**Electronic Portfolios and Digital Storytelling**

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

---

**The ePortfolio as a Story of Learning**

Digital Storytelling as Reflective Portfolio

---

**Linking Two Dynamic Processes to Promote Deep Learning**

Portfolio Development Process  
Digital Storytelling

---

**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.

“A portfolio is opinion backed by fact... Students prove what they know with samples of their work.”

(Paulson & Paulson, 1991, p.2)

---

**Portfolio Processes**

Traditional  
• Collecting  
• Selecting  
• Reflecting  
• Projecting  
• Celebrating

+ Technology  
• Archiving  
• Linking/Thinking  
• Storytelling  
• Planning  
• Publishing
**Purpose & Goals for the portfolio (Determine Content)**

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

---

**Assessment for Learning Continuum - Enhanced**

<table>
<thead>
<tr>
<th>Learning</th>
<th>Reflection</th>
<th>Accountability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Assessment</td>
<td>Informal Feedback</td>
<td>Rubrics</td>
</tr>
<tr>
<td>Portfolio</td>
<td>Performance Based</td>
<td>Standardized Tests</td>
</tr>
<tr>
<td>Observation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Electronic Portfolio or Assessment Management System?**

**Electronic Portfolio**
- Multiple purposes: Learning, Assessment, Employment
- Data structure varies with tools used to create the portfolio; common data formats (converted to HTML, PDF)
- Primary type of data: qualitative
- Data storage in multiple options: CD-ROM, videotape, DVD, WWW server, LAN
- Visual design and hyperlinks most often under control of portfolio developer
- Learner choice of artifacts
  - Learner-Centered

**Assessment Management System**
- Single purpose: Formative and Summative Assessment
- Data structure most often uses a relational database to record, report data
- Primary type of data: qualitative
- Data storage primarily on LAN or on secure WWW server
- Visual design and hyperlinks most often controlled by database structure
  - Institutional choice of artifacts
  - Institution-Centered

---

**A Resource on K-12 Portfolios**

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

---

**Which approach should you take?**

- Are we implementing **electronic portfolios**...
- Or **assessment management systems**?
- What’s the difference? Along a Continuum
Storytelling as Reflection (Schön, 1988)

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

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

Linked to…

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

Elements from the Center for Digital Storytelling

http://www.storycenter.org

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

Why?

Learner Motivation and Affect
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.

Emotional Connection

• There is an affective component of the portfolio development process, that supports deep learning.

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

Learner’s Authentic Voice

• As learners create their own electronic portfolios, their unique "voice" should be evident from navigating the portfolios and reading the reflections on the screen.
• In an electronic portfolio, the ability to add multimedia elements expands the definition of "voice" within that rhetorical construct.

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

Portfolio as Lifelong Learning/Professional Development Tool

• The tools used to develop the portfolio should be accessible to a learner throughout their chosen career.
• Dependence on propriety software that is not accessible to a learner after graduation may not, in the long term, provide the skills necessary to maintain the e-portfolio as a lifelong professional development tool.

Constructivist model supports deep learning

• As Portland State University has found, hyperlinking leads to metacognition, which leads to deeper learning.
• Whenever possible, learners should have the opportunity to plan and assess their own learning.
Research Questions
http://electronicportfolios.org/research.html

How do we create an Institution-Centered Assessment and Accountability System...
Without losing the power of the portfolio as a student-centered tool for lifelong learning and professional development?

How do we maintain the authenticity of the portfolio process...
And help our teacher candidates develop the skills and attitudes necessary to implement this strategy with their own students once they have their own classrooms?

Modeling!

Barrett’s Hypotheses

• Tools
to meet goals of balanced assessment and both paradigms

• Motivation
so that learners will want to maintain their portfolios as a “living history of a teaching/learning life”

Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning
©2004, Helen C. Barrett
Judy Williams & William Steve Long

Congruence with Philosophy

• Create a system that is congruent with underlying learning philosophy or conceptual framework
  - positivism vs. constructivism
  - psychometrics vs. hermeneutics
  - portfolio as test vs. portfolio as story
Contrasting Paradigms of Portfolios

• Positivism
• Constructivism

Positivist Portfolios

“The purpose of the portfolio is to assess learning outcomes and those outcomes are, generally, defined externally. Positivism assumes that meaning is constant across users, contexts, and purposes... The portfolio is a receptacle for examples of student work used to infer what and how much learning has occurred.”

Constructivist Portfolios

“The portfolio is a learning environment in which the learner constructs meaning. It assumes that meaning varies across individuals, over time, and with purpose. The portfolio presents process, a record of the processes associated with learning itself; a summation of individual portfolios would be too complex for normative description.”

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.”

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

Handout: Balancing Accountability with Learning
Begin Here

Learning Experiences embedded in curriculum

I.
Digital Archive of Learner Artifacts
(Working Portfolio)

Interactive Process

Evidence = +Artifacts +Reflection +Validation

Interactive Process

Performance Tasks & Rubrics for evaluation

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

Assessor → Learner

Positivist Paradigm
(Evaluation and Making Inferences)

Portfolio as Test
Assessor EVALUATES required artifacts

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

Resulting in...

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

Performance Tasks & Rubrics for evaluation

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

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

I. Digital Archive of Learner Artifacts (Working Portfolio)

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)

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: Balanced Assessment System
One final thought…
• Assessment of 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
  − Assessment
  − Employment

Components of Portfolio Development

• Process:
  − tools used
  − sequence of activities/rules
  − reflection
  − 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
Learner Ownership and Control of Electronic Portfolio Development

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

My Final Wish…
May all your electronic portfolios become dynamic celebrations of learning across the lifespan.

Dr. Helen Barrett

• Co-Director ISTE's Community & Assessment in PT3 Catalyst Grant
• hbarrett@iste.org
• http://electronicportfolios.org/