Balancing “ePortfolio as Test” with “ePortfolio as Story”

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Four Topics in this Presentation
- Assessment - for what purpose?
- OF or FOR Learning?
- Conflicting Paradigms in Electronic Portfolio Development
  - Assessment Management or ePortfolio?
- My Current Evaluation of Online Systems
- Electronic Portfolios as Digital Stories
  - Deep Learning and Intrinsic Motivation

A few thoughts about Assessment -- What Type?
- Assessment OF Learning? or
- Assessment FOR Learning?

Assessment OF Learning= Summative
- Involves judging pupils’ performance against national standards (level descriptions).
- Teachers often make these judgments at the end of a unit of work, year or key stage.
- Test results also describe pupils performance in terms of levels.
- Carried out for the purposes of grading and reporting (ARG, 1999).

Time Perspective: Past -> Present

Assessment FOR Learning = Formative
- While it is not the only purpose, Assessment for learning is one of the most important purposes of assessment.
- While assessment of learning has well established procedures, assessment for learning requires some theoretical ideas to be put into practice if the potential benefits are to be gained.

Time Perspective: Present -> Future

Assessment for Learning (formative or classroom-based assessment) is different from assessment of learning (summative assessment)
- An important aspect of assessment for learning is the formative use of summative data.

Purposes of Assessment
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*

Assessment OF Learning

Assessment FOR Learning

*Alberta Assessment Consortium

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

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

www.qca.org.uk ages3-14

Resources and Readings on Assessment FOR Learning

- My website for articles not available online: http://electronicportfolios.org/afl/
- Assessment Reform Group
  http://assessment-reform-group.org.uk
- Principles of Assessment for Learning
  http://www.qca.org.uk/afl
Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning

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Judy Wilkerson & William Steve Lang

Congruence with Conceptual Framework
- Create a system that is congruent with your underlying learning philosophy or conceptual framework
- Behaviorism vs. constructivism
- Positivism vs. hermeneutics
- Portfolio as test vs. portfolio as story

Tasks, Rubric, Record of Achievement
- Identify tasks or situations that allow one to observe students’ performance...
- Create rubrics that clearly differentiate performance (3 or 4 levels only)
- Create a recordkeeping system to keep track of the rubric/evaluation data
- Based on multiple measures/methods

Reporting System and Feedback Loop
- Create a reporting process
- To summarize assessment data
- To be able to draw inferences from performance evidence
- To use for program improvement

Accountability System (based on Assessment Triangle)

Congruent with Conceptual Framework
Feedback Loop for Continuous Improvement
Analysis and Reporting System

Tasks, Rubrics and Record of Achievement

Which approach should you take?
- Are you looking for an electronic portfolio...
- Or an assessment management system?
- What’s the difference?
  Along a Continuum
Purpose

- Electronic Portfolio
- Multiple:
  - Learning
  - Assessment
  - Employment
- Assessment Management System
- Single:
  - Assessment

Data Structure

- Electronic Portfolio
- Assessment Management System
- varies with the tools used to create the portfolio; most often common data formats (documents often converted to HTML, PDF)
- Single:
  - Assessment
- most often uses a relational database to record, report data

Primary Type of Data

- Electronic Portfolio
- Qualitative
- Assessment Management System
- Quantitative and Qualitative

Data Storage

- Electronic Portfolio
- Assessment Management System
- multiple options: CD-ROM, videotape, DVD, WWW server, LAN
- LAN or secure WWW server
  *Digital Divide Issues

Technology Skills Required

- Electronic Portfolio
  - Medium -> High
- More advanced skills: information design through hyperlinking, digital publishing strategies, file management
- Assessment Management System
  - Low -> Medium
- Minimal skills, equivalent to using a web browser and adding attachments to an e-mail message

Technology Skills Demonstrated

- Electronic Portfolio
  - Medium -> High
  - depending on tools used to create portfolio
- Assessment Management System
  - Low -> Medium
  - depending on the sophistication of the artifacts added to the portfolio
Control of Design & Links
- Electronic Portfolio
- Assessment Management System
- under control of portfolio developer
- controlled by database structure

Choice of Artifacts
- Electronic Portfolio
- Assessment Management System
- Learner
- Institution

Locus of Control
- Electronic Portfolio
- Assessment Management System
- Student-Centered
- Institution-Centered

Electronic Portfolio or Assessment Management System?

Cautions about Portfolio Use
(Lucas, 1992)
1. The weakening of effect through careless imitation
2. The failure of research to validate the pedagogy
3. The co-option by large-scale external testing programs

Lee Shulman’s 5 dangers of portfolios
1. "lamination"
2. "heavy lifting"
3. "trivialization"
4. "perversion"
5. "misrepresentation"

*Hyperlinking reinforces metacognition*
*Design=Individuality*
Lee Shulman’s 5 dangers of portfolios

1. "lamination" - a portfolio becomes a mere exhibition, a self-advertisement, to show off.

2. "heavy lifting" - a portfolio done well is hard work. Is it worth the extra effort?

3. "trivialization" - documenting stuff that isn't worth reflecting upon.

4. "perversion" - when used as a form of high stakes assessment, "why will portfolios be more resistant to perversion than all other forms of assessment have?"

5. "misrepresentation" - does "best work" misrepresent "typical work" -- not a true picture of competency.

Contrasting Paradigms of Portfolios

- **Positivism**
- **Constructivism**

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.”

“Assessing Portfolios Using the Constructivist Paradigm”
Palatine: IRI Skylight Training & Publishing

Tension between two approaches

“It is important to recognize the dangers of the portfolio process—the possibilities for trivialization as well as mindless standardization.” (p.5)


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!

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

Why?

- Learner Ownership and Engagement with Portfolio
- Emotional Connection to Process
- Learner’s Authentic Voice
- Portfolio as Story
- Portfolio as Lifelong Learning/Professional Development Tool
- Support deep learning
Who?

Who has successfully kept these two strategies separate, but connected?
- Baylor University College of Ed
- University of Denver (campus-wide)
- Ball State University College of Ed

University of Denver
http://portfolio.du.edu

Baylor University Example
Student E-Portfolio (appears in this upper window for review)

Assessment database (lower window)

Rubric for assessing e-portfolios against rubrics:
Student Factor

Ball State University
- Student-created web-based portfolio PLUS
- Student Learning Objectives System (SLO)
http://www.washington.edu/slo/
University of Washington’s Student Learning Objectives (SLO)

- four web applications
  - SLO Encoder - faculty encode the SLOs for their courses
  - SLO Reporter - a tool for viewing information in the database
  - MyLO - SLO Student system - to view their personal learning objective profile
  - SLO Admin System - a non-technical tool to perform basic system administration tasks

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
Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning

Begin Here
Learning Experiences embedded in curriculum

Interactive Process
Evidence = + Artifacts + Reflection + Validation
**Interactive Process**

Performance Tasks & Rubrics for evaluation

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

Evidence = +Artifacts +Reflection +Validation

Learner

**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

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

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

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

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

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

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


Deep Learning Defined

- Learning that promotes the development of conditionalized [contextualized] knowledge and metacognition through communities of inquiry.


Deep Learning for a Digital Age

<table>
<thead>
<tr>
<th>Table 1.1. DEEP LEARNING VERSUS SURFACE LEARNING</th>
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<tbody>
<tr>
<td><strong>Attributes of Deep Learning</strong></td>
</tr>
<tr>
<td>Learners relate ideas to previous knowledge and experience.</td>
</tr>
<tr>
<td>Learners look for patterns and underlying principles.</td>
</tr>
<tr>
<td>Learners check evidence and relate it to conclusions.</td>
</tr>
<tr>
<td>Learners examine logic and argument cautiously and critically.</td>
</tr>
<tr>
<td>Learners are aware of the understanding that develops while learning.</td>
</tr>
<tr>
<td>Learners become actively interested in the course content.</td>
</tr>
</tbody>
</table>

Source: Adapted from Ennis, 2001.


Transforming the Classroom into Knowledge Rooms

1. The Research Center
2. The Skill Workplace
3. The Conference Center
4. The Debate Hall
5. The Portfolio Gallery


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

Tools, Tools, Tools!

The “Instruments” of Electronic Portfolio Development

Why are tools important?

Activity Theory

Implications for human-computer interaction

- **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

What’s the State of the Art in 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
- 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](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 Epsilen, UWWashington.,
- **Open Source ePortfolio**
  - OSPI (rSmart/UMN), others in development

### Online Portfolio Tool Characteristics

- Custom-designed Electronic Portfolio - (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 Journal**
- 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** - Server Limit means the only limit is the size of the storage available to the entire installation

### 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 database.**”

### One final thought…

- 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
  - Assessment
  - Employment

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

Learner Ownership and Control of Electronic Portfolio Development

- **Motivation**
  - Intrinsic
  - Process

DEGREE OF CHOICE

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

Handout: ePortfolio as Storytelling
Portfolio Development Process

Portfolio Processes
- Traditional
  - Collecting
  - Selecting
  - Reflecting
  - Projecting
  - Celebrating
- Technology
  - Archiving
  - Linking/Thinking
  - Storytelling
  - Collaborating
  - Publishing

Reflective Questions that tie the Past to the Future

Linked to...
- Digital Storytelling
- Blogs
- Wikis

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

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
Why include Digital Storytelling in ePortfolios?
Learner Motivation and Affect
Brain Research

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 have build into them and attending, as well, to our strategies of narrative description.”

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

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.

Examples of Reflective Stories

- Go to DVD - Play “Full Circle”
- Go to DVD - Play “Hakuin”

Don’t double your learning! Consider Cognitive Overload!

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

Barrett, 1991

My Final Wish…

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

Dr. Helen Barrett

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My Story

- Go to DVD - Play “Choices”