

**Competing Paradigms in  
Electronic Portfolios:  
Balancing “Portfolio-as-Test”  
with “Portfolio-as-Story”**

**Dr. Helen Barrett**  
University of Alaska Anchorage  
The REFLECT Initiative

**REAL Electronic Portfolios**

**R**eflection  
**E**ngagement  
**A**ssessment for  
**L**earning

**A Tale of Two Portfolios**

- High School graduates in Washington
- High school freshman as told by Jim Mahoney

What’s the difference between those two stories?

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

**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 an proficient I don’t get to graduate.”

**How would you answer this student?**

Read my complete answer in my blog:  
<http://electronicportfolios.org/blog/>

**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)

## 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

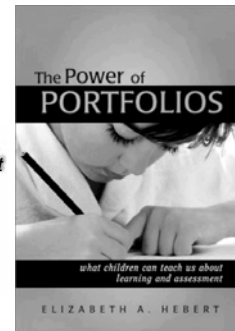
“Everything I know about portfolios was confirmed working with a kindergartener”

## The Power of Portfolios

*what children can teach us about learning and assessment*

Author: Elizabeth Hebert  
Publisher: Jossey-Bass

Picture courtesy of Amazon.com



## The Power of Portfolios

Author:  
Dr.  
Elizabeth  
Hebert,  
Principal  
Crow Island  
School,  
Winnetka,  
Illinois

Picture taken by  
Helen Barrett at  
AERA, Seattle,  
April, 2001



## From the Preface (1)

Hebert, Elizabeth (2001) *The Power of Portfolios*. Jossey-Bass, p.ix

“Portfolios have been with us for a very long time. Those of us who grew up in the 1950s or earlier recognize portfolios as reincarnations of the **large memory boxes** or drawers where our parents collected starred spelling tests, lacy valentines, science fair posters, early attempts at poetry, and (of course) the obligatory set of plaster hands. Each item was selected by our parents because it represented our acquisition of a new skill or our feelings of accomplishment. Perhaps an entry was accompanied by a special notation of praise from a teacher or maybe it was placed in the box just because we did it.”

## From the Preface (2)

Hebert, Elizabeth (2001) *The Power of Portfolios*. Jossey-Bass, p.ix

“We formed part of our identity from the contents of these memory boxes. We recognized each piece and its **association with a particular time or experience**. We shared these collections with grandparents to reinforce feelings of pride and we reexamined them on rainy days when friends were unavailable for play. **Reflecting on the collection** allowed us to attribute importance to these artifacts, and by extension to ourselves, as they gave witness to **the story** of our early school experiences.”

## From the Preface (3)

Hebert, Elizabeth (2001) *The Power of Portfolios*. Jossey-Bass, p.ix-x

“Our parents couldn’t possibly envision that these memory boxes would be the inspiration for an innovative way of thinking about children’s learning. These collections, lovingly stored away on our behalf, are the genuine exemplar for documenting children’s learning over time. But now these memory boxes have a different meaning. It’s not purely private or personal, although **the personal is what gives power to what they can mean.**”

**Let's get personal...**  
**Think for a minute about:**

Something about your **COLLECTIONS**:

Suggested topics:

- If you are a parent, what you saved for your children
- What your parents saved for you
- What you collect...
- Why you collect...

**Some issues to consider**

- What do your collections say about what you value?
- Is there a difference between what you purposefully save and what you can't throw away?
- How can we use our personal collections experiences to help learners as they develop their portfolios?

*The power of portfolios [to support deep learning] is personal.*

**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)

**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)

**Portfolio Processes**

**Traditional + Technology**

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

**Metaphors!**

- Mirror, Map, Sonnet
- C.V. or Multimedia Resume
- Test
- Story
  
- <http://electronicportfolios.org/metaphors.html>

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

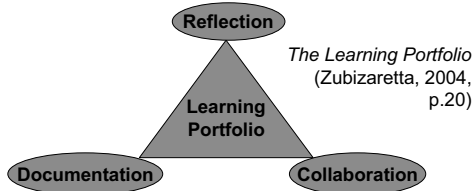
- Multiple purposes:
  - Learning/Process
  - Assessment
  - Marketing/Showcase

Think about the differences  
between:

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

### Learning Portfolios

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



### 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

### Showcase Portfolios

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

### Assessment Portfolios

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

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

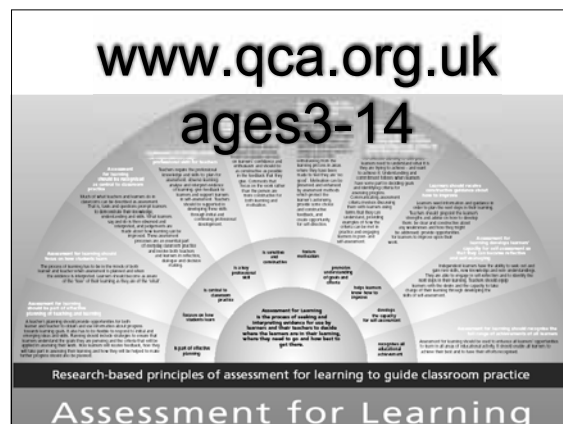
**Assessment FOR Learning = Formative**

- 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.



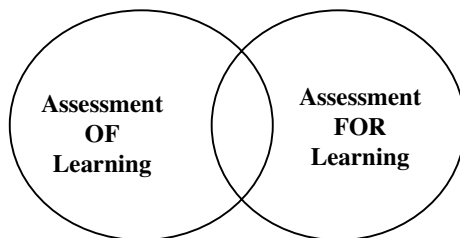
## 10 AFL Principles - Part 1

- AFL should be part of effective planning of teaching and learning
- AFL should focus on how students learn
- AFL should be recognized as central to classroom practice
- AFL should be regarded as a key professional skill for teachers
- AFL should be sensitive and constructive because any assessment has an emotional impact

## 10 AFL Principles - Part 2

- AFL should take account of the importance of (and foster) learner motivation
- AFL should promote commitment to learning goals and a shared understanding of the criteria by which they are assessed
- AFL develops learners' capacity for self-assessment so that they can become reflective and self-managing
- AFL should recognize the full range of achievements of all learners
- Learners should receive constructive guidance about how to improve

## Overlap of Assessment Types\*



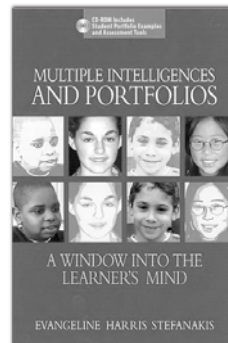
\*Alberta Assessment Consortium

## 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



## A Resource on K-12 Portfolios

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

**Assessment for Learning Continuum - Enhanced**

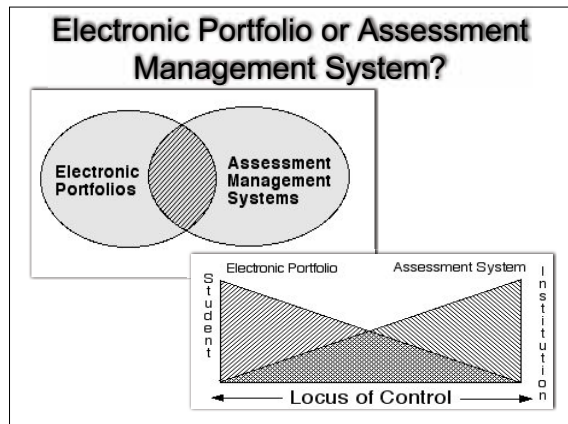
Stefanakis, Evangelina (2002) *Multiple Intelligences and Portfolios*. Portsmouth: Heinemann, p. 136

**Which approach should you take?**

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

**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



**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**

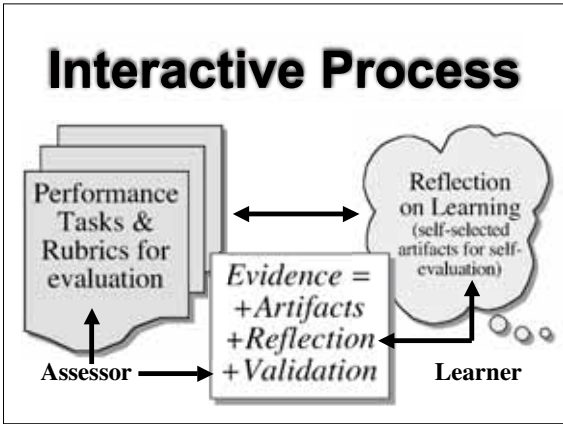
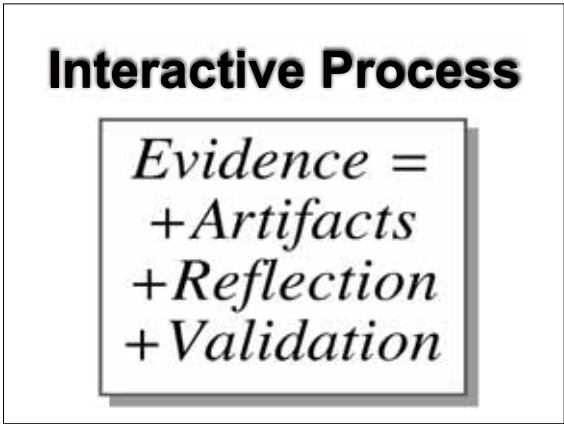
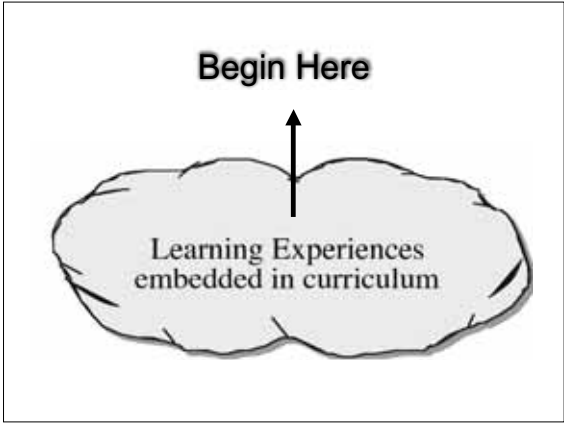
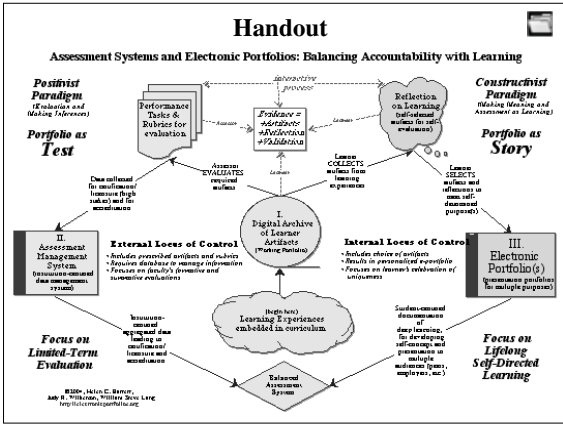
- "The two paradigms produce portfolio activities that are entirely different."
- "The positivist approach puts a premium on the selection of items that reflect **outside standards and interests.**"
- "The constructivist approach puts a premium on the selection of items that reflect learning **from the student's perspective.**"

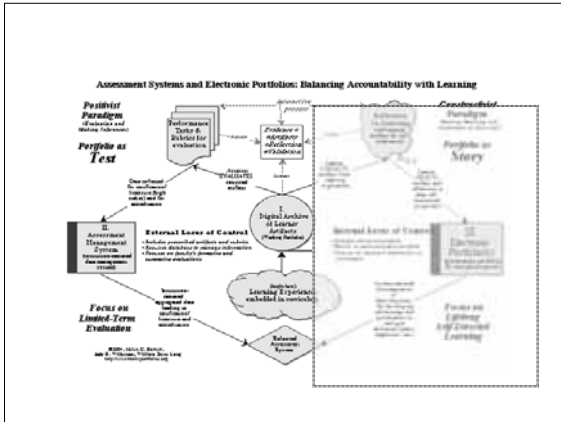
F. Leon Paulson & Pearl Paulson (1994)  
 "Assessing Portfolios Using the Constructivist Paradigm"  
 in Fogarty, R. (ed.) (1996) *Student Portfolios*.  
 Palatine: IRI Skylight Training & Publishing

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**





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

**Portfolio as Test**

**Assessor EVALUATES required artifacts**



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



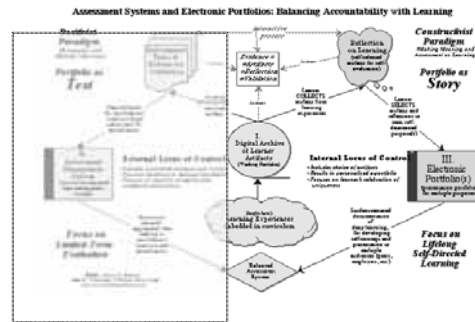
## Resulting in...

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

## 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



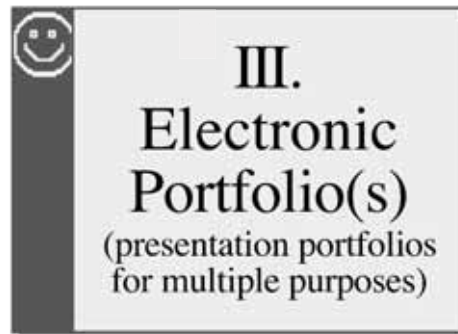
## Constructivist Paradigm (Making Meaning and Assessment as Learning)

## 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  
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)

## 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)

## Some concerns...

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

Components of Portfolio Development

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

Components of Portfolio Development

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

Components of Portfolio Development

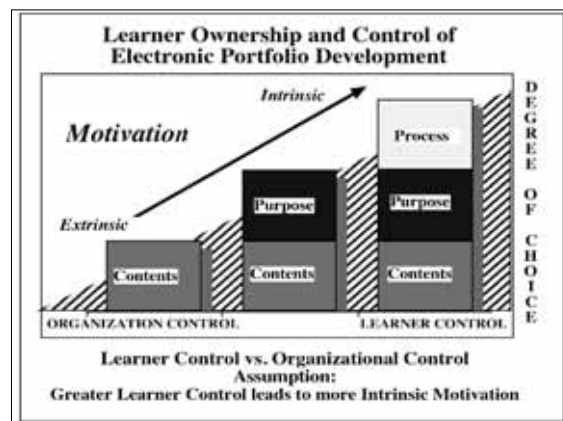
- **Purpose:**  
the reason for developing the portfolio – includes audience
  - Learning & professional development - Process
  - Assessment (Of and for learning)
  - Showcase (Employment/Marketing)

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



*Linking Two Dynamic  
Processes to Promote  
Deep Learning*

**Portfolio Development  
Process  
Digital Storytelling**

Helen C. Barrett, Ph.D.  
reflect@taskstream.com  
<http://reflectinitiative.com>

**Research Director  
The REFLECT  
Initiative**

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



## **My Final Wish...**

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

## **Dr. Helen Barrett**

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