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?

Purposes of Assessment

- 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.

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

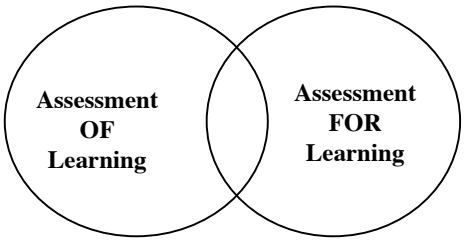
- While it is not the only purpose, Assessment **for** learning is one of the most important purposes of assessment.
- While assessment **of** learning has well established procedures, assessment **for** learning requires some theoretical ideas to be put into practice if the potential benefits are to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

Time Perspective: Present -> Future

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*



*Alberta Assessment Consortium

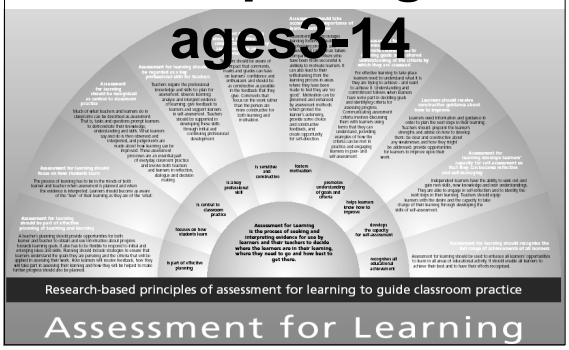
Portfolios used for Assessment OF Learning

- 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



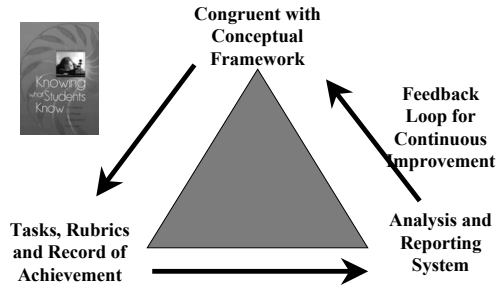
Resources and Readings on Assessment FOR Learning

- 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

Judy Wilkerson & William Steve Lang

Accountability System
(based on Assessment Triangle)



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

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*
- varies with the tools used to create the portfolio; most often common data formats (documents often converted to HTML, PDF)
- *Assessment Management System*
- 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*
- multiple options: CD-ROM, videotape, DVD, WWW server, LAN
- *Assessment Management System*
- LAN or secure WWW server

•***Digital Divide Issues***

Technology Skills Required

- *Electronic Portfolio*
- Medium–>High
- **More advanced skills:** information design **through hyper linking, 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*
- under control of portfolio developer
- *Assessment Management System*
- controlled by database structure

•Hyperlinking reinforces metacognition*
•Design=Individuality

*Portland State University

Choice of Artifacts

- *Electronic Portfolio*
- Learner
- *Assessment Management System*
- Institution

Locus of Control

- *Electronic Portfolio*
- Student-Centered
- *Assessment Management System*
- 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

(Lucas, Catharine. 1992. Introduction: Writing Portfolios - Changes and Challenges. *Portfolios in the Writing Classroom: An Introduction*, ed. Kathleen Blake Yancey. Urbana, Illinois: NCTE: 1-11)

Lee Shulman's 5 dangers of portfolios

1. "lamination"
2. "heavy lifting"
3. "trivialization"
4. "perversion"
5. "misrepresentation"

Shulman, Lee (1998) "Teacher Portfolios: A Theoretical Activity" in N. Lyons (ed.) *With Portfolio in Hand*. (pp. 23-37) New York: Teachers College Press.

Lee Shulman's 5 dangers of portfolios

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

Shulman, Lee (1998) "Teacher Portfolios: A Theoretical Activity" in N. Lyons (ed.) *With Portfolio in Hand.* (pp. 23-37) New York: Teachers College Press.

Lee Shulman's 5 dangers of portfolios

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

Shulman, Lee (1998) "Teacher Portfolios: A Theoretical Activity" in N. Lyons (ed.) *With Portfolio in Hand.* (pp. 23-37) New York: Teachers College Press.

Lee Shulman's 5 dangers of portfolios

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

Shulman, Lee (1998) "Teacher Portfolios: A Theoretical Activity" in N. Lyons (ed.) *With Portfolio in Hand.* (pp. 23-37) New York: Teachers College Press.

Lee Shulman's 5 dangers of portfolios

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**

Shulman, Lee (1998) "Teacher Portfolios: A Theoretical Activity" in N. Lyons (ed.) *With Portfolio in Hand.* (pp. 23-37) New York: Teachers College Press.

Lee Shulman's 5 dangers of portfolios

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

Shulman, Lee (1998) "Teacher Portfolios: A Theoretical Activity" in N. Lyons (ed.) *With Portfolio in Hand.* (pp. 23-37) New York: Teachers College Press.

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

Tension between two approaches

" The two paradigms produce portfolio activities that are entirely different."

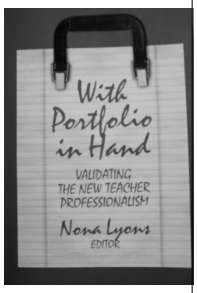
"The positivist approach puts a premium on the selection of items that reflect **outside standards and interests**."

"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

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)



Lyons, Nona (1998) *With Portfolio in Hand*. Teachers College Press

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 <u>authenticity</u> 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

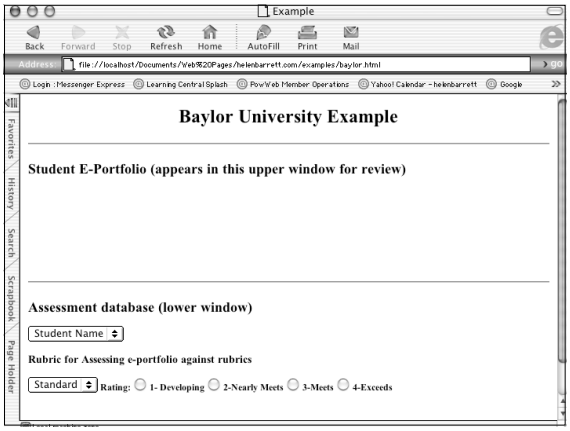
- multimedia expands the "voice" in an electronic portfolio (both literally and rhetorically)
- personality of the author is evident
- gives the reflections a uniqueness
- gives the feeling that the writer is talking directly to the reader/viewer

Why?

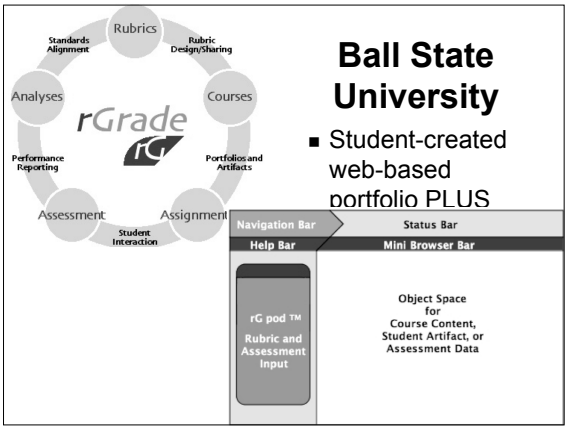
- Learner Ownership and Engagement with Portfolio
- Emotional Connection to Process
- Learner's Authentic **Voice**
- Portfolio as **Story**
- Portfolio as Lifelong Learning/ Professional Development Tool
- Support **deep learning**

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



Ball State University

- Student-created web-based portfolio PLUS

University of Washington

- Catalyst Portfolio

  http://catalyst.washington.edu

- Student Learning Objectives System (SLO)

http://www.washington.edu/slo/

University of Washington's Catalyst Portfolio

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

[redacted]

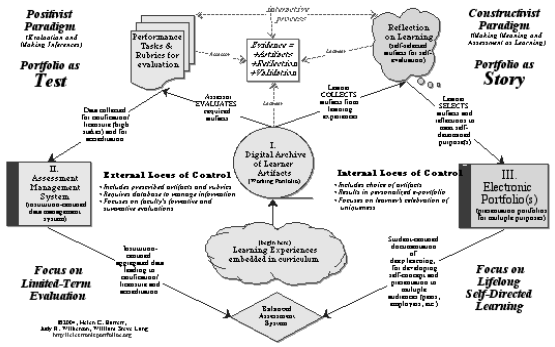
How can we address both types of portfolios?

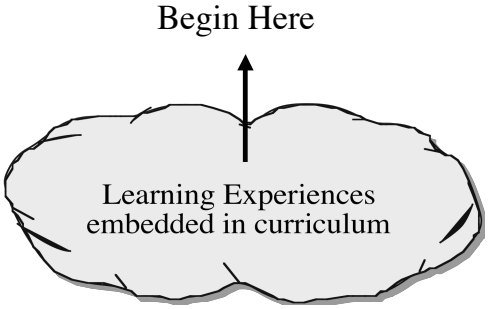
Use three different systems that are digitally linked:

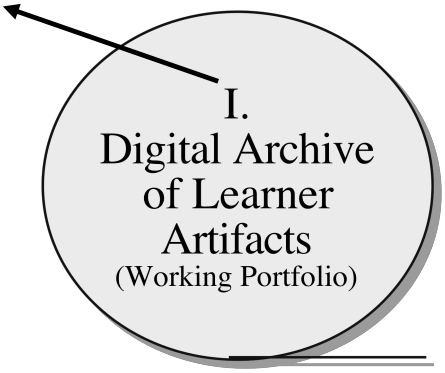
I. A digital **archive** of a learner's work
II. An institution-centered **database** to collect faculty-generated assessment data based on tasks and rubrics
III. A student-centered **electronic portfolio**

Handout

Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning



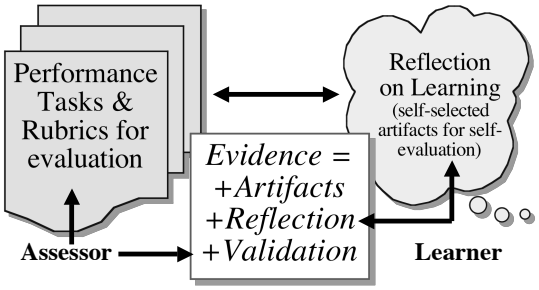


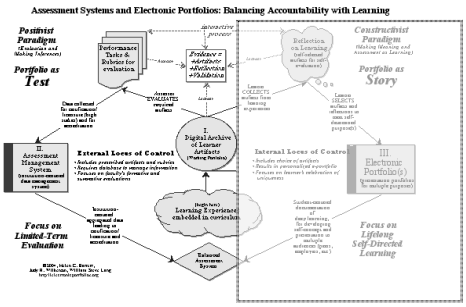


Interactive Process

Evidence =
+Artifacts
+Reflection
+Validation

Interactive Process



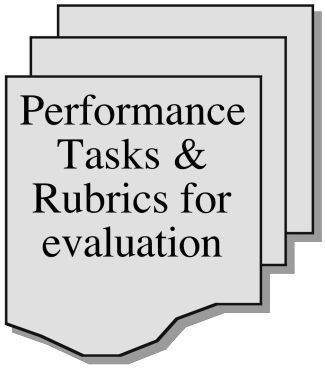


Positivist Paradigm

(Evaluation and Making Inferences)

Portfolio as Test

Assessor EVALUATES <u>required</u> artifacts



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

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

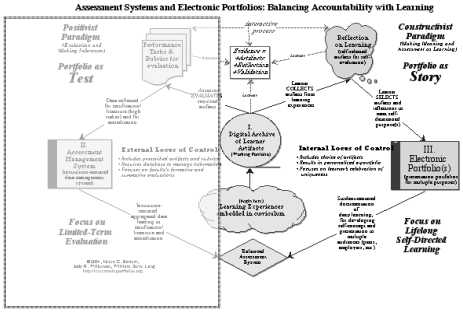
Resulting in…

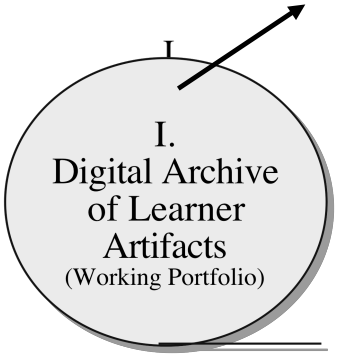
Institution-centered aggregated data leading to certification/licensure and accreditation

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***



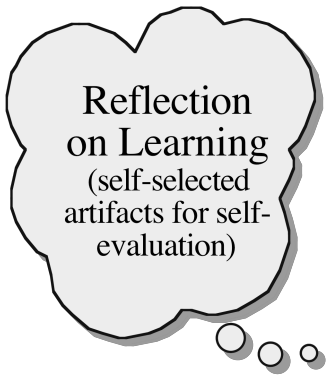


Constructivist Paradigm

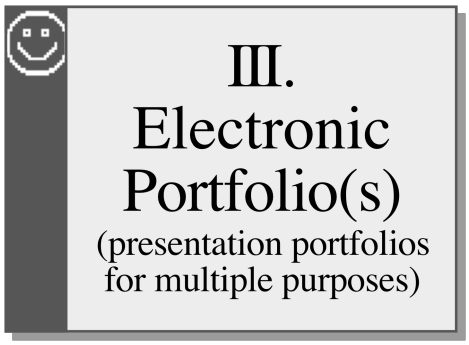
(Making Meaning and Assessment as Learning)

Portfolio as Story

Learner COLLECTS artifacts from learning experiences



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



Resulting in…

Student-centered documentation of <u>deep learning</u>,

for developing self-concept and presentation to multiple audiences (peers, employers, etc.)

Deep Learning

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

Cambridge (2004)

Deep Learning Defined

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

Weigel, V.B. (2001) *Deep Learning for a Digital Age: Technology's Untapped Potential to Enrich Higher Education*. Jossey-Bass, p.5

Deep Learning for a Digital Age

Table 1.1. DEEP LEARNING VERSUS SURFACE LEARNING

Attributes of Deep Learning	Attributes of Surface Learning
Learners relate ideas to previous knowledge and experience.	Learners treat the course as unrelated bits of knowledge.
Learners look for patterns and underlying principles.	Learners memorize facts and carry out procedures routinely.
Learners check evidence and relate it to conclusions.	Learners find difficulty in making sense of new ideas presented.
Learners examine logic and argument cautiously and critically.	Learners see little value or meaning in either courses or tasks.
Learners are aware of the understanding that develops while learning.	Learners study without reflecting on either purpose or strategy.
Learners become actively interested in the course content.	Learners feel undue pressure and worry about work.

Source: Adapted from Entwistle, 2001.

Weigel, V.B. (2001) *Deep Learning for a Digital Age: Technology's Untapped Potential to Enrich Higher Education*. Jossey-Bass, p.6

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

Weigel, V.B. (2001) *Deep Learning for a Digital Age: Technology's Untapped Potential to Enrich Higher Education*. Jossey-Bass, pp.18-23

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

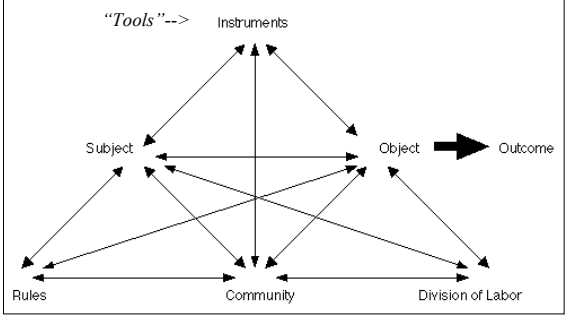
Tools, Tools, Tools!

The "Instruments" of Electronic Portfolio Development

Why are tools important?

Activity Theory

Implications for human-computer interaction



Activity Theory

- **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**
- Under On-line Publications
- To date, recreating my new portfolio using **17 different software packages, services, or strategies**

Online Portfolio Tools

- **HTML editors** plus web server space
  - **Netscape/Mozilla Composer, Geocities**
- **Blogging tools** - include entry **categories**
  - **Movable Type, WordPress, BlogWave Studio**
- Online **Content Management Systems** (CMS)
  - **Userland Manila, Blackboard CMS**
- Open Source Software - **Plone** (Zope), PHP/MySQL

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, UWashington,,
- 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 data-base."

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

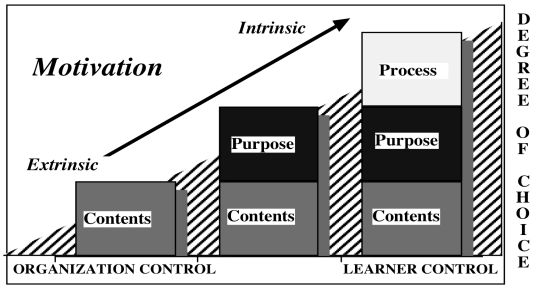
Components of Portfolio Development

- **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



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	+ Technology
■ Collecting	■ Archiving
■ Selecting	■ Linking/Thinking
■ Reflecting	■ Storytelling
■ Projecting	■ Collaborating
■ Celebrating	■ 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."

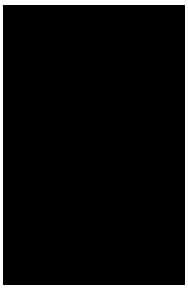
Storytelling as Reflection
(Schön, 1988)

"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

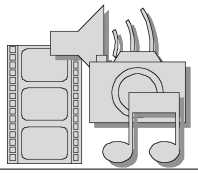


- Two educators from New Zealand - staff developer and health educator
- Relates storytelling to literature on learning and reflection
- Provides stages of storytelling related to reflection

Constructivist Approach to Project-Based "Assessment-as-Learning"

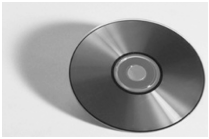
Learner Ownership and Engagement with Portfolio

- 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"*