

Differentiating Electronic Portfolios and Assessment Management Systems

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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

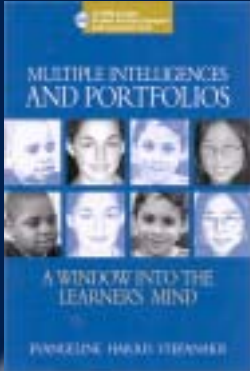
"Everything I know about portfolios was confirmed working with a kindergartener"

Portfolio Processes

Traditional	+ Technology
Collecting	Archiving
Selecting	Linking/Thinking
Reflecting	Storytelling
Projecting	Planning
Celebrating	Publishing

Portfolios support a Culture of Evidence

Evidence =
Artifacts
+ Reflection (Rationale)
+ Validation (Feedback)




A Resource on K-12 Portfolios

By Evangelina Harris Stefanakis

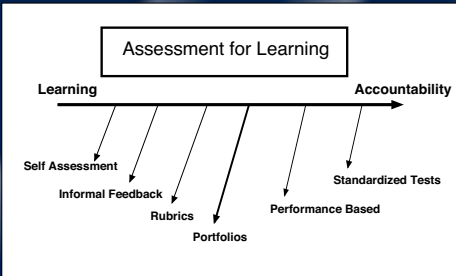
Published by Heinemann

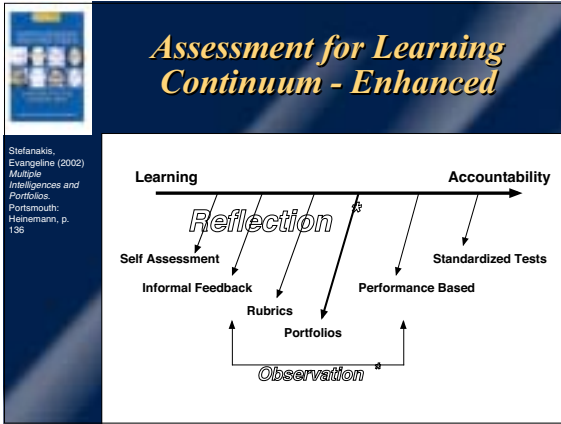
Includes a CD-ROM with examples of student portfolios



Assessment for Learning Continuum

Stefanakis, Evangelina (2002) *Multiple Intelligences and Portfolios*. Portsmouth: Heinemann, p. 138





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

<i>Electronic Portfolio</i>	<i>Assessment Management System</i>
Multiple:	Single:
- Learning	- Assessment
- Assessment	
- Employment	

Data Structure

<i>Electronic Portfolio</i>	<i>Assessment Management System</i>
varies with the tools used to create the portfolio; most often common data formats (documents often converted to HTML, PDF)	<ul style="list-style-type: none"> most often uses a relational database to record, report data

Primary Type of Data

<i>Electronic Portfolio</i>	<i>Assessment Management System</i>
Qualitative	Quantitative and Qualitative

Data Storage

<i>Electronic Portfolio</i>	<i>Assessment Management System</i>
multiple options:	
CD-ROM, videotape, DVD, WWW server, LAN	LAN or secure WWW server
	<i>•Digital Divide Issues</i>

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

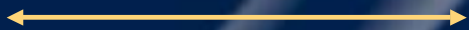
depending on tools
used to create
portfolio

**Assessment
Management
System**

Low → Medium

depending on the
sophistication of the
artifacts added to the
portfolio

Selection of Contents



**Electronic
Portfolio**

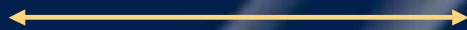
Artifacts selected
by portfolio
developer

**Assessment
Management
System**

Artifacts
prescribed by
institution

•Free choice is difficult to aggregate

Control of Design & Links



**Electronic
Portfolio**

under control of
portfolio
developer

**Assessment
Management
System**

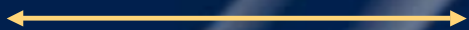
controlled by
database
structure

*•Hyperlinking reinforces metacognition**

•Design=Individuality

*Portland State University

Locus of Control



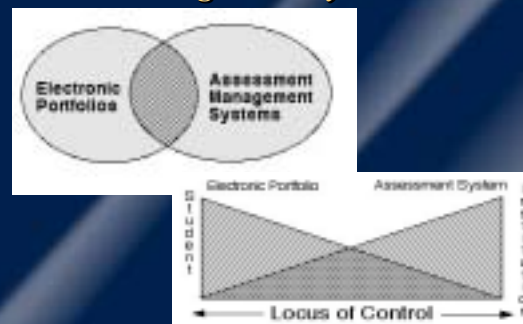
**Electronic
Portfolio**

Student-
Centered

**Assessment
Management
System**

Institution-
Centered

Electronic Portfolio or Assessment Management System?



Further issues with Portfolios and Accountability Systems

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

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

Lee Shulman's 5 benefits of portfolios

1. tracking and documentation of longer episodes of teaching and learning
2. encourage the reconnection between process and product. - very best teaching portfolios consist predominantly of student portfolios" & highlight the results of teaching that lead to student learning.
3. institutionalize norms of collaboration, reflection, and discussion
4. a portable residency... introduces structure to the field experience
5. (most important) shifts the agency from an observer back to the teacher interns...

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

My questions

Will ePortfolios become another tool by educational organizations for mechanistic forms of high-stakes summative assessment?

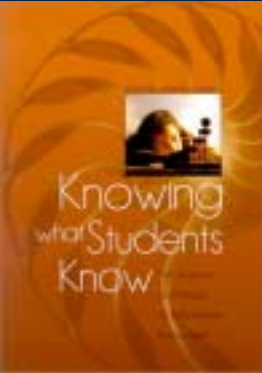
Or will educators recognize that ePortfolios are the best way to recognize and showcase learning in highly complex self-organizing human systems

More questions

How can we preserve the "soul" of the portfolio while still collecting the assessment data we are required to collect?

How can we avoid Lucas' Cautions and Shulman's Dangers

What does the literature on Assessment say?



Resource on Assessment

The Science and Design of Educational Assessment


Published by National Academies Press

Edited by James Pellegrino, Naomi Chudowsky and Robert Glaser

<http://www.nap.edu>

Purpose of Educational Assessment

“Educational Assessment seeks to determine how well students are learning and is an integrated part of the quest for improved education. It provides feedback to students, educators, parents, policy makers, and the public about the effectiveness of educational services.” (p.1)



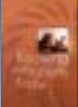
Factors that are improving assessment

Advances in cognitive sciences

- Broadened concept of what is important to assess


Advances in measurement sciences

- Expanded capability to interpret more complex forms of evidence




Multiple Measures

One type of assessment does not fit all
a single assessment is often used for multiple purposes



Problem:

“...the more purposes a single assessment aims to serve, the more each purpose will be compromised.” p.2




Assessment ...

Is always a process of reasoning from evidence

Is imprecise to some degree

Results are only estimates of what a person knows and can do

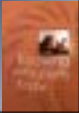


Every Assessment Rests on Three Pillars

Model of how students represent knowledge and develop competence in a content domain

Tasks or situations that allow one to observe students' performance

An interpretation method for drawing inferences from performance evidence



Assessment Triangle

Observation

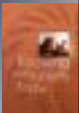
Interpretation

3 elements must be explicitly connected and designed as a coordinated whole

Cognition



We need a richer and more coherent set of assessment practices



Assessment Design Principles

Assessment design should always be...

- Based on a model of student learning
- Well designed and tested
- Clear sense of the inferences about student competence
- For the particular context of use



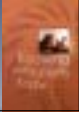
Implications for assessment practice in the classroom

Integral part of instruction

Information about qualities of work

Students understand learning goals and landmark performances

Based on cognitive science

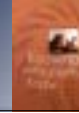


Think Through Assessment Systematically

Needs to be

- Comprehensive
- Coherent
- Continuous

Shift emphasis back into classroom where learning occurs



Assessment as Celebration

Celebrating the successes of what we've learned through assessment

Done through documentation

Students take charge of their own learning

Assessment should...

Be based on modern knowledge of cognition and its measurement

Be integrated with curriculum and instruction

Inform as well as improve student achievement

"The promise of these new kinds of assessments remains largely unfulfilled, but technology should substantially change this situation." p.261

New Information Technologies...

Can advance the design of assessments:

- Bring greater efficiency
- Timeliness
- Immediately adapt items based on performance
- Analyze, score, report assessment data
- Allow learners to be assessed at different times and in distant locations
- Enliven assessment tasks with multimedia
- Add interactivity to the assessment task

A significant contribution of Technology...

To design systems for implementing sophisticated classroom-based formative assessment

Assessment embedded in instruction

Holds great promise for enhancing educational assessment at multiple levels of practice

Raises issues of utility, practicality, cost, and privacy.

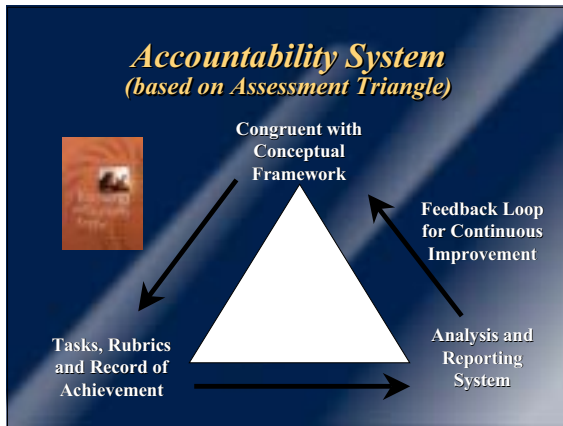
How do we create an Institution-Centered Assessment and Accountability System...

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!



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

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

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.”

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

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.”

F. Leon Paulson & Pearl Paulson (1994)
“Assessing Portfolios Using the Constructivist Paradigm”
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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 can we address both types of portfolios?

Use **two different systems** that electronically talk to each other:
–A **student-centered electronic portfolio**
–An **institution-centered database** to collect faculty-generated assessment data based on tasks and rubrics

Why?

Learner **Ownership** and Engagement with Portfolio
Emotional Connection
Portfolio as **Story**
Portfolio as Lifelong Learning/
Professional Development Tool
Constructivist model supports **deep learning**

Deep Learning

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

Cambridge (2004)

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>



DUPC Portfolio Component *(from DU Syllabus Conference Presentation)*

User-centric

- Easy to set up and maintain
- Portfolio owner controls & manages the content and how the content is shared

Community capabilities

- Expands communication beyond individual courses
- Invites participation by people from outside of DU

Complies with FERPA and with DU's privacy & intellectual property guidelines

DUPC Assessment Component *(from DU Syllabus Conference Presentation)*

- Supports online assessment of student work
- Contains a rubric library and rubric builder
- Provides powerful reporting tools
- Allows for extensive assessment management functionality
- Is secure and separate from portfolio component



Ball State University

Student-created web-based portfolio PLUS

What next?

Research!

Setting a Research Agenda

Need for more data collection and longitudinal research on the perceptions of teacher candidates and faculty on the value and purpose of electronic portfolios

Do the benefits extend to the classroom and enhance K-12 student learning?

Is the extra effort worthwhile?

Need to Share Evaluation Strategies

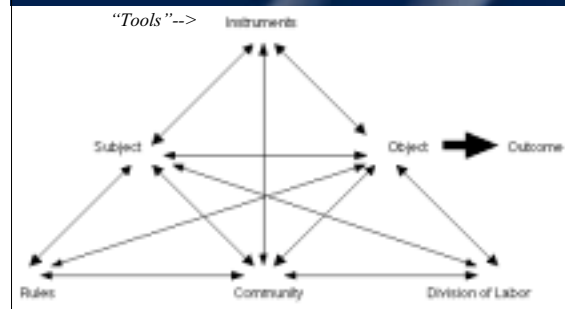
The time is right to move beyond implementation issues to research and evaluation

What are your research questions?

Can we collaborate and share evaluation instruments?

Activity Theory

Implications for human-computer interaction



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

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<http://electronicportfolios.org/pt3/>

Contrasting Assessment Management Systems with Electronic Portfolios

