

## Setting an Agenda for Research on Electronic Portfolios: Past Practices and New Directions

Session 40.057

## Presenters

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## Our Goals

To share knowledge of existing research

To formulate an agenda to guide future  
research

To carry on a dialogue about directions for  
ongoing research

To begin collecting data about electronic  
tools implemented in Teacher Education.

## Issues to Consider

Definitions

Multiple Purposes

Diverse Contexts and Process

## Links to Papers & Presentations Online:

[http://electronicportfolios.org/  
aera/](http://electronicportfolios.org/aera/)

<http://helenbarrett.com/aera/>

## Electronic Portfolio Tools Questionnaire Online:

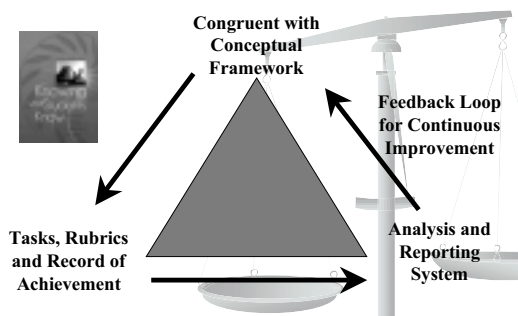
[http://survey.rockman.com/  
iste2/eportfolio.htm](http://survey.rockman.com/iste2/eportfolio.htm)

# Assessment Systems and Electronic Portfolios: Balancing Accountability with Learning

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Judy Wilkerson & William Steve Lang

## Theoretical Frameworks & Definitions

### Accountability System (based on Assessment Triangle)

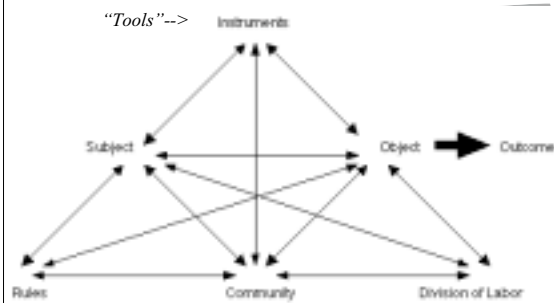


### Congruence with Conceptual Framework

Create a system that is congruent  
with your underlying learning  
philosophy or conceptual framework  
positivism vs. constructivism  
psychometrics vs. hermeneutics  
portfolio as test vs.  
portfolio as story

### Activity Theory

Implications for human-computer interaction



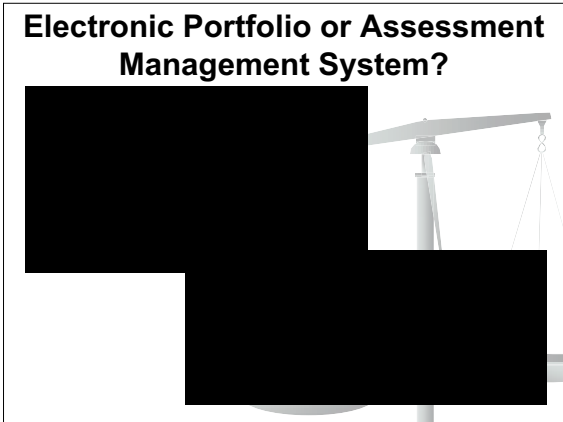
### Which direction are we heading?

Are we currently *implementing*  
electronic portfolios...  
Or *assessment*  
management systems?  
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
<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

### 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

### Research Questions

## 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?

## 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  
To 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

## Deep Learning

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

Cambridge (2004)

## Barrett's Hypotheses

### Tools

to meet goals of balanced assessment and both paradigms

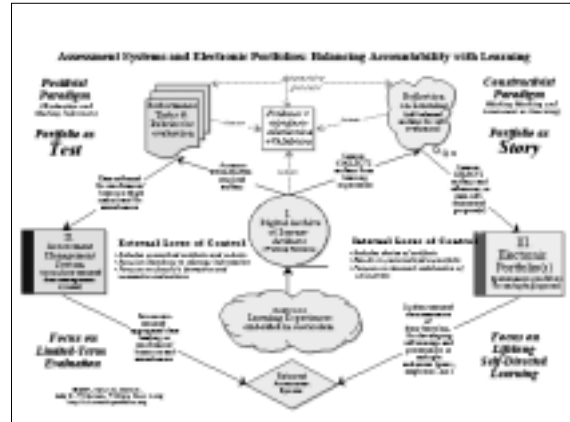
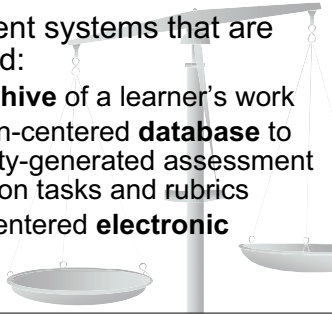
### Motivation

so that learners will want to maintain their portfolios as a "living history of a teaching/learning life"

## How can we address both types of portfolios?

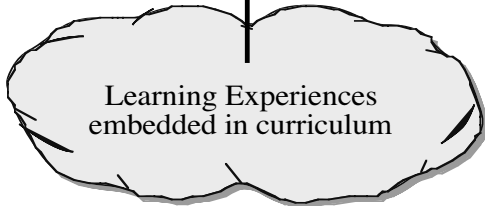
Use three different systems that are digitally linked:

- 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**

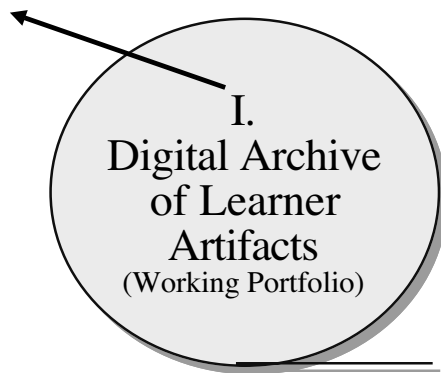


Begin Here

Learning Experiences  
embedded in curriculum



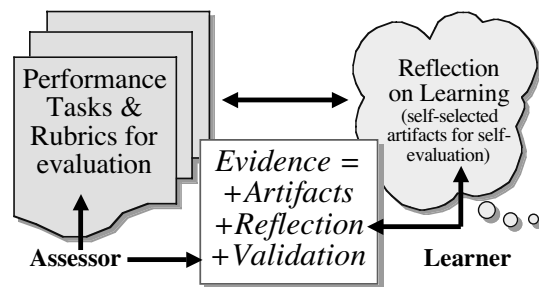
I.  
Digital Archive  
of Learner  
Artifacts  
(Working Portfolio)

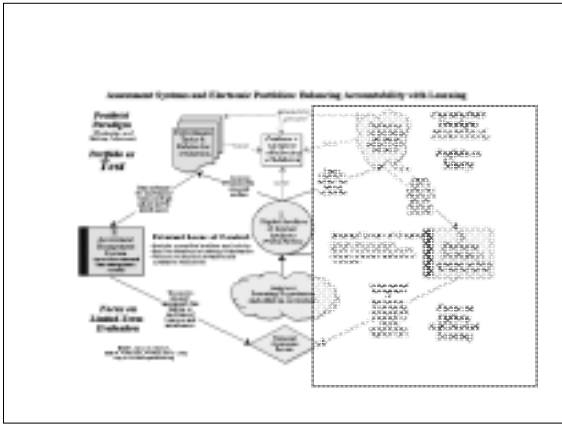


## Interactive Process

*Evidence =  
+ Artifacts  
+ Reflection  
+ Validation*

## Interactive Process

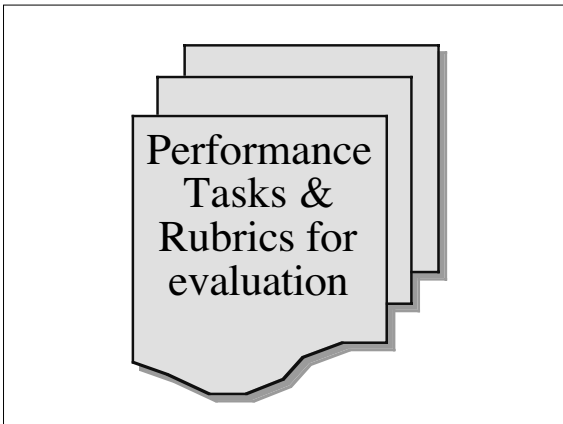




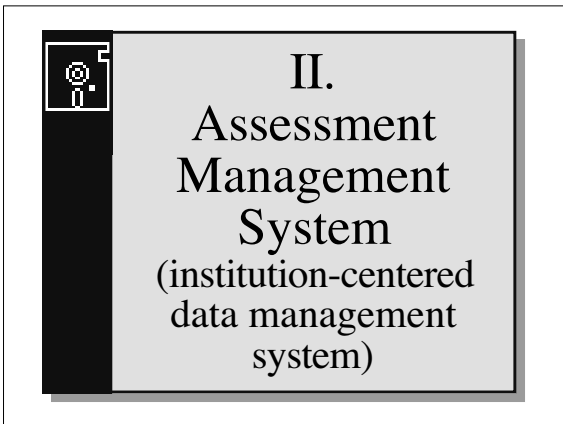
***Positivist Paradigm***  
*(Evaluation and Making Inferences)*

***Portfolio as Test***

**Assessor  
 EVALUATES  
required  
 artifacts**



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



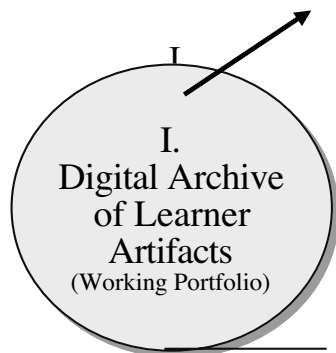
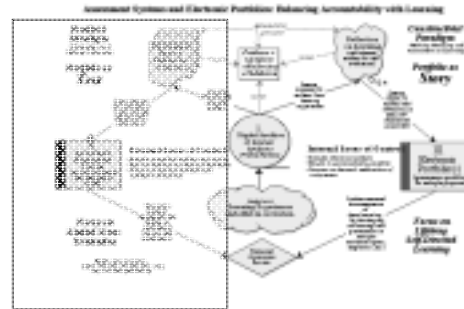
## Resulting in...

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

## *Focus on Limited-Term Evaluation*

### External Locus of Control

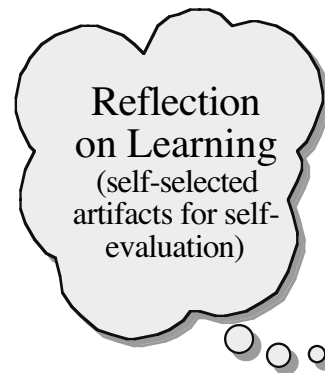
- *Includes prescribed artifacts and rubrics*
- *Requires database to manage information*
- *Focuses on faculty's formative and summative evaluations*



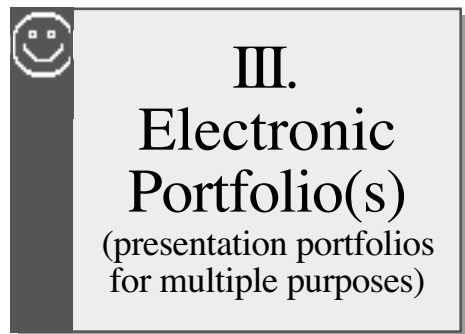
## *Constructivist Paradigm (Making Meaning and Assessment as Learning)*

## *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:



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  
reflection  
evaluation criteria (rubrics)  
collaboration/conversation

## Developmental Levels of Portfolio Implementation

### Extrinsic Motivation

institutional directed content, purpose & process – external locus of control

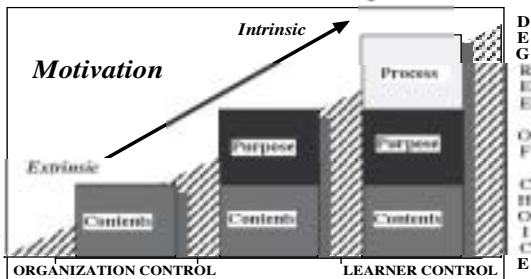
### Mixed Motivation

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

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Grant 2001-2004

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