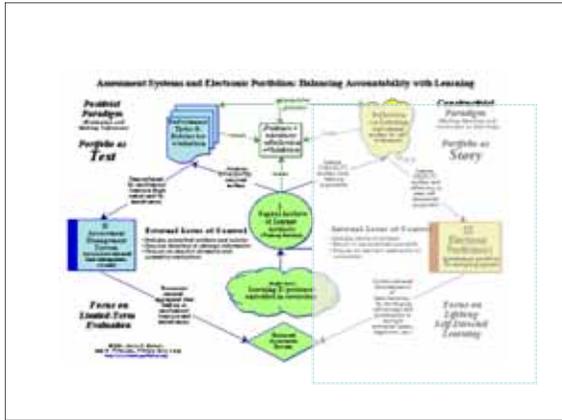
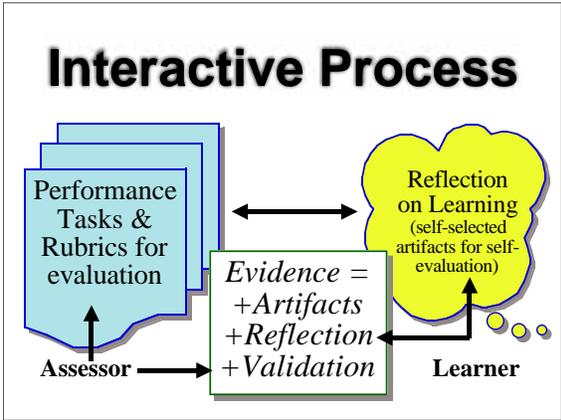
## How can we address both types of portfolios?

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
- iii. A student-centered **electronic portfolio**

26

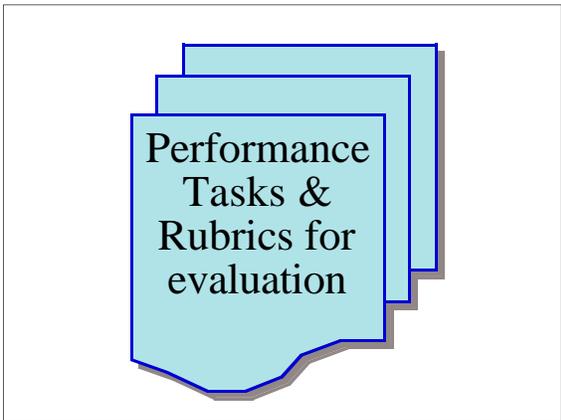




**Positivist  
Paradigm**  
(Evaluation and  
Making Inferences)

**Portfolio as Test**

**Assessor  
EVALUATES  
required  
artifacts**



Data collected for  
certification/  
licensure  
(high stakes)  
and for  
accreditation



**II.**  
**Assessment  
 Management  
 System**  
 (institution-centered  
 data management  
 system)

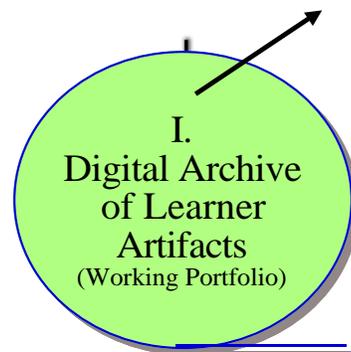
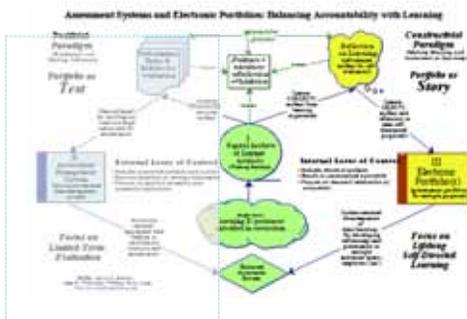
**Resulting in...**

**Institution-centered  
 aggregated data  
 leading to  
 certification/licensure  
 and accreditation**

**Focus on  
 Limited-Term  
 Evaluation**

**External Locus of  
 Control**

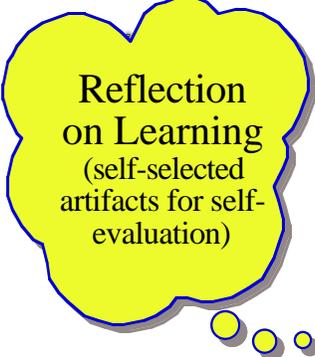
- **Includes prescribed artifacts and rubrics**
- **Requires database to manage information**
- **Focuses on faculty's formative and summative evaluations**



**Constructivist  
Paradigm**  
*(Making Meaning and  
Assessment as Learning)*

**Portfolio as Story**

**Learner  
COLLECTS  
artifacts from  
learning  
experiences**



Reflection  
on Learning  
(self-selected  
artifacts for self-  
evaluation)

**Learner SELECTS  
artifacts and  
reflections to meet  
self-determined  
purpose(s)**



**III.**  
**Electronic  
Portfolio(s)**  
(presentation portfolios  
for multiple purposes)

**Resulting in...**  
**Student-centered  
documentation of  
deep learning,**  
for developing self-concept and  
presentation to multiple  
audiences (peers, employers, etc.)

# ***Focus on Lifelong Self-Directed Learning***

## **Internal Locus of Control**

- ***Includes choice of artifacts***
- ***Results in personalized e-portfolio***
- ***Focuses on learner's celebration of uniqueness***

**Both approaches result in a:**



## Constructed Meaning

"The portfolio is a **laboratory** where students **construct meaning** from their accumulated experience."

(Paulson & Paulson, 1991, p.5)

52

## 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)

53

## 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)

54

Linking Two Dynamic Processes to Promote Deep Learning

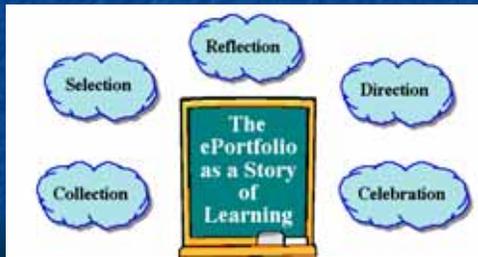
Portfolio Development Process  
Digital Storytelling

55

ePortfolio as Storytelling



Portfolio Development Process



57

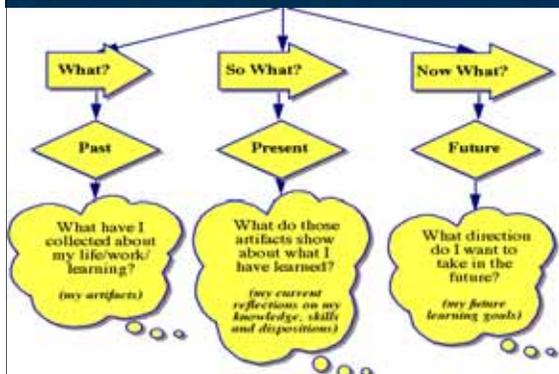
Portfolio Processes

Traditional + Technology

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

58

Reflective Questions that tie the Past to the Future



Some concerns...

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

60

## Components of Portfolio Development

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

61

## Components of Portfolio Development

- **Content:**  
evidence=  
artifacts + reflections  
+ validation

62

## 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)

63

## Components of Portfolio Development

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

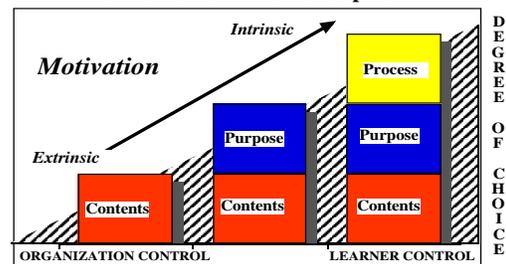
64

## 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

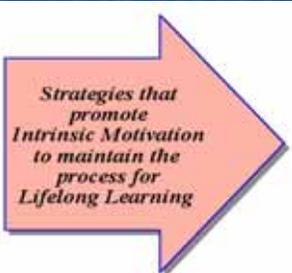
65

### 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

### Digital Tools to Support Reflection:

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

67

## Portfolios provide Encouragement for Reflection

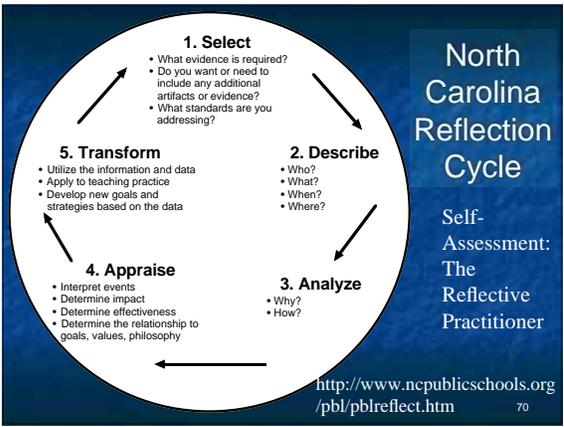
1. ...provides both the discipline and the freedom of structure, allowing one to see one's own work. (Sonnet)
2. ...provides the opportunity to assess one's own strengths and weaknesses through examination of a collection of samples, as well as to get feedback on one's performance from others. (Mirror)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

(Mary Diez, 1994)

## 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.

69



## 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?

71

## 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.

72

## Digital Tools for Reflection

### Blogs and Wikis

73

### “Blog” #1 word of the year\*

- Merriam-Webster Inc announced its top 10 "words of the year" list, with the immensely popular "blog" taking the number one place.
- Compiles list each year by taking the most researched words on its various Web sites

\* *Internet Scout Report, December 3, 2004*

### 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

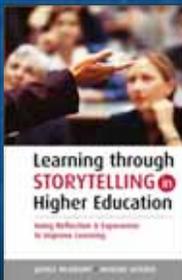
75

### Why include Digital Storytelling in ePortfolios?

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

76

### 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

77

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



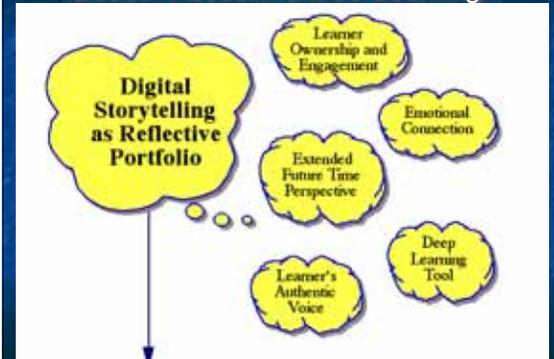
## Storytelling = Narrative Inquiry

*Mattingly in Schön (1991)*

- Aristotle: narrative – natural framework for representing world of action
- Everyday sense-making role
- Stories reveal way ideas look in action
- Narrative provides explanation
- Motivation = wrest meaning from experiences

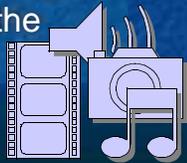
79

## 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)

82

## Voice = Authenticity

- multimedia expands "voice" in an electronic portfolio (both literally and rhetorically)
- personality of the author
- reflections unique
- writer talking directly to the reader/viewer

## Digital Paper or Digital Story?

Digital paper = text and images only  
Digital story = tell your story in **your own voice.**

**Multimedia** = audio and video

84

## A Graduate Student's Letter to a former teacher

- ...or you are a graduate student reflecting on what is drawing you into teaching (while showing your photo portfolio)
- Play "coming full circle"



## 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?

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

87

## Digital Story as Legacy

Not just for professional development  
Or skills-based portfolios

88

## 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



89

## High School Portfolios

To "e" or not to "e"

90

## from “Presentation Guidelines”

- ...tell your high school life **story** to a “panel”
- Remember—this is meant to be your **story**, tell it with pride.
- You are telling us a **story**, and not just any **story**. This is the **story** of your life the last four years as well as the **story** of where your life might be going the next four years.

Wood School District, Washington 91

## from “Presentation Guidelines”

- This **story** should be told with confidence and pride...
- The content needs to be organized, interesting, and about you.
- ...this presentation is all about...the knowledge of your current self, as well as your past and future self.

Wood School District, Washington 92

## from “Presentation Guidelines”

- All great **stories** (and yours is great) have some sort of history to them, and these **stories** leave us also with some sort of look to the future.

Wood School District, Washington 93

## Essential Questions

- 9th Grade Focus:  
“Who Am I” & “What do I want to be?”
- 10th and 11th Grade Focus:  
“How do I get there?”
- 12th Grade Focus:  
“Am I in a position to pursue my goals?”

Wood School District, Washington 94

## 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

95

## 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/>

96

## 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)

97

## Don't double your learning! Consider Cognitive Overload!

- When learning **new tools**, use **familiar tasks**;
- When learning **new tasks**, use **familiar tools**.

Barrett, 1991

98

## The REFLECT Initiative eportfolios@comcast.net <http://electronicportfolios.org/reflect/>

**Helen Barrett, Ph.D.**  
**Research Director**

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



## Key elements of The REFLECT Initiative

- Two-year research and professional development initiative
- Free access for up to 50,000 high school student participants
- Free on-site and online staff development
- Underwritten by: TaskStream  
- *Tools of Engagement*
- Applications due **April 21, 2005**
- E-mail: [reflect@taskstream.com](mailto:reflect@taskstream.com)
- <http://www.taskstream.com/reflect/>



## Key Research Questions

- What is the impact of electronic portfolios on student learning, motivation, and engagement in secondary schools?
- What are the perceived benefits of and obstacles to effective implementation of ePortfolios?
- How do ePortfolios provide evidence of deep learning?
- Under what conditions do students take ownership of their ePortfolios?



## My Final Wish...

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

102

## Dr. Helen Barrett

- Co-Director ISTE's Community & Assessment in PT3 Catalyst Grant
- Research Director, The REFLECT Initiative
- [eportfolios@comcast.net](mailto:eportfolios@comcast.net)
- <http://electronicportfolios.org/>

103