

## ePortfolios in K-12 and in Teacher Education

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ISTE = International Society for  
Technology in Education

- 2001 PT3\* Catalyst Grant

\*Preparing Tomorrow's Teachers to use  
Technology

These Slides will be posted to:  
<http://electronicportfolios.org/portfolios.html#conf>

### 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

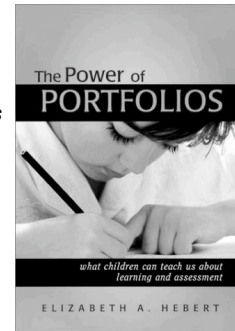
“Everything I know about portfolios was confirmed working with a kindergartener”

### 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

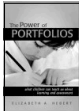
Picture taken by  
Helen Barrett at  
AERA, Seattle,  
April, 2001



### From the Preface (1)

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

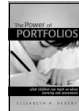
“Portfolios have been with us for a very long time. Those of us who grew up in the 1950s or earlier recognize portfolios as reincarnations of the large memory boxes or drawers where our parents collected starred spelling tests, lacy valentines, science fair posters, early attempts at poetry, and (of 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 collection experiences to help learners as they develop their portfolios?

### 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)

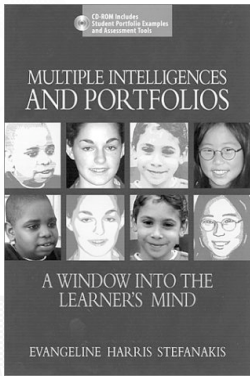
## Portfolio Processes

Traditional + Technology

- Collecting
- Archiving
- Selecting
- Linking/Thinking
- Reflecting
- Storytelling
- Projecting
- Planning
- Celebrating
- Publishing

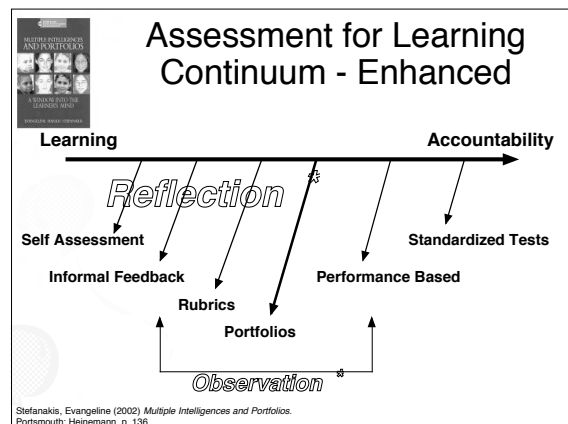
## Purpose & Goals for the portfolio (Determine Content)

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



**A Resource on K-12 Portfolios**

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



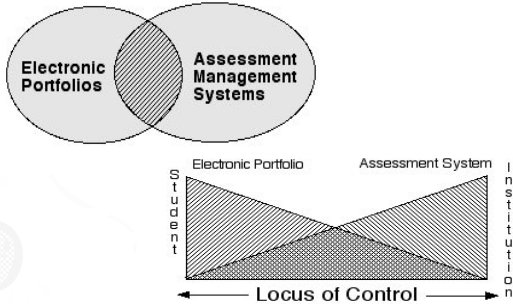
## Which approach should you take?

- Are 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 most often under control of portfolio developer	Visual design and hyperlinks most often controlled by database structure
Student-Centered	Institution-Centered

## Electronic Portfolio or Assessment Management System?



## A few examples of K-12 ePortfolios

- Victoria's Electronic Portfolio (K, 1, 2)  
<http://homepage.mac.com/eportfolios/families/>  
or my Apple Learning Interchange Exhibit
- Middle School ePortfolios  
- examples - Shea - Naya - Naya's story
- High School ePortfolios  
<http://electronicportfolios.org/hs/index.html>

## Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning

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Judy Wilkerson & William Steve Lang

## 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"  
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 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!

## 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**

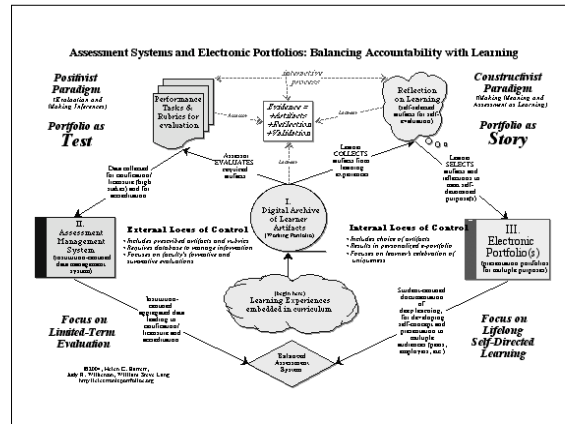
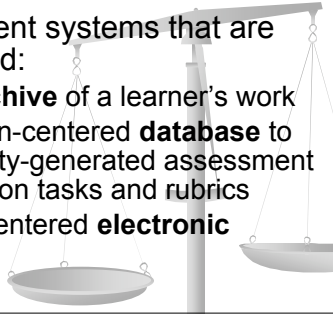
## Voice = Authenticity

- 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

## How can we address both types of portfolios?

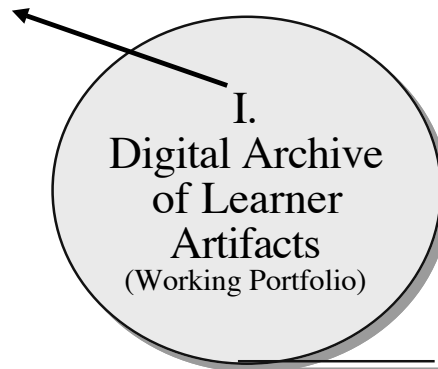
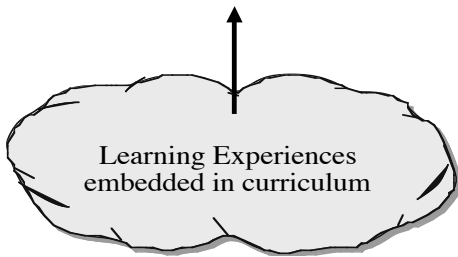
Use three different systems that are digitally linked:

- 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**



Begin Here

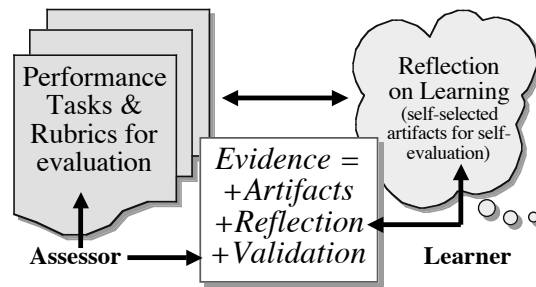
Learning Experiences embedded in curriculum

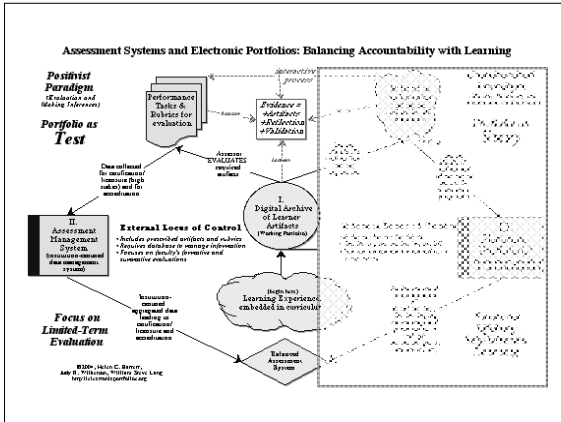


## Interactive Process

*Evidence =  
 + Artifacts  
 + Reflection  
 + Validation*

## Interactive Process

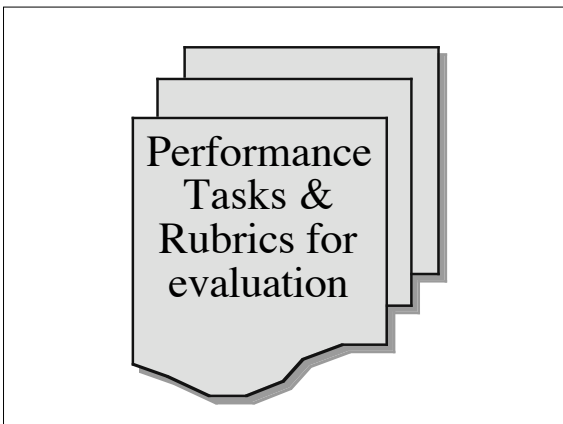




***Positivist Paradigm***  
*(Evaluation and Making Inferences)*

***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)**

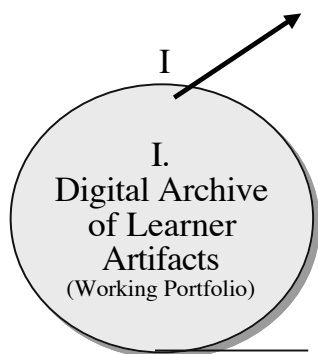
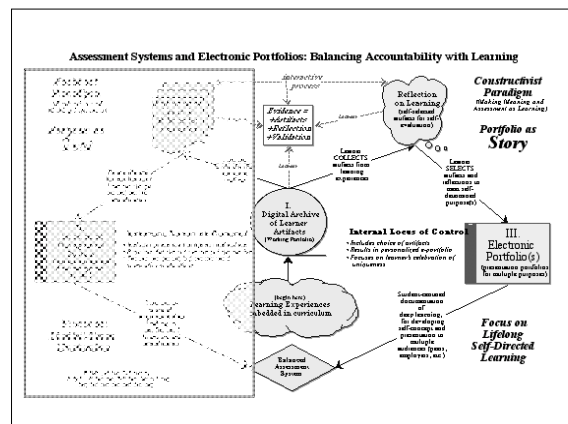
## Resulting in...

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

## Focus on Limited-Term Evaluation

### External Locus of Control

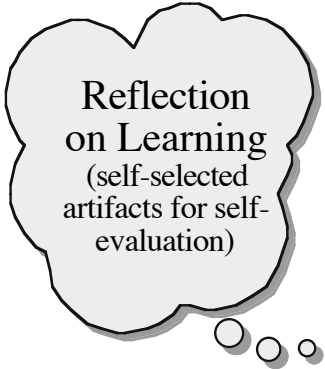
- Includes prescribed artifacts and rubrics
- Requires database to manage information
- Focuses on faculty's formative and summative evaluations



## 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)**



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

**Resulting in...**  
**Student-centered  
documentation of  
deep learning,**  
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



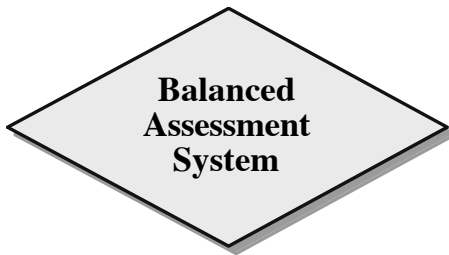
Cambridge (2004)

# *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:**



**One final thought...**

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

**Components of Portfolio  
Development**

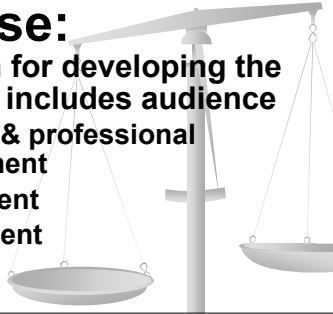
- **Content**
- **Purpose**
- **Process**

**Components of Portfolio  
Development**

- **Content:  
evidence  
(artifacts +  
reflections)**

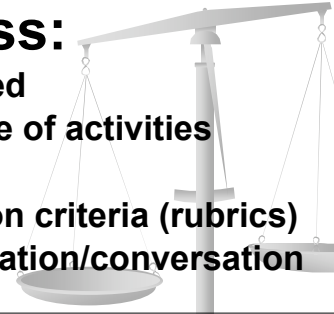
## Components of Portfolio Development

- **Purpose:**  
the reason for developing the portfolio – includes audience
  - Learning & professional development
  - Assessment
  - Employment



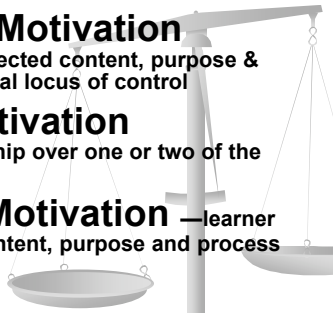
## Components of Portfolio Development

- **Process:**
  - tools used
  - sequence of activities
  - rules
  - evaluation criteria (rubrics)
  - collaboration/conversation

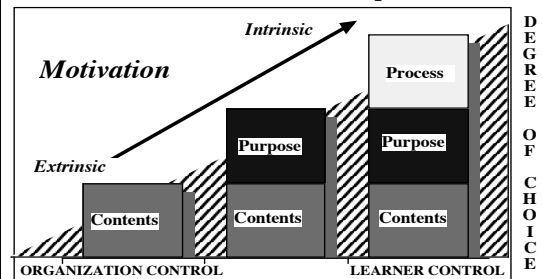


## Developmental Levels of Portfolio Implementation

- **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/>

# Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning

