

As you are coming in...

**What are your questions  
about electronic  
portfolios?**

**What are your decisions  
and dilemmas?**

**Write down on yellow pads**

**SITE 2003**  
**Electronic Portfolios in Education:**  
**Definitions, Dilemmas and Decisions**

**Dr. Helen Barrett**  
**International Society for Technology in**  
**Education (ISTE) &**  
**University of Alaska Anchorage**  
**PT3 Catalyst Grant**

# Questions

How does an electronic portfolio differ from an online assessment management system? Or is there a difference?

What are the multiple purposes that electronic portfolios are developed to address?

Should the purpose define the structure of the portfolio (or does the structure of the portfolio software/system shape the outcome)?

## Questions

In the history of human development, our tools have often shaped the outcomes of our tasks. . .

Does the structure of the electronic portfolio tools that are created/used enhance or limit the outcome of the portfolio development process?

## Questions

Many institutions use the popular term “electronic portfolio” to describe a process that is very different from one place to the next.

Can we (or should we) come up with some common criteria to describe what we mean by the term?

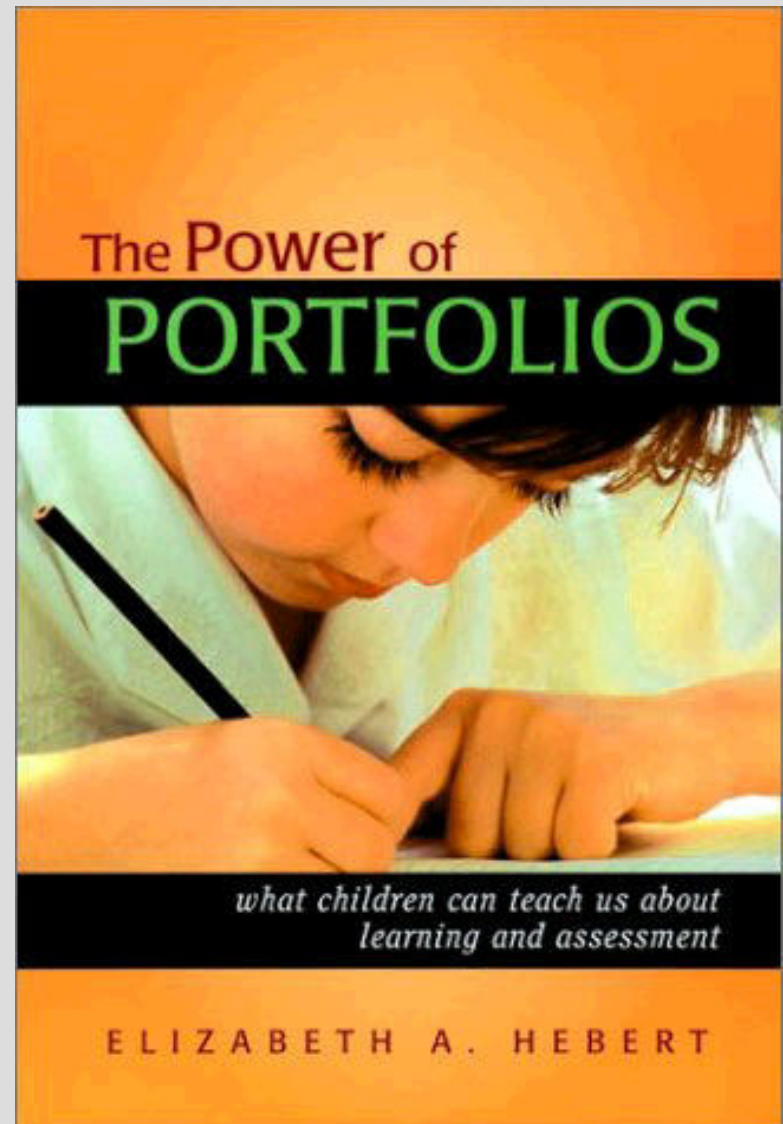
# The Power of Portfolios

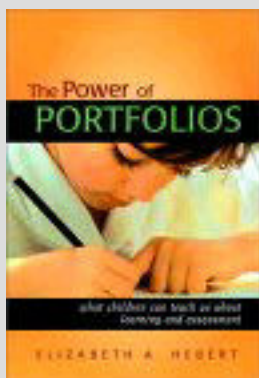
*what children can teach us  
about learning and  
assessment*

Author: Elizabeth Hebert

Publisher: Jossey-Bass

Picture courtesy of Amazon.com





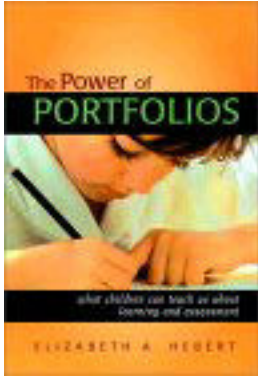
# The Power of Portfolios

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





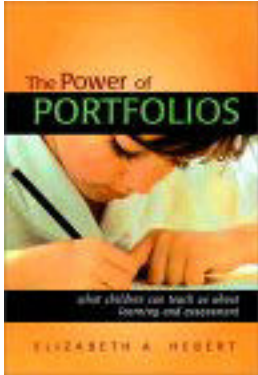
# From the Preface (1)

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.”





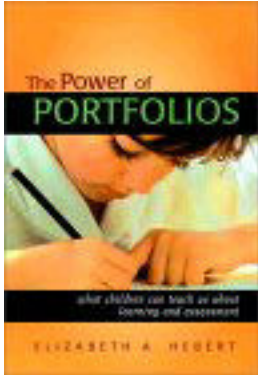


## From the Preface (2)

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...  
Find a partner and share...

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...



# Debrief

- Were there some common themes in your discussion?
- 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 students as they develop their portfolios?





# Definitions

# What is a Portfolio?

**A purposeful  
collection of students'  
work that illustrates  
efforts, progress, and  
achievement [over time]**

**(NW Eval Assoc.)**

# What is an Electronic Portfolio?

- uses electronic technologies as the container
- which allows students/teachers to collect and organize portfolio artifacts in many media types (audio, video, graphics, text)
- using **hypertext links** to organize the material
- connecting evidence to appropriate standards (*in a standards-based portfolio*)

Dr. Mary Diez' Metaphors

(Alverno College)



# The portfolio as Mirror

**Captures the reflective  
nature of the portfolio**  
**Allows students to “see”  
themselves over time**



# Dr. Mary Diez' Metaphors

(Alverno College)

## The portfolio as Mirror



Developmental portfolios are like mirrors because they can allow the student to see their own progress. When students can see their own progress, it has a significant impact on their growth and self awareness. Looking at the reflection in a developmental portfolio can spark an internal reflection that provides a framework for looking at where next to set goals for progress, hence the map symbol for portfolio roles

Dr. Mary Diez' Metaphors  
(Alverno College)

# The portfolio as Map



**Creating a plan and  
setting goals**

# Dr. Mary Diez' Metaphors

(Alverno College)

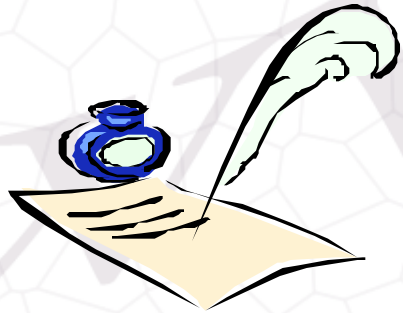
## The portfolio as Map



Self assessment is the primary tool that makes the portfolio like a map. Using explicit criteria the student develops the ability to look at his or her own work and to determine strengths and weaknesses. The student then begins to set goals to address areas for development. The portfolio as map captures the sense of a process made a habit of mind, of a commitment to ongoing professional growth.

Dr. Mary Diez' Metaphors

(Alverno College)



**The portfolio as**

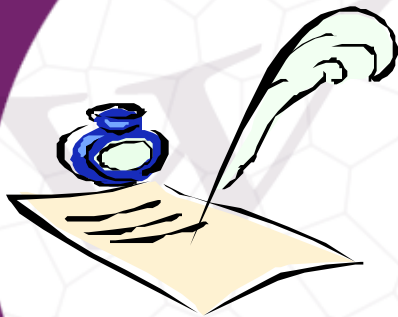
**Sonnet**

**Provides a framework,  
but the contents can  
showcase creativity and  
diversity**

# Dr. Mary Diez' Metaphors

(Alverno College)

## The portfolio as Sonnet



A sonnet must conform to a set of rules but the discipline of these rules offers a measure of freedom. In the same way, the work of portfolio development within established constraints provides a discipline and freedom of structure that allows the student to see his or her own work. Simply following the form of a portfolio does not ensure success, however. In particular, a showcase portfolio demands that all the samples selected must work together to communicate qualifications to a potential employer or evaluator.

## Financial or Professional Portfolio?

**A financial portfolio documents the accumulation of fiscal capital or monetary assets**

**An educational portfolio documents the development of human capital or intellectual assets**

# Professional Portfolios for Teachers

Wilcox & Tomei (1999) Christopher-Gordon  
Publishers, Inc.

**...extends the possibilities  
for portfolios in education by  
going beyond assessment,  
learning, and professional  
development to the use of  
the portfolio as  
a living history of a  
teaching-learning life.**

(p.5)



# Decisions



# Electronic Portfolio Decision Considerations

**PT3 Catalyst Grant focusing on  
Supporting Technology and  
Assessment in Teacher Education**

**Questions to ask**

# Basic Structure for Implementing Electronic Portfolios

- Credit to David Niguidula and Hilarie Davis for the basic structure to think about implementing electronic portfolios:

**Vision**

**Culture**

**Assessment**

**Logistics**

**Use of Technology**

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

**Many purposes:**

**–Learning**

**–Assessment**

**–Marketing/Showcase**

# Audience

(Determine publishing format)

Who are the primary audiences for the portfolio?

- Student
- Parent
- Faculty
- Employer
- College

What technologies do they have?

Assessment - What are the goals for students?  
How is the work assessed?

- Standards
- Rubrics
- Is there a need to aggregate portfolio/assessment data for program assessment purposes?

# Implementing Large Scale Change

**Vision**

(not confusion)

**Skills**

(not anxiety)

**Incentives** (not gradual change)

**Resources** (not frustration)

**Action Plan** (no false starts)

# Curriculum Issues in Teacher Education

**Where is the concept of the e-portfolio introduced to students?**

**Does the curriculum require “appropriate digital artifacts for electronic portfolio?”**

**Is there a course in the curriculum where the students develop their electronic portfolios?**

**How are the portfolios assessed?**

# Culture

**What else has to change for  
the portfolio to be valued  
AND valuable?**

# Collaboration



# Technology - Storage

How much storage to make available  
per student?

–5 MB

–20-30 MB

–650 MB

–Unlimited

# Type of Technology

What MEDIA best convey the messages of the learning journey?

- Text
- Images
- Audio
- Video



"Portfolios tell a story...put in anything that helps to tell the story"

- *Pearl & Leon Paulson, 1991*

# Scarcest Resource: Time

## FACULTY

- Professional Development
- Implementation
- Planning
- Reflection
- Assessment

## STUDENTS

- Collection
- Selection
- Reflection
- Direction



# Electronic Portfolios

A conceptual framework  
©2001, Helen C. Barrett, Ph.D.

<http://electronicportfolios.com>

Purpose

**Learning Portfolios (Formative)**

**Employment Portfolios (Marketing)**

**Assessment Portfolios (Formative and Summative)**

Best Works/ Showcase

Ongoing Professional Development

Collaboration

PDF (Acrobat) on CD-ROM or WWW

HTML posted on WWW

Productivity Tools (i.e., Office, database)

Proprietary software

Assessment Systems

Web-based database

tied into campus information systems

Tools

**Common Tools**

**IT Systems**

Macromedia Director

**Strategies for Implementation**

Individual

Organization

Continuum

Locus of Control

# Directions in Electronic Portfolio Development

## Generic/Common Tools Approach

- MS Office: Word/Excel/PowerPoint
  - Higher level tool software
  - Portable Document Format
  - HTML
  - Multimedia authoring
- + Low startup and maintenance costs
- **Ability to aggregate data for assessment**

## The "5-by-5" Model of Electronic Portfolio Development - Overview of Technology Options

© 2000, Helen C. Barrett	Stages of Electronic Portfolio Development				
Levels of Portfolio Development (based on level of difficulty)	<b>1</b> <b>Defining the Portfolio Context &amp; Goals</b>	<b>2</b> <b>The Working Portfolio</b>	<b>3</b> <b>The Reflective Portfolio</b>	<b>4</b> <b>The Connected Portfolio</b>	<b>5</b> <b>The Presentation Portfolio</b>
	<b>1 - Text only.</b> All documents are in digital file formats, using word processing or other commonly-used software, and stored in electronic folders on a hard drive, floppy diskette or LAN server.	<i>Development Software:</i> Any Word Processor	<i>Development Software:</i> Any Word Processor	<i>Development Software:</i> Any Word Processor	<i>Development Software:</i> Microsoft Word (linking to other Word documents) AppleWorks (linking to other Works documents)
<b>2a - With Graphics.</b> Portfolio data is entered into a structured format, such as a database or HyperStudio template or slide show (PowerPoint or AppleWorks) and stored on a hard drive, Zip, floppy diskette or LAN server. Video may be collected in analog form on video tape. Presentation portfolio may also be recorded on video tape.	<i>Development Software:</i> Database PowerPoint or slide show HyperStudio  Inspiration (mind mapping software)	<i>Development Software:</i> Graphics software Database PowerPoint or slide show HyperStudio  Digital still camera	<i>Development Software:</i> Database PowerPoint or slide show HyperStudio	<i>Development Software:</i> HyperStudio	<i>Storage/Publishing Tools:</i> Videotape (digital-to-analog conversion)
<b>2b - With Audio &amp; Video</b>  Portfolio incorporates digitized audio and video artifacts linked to the portfolio, and stored on CD-ROM or server.		Audio capturing software  Video capturing software (analog-to-digital conversion)	Audio editing software  Video editing software		<i>Storage/Publishing Tools:</i> CD-ROM
<b>3 - With Navigational links</b> Documents are translated into Portable Document Format with "hyper-links" between standards, artifacts, and reflections using Adobe Acrobat Exchange and stored on a hard drive, Zip, Jaz, CD-R/W, or LAN server.		<i>Conversion Software:</i> Adobe PDFWriter or PrintToPDF (Mac only) Acrobat Distiller		<i>Development/Editing Software:</i> Adobe Acrobat Exchange	<i>Storage/Publishing Tools:</i> CD-ROM
<b>4 - With WWW links</b> Documents are translated into HTML, complete with "hyper-links" between standards, artifacts, and reflections, using a web authoring program (i.e., Netscape Composer, Adobe PageMill or CyberStudio, Macromedia Dreamweaver) and posted to a WWW server.		<i>Development &amp; Publishing Software:</i> HTML authoring software	<i>Development &amp; Publishing Software:</i> HTML authoring software	<i>Development &amp; Publishing Software:</i> HTML authoring software  PowerPoint*	<i>Storage/Publishing Tools:</i> WWW Server
<b>5 - With Interactive Multimedia</b> Portfolio is organized with a multimedia authoring program, incorporating digital sound and video is converted to digital format and pressed to CD-R/W or posted to WWW in streaming format.		<i>Development &amp; Publishing Software:</i> Macromedia Director	<i>Development &amp; Publishing Software:</i> Macromedia Director	<i>Development &amp; Publishing Software:</i> Macromedia Director	<i>Storage/Publishing Tools:</i> Streaming Server

# Directions in Electronic Portfolio Development

## IT Customized Systems Approach

- Online database
  - Assessment Management Systems
  - Examples of commercial companies: LiveText, TaskStream, Chalk & Wire, McGraw-Hill's FolioLive, ePortaro, True Outcomes
- Server programming/purchase (or student fee subscription), maintenance & Internet access requirements
- + Ability to aggregate data for assessment

# Pedagogical Requirements

An online portfolio system needs to support a culture of EVIDENCE:

**Evidence =**  
**Artifacts +**  
**Learner Reflections +**  
**Validation or Feedback**



# **Pedagogical Requirements**

**Storage Space**

**Security**

**Linking and Grouping Artifacts**

**Reflection**

**Publishing**

**Portability**

# Storage Space

**To store digital artifacts (with meta-tags)**

**To store learner self-reflection and self-assessment on each artifact**

**To store feedback on each artifact from assessor(s) (independent validation)**

**To store details of the assignment with criteria for assessment (rubrics)**

# Security

**Ability to restrict access, setting permissions to view:**

- **Artifact only**
- **Artifact with reflection**
- **Artifact with reflection and feedback**

**Ability to set permissions separately for faculty to view portfolio and provide feedback on work.**

# Linking and Grouping Artifacts

**Ability to organize portfolio in a variety of ways  
(flexibility in organization)**

- **By standards or learning outcomes**
- **By course**
- **By date (entered, last updated, etc.)**
- **By status of work (Work in progress, ready for assessment, ready for publication)**

**Ability to include:**

- **Goals for portfolio, Contents of portfolio**
- **Learning Goals or Standards**
- **Resume**

# Reflection

**Ability to reflect on a specific grouping of artifacts to make a particular case (i.e., how this collection demonstrates achievement of standards or learning goals)**

**Ability to set learning goals and future direction**

# Publishing

**Ability to create a variety of portfolios, depending on audience and purpose**

**Ability to individualize the portfolio, to allow creativity of expression in the presentation (how to avoid the “cookie cutter” effect or identical “look and feel” of a data-base or template-based portfolio)**

# Portability

**Ability to archive work in a portable format such as:**

- CD-ROM**
- HTML or PDF Archive**
- DVD**

**Learners can take their portfolio to another institution or maintain it on their own.**



# **Dilemmas**



# Joanne Carney's Dilemmas on Electronic Portfolios

- 1. Multiple Purpose Dilemma**
- 2. Personal Revelation Dilemma**
- 3. Cognitive Overload Dilemma**
- 4. Self-Expression Dilemma**
- 5. Dead-End Dilemma**
- 6. Data-Aggregation Dilemma**

**Carney, Joanne (in development) "Campfires Around Which We Tell Our Stories: Confronting the Dilemmas of Teacher Portfolios and New Technologies"**

# **SITUATING PORTFOLIOS**

**WWW**

**FOUR PERSPECTIVES**

**Edited by  
Kathleen Blake Yancey  
Irwin Weiser**

# 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)

# SITUATING PORTFOLIOS

**“ ...as portfolio systems are developed and implemented, teachers need to maintain as much power as possible over how these systems work if portfolios are to deliver on their potential to create important connections among teaching, learning, and assessing.”**

Yancey & Weiser (1997) *Situating Portfolios: An Introduction*.  
Situating portfolios: four perspectives. Ed. Kathleen Blake  
Yancey & Irwin Weiser, Logan, Utah: Utah State University  
Press, p. 14.

# SITUATING PORTFOLIOS

## **Lucas (1992):**

- **...will [portfolios] become merely the newest vehicle to perform the old task, with the result that portfolios will become standardized--with “common assignments” and “clearly defined criteria” and restricting conditions...**
- **...resist the standardization characteristics of mass testing**

Yancey & Weiser (1997) Situating Portfolios: An Introduction. Situating portfolios: four perspectives. Ed. Kathleen Blake Yancey & Irwin Weiser, Logan, Utah: Utah State University Press, p. 13, 14.

Let's See Some Examples

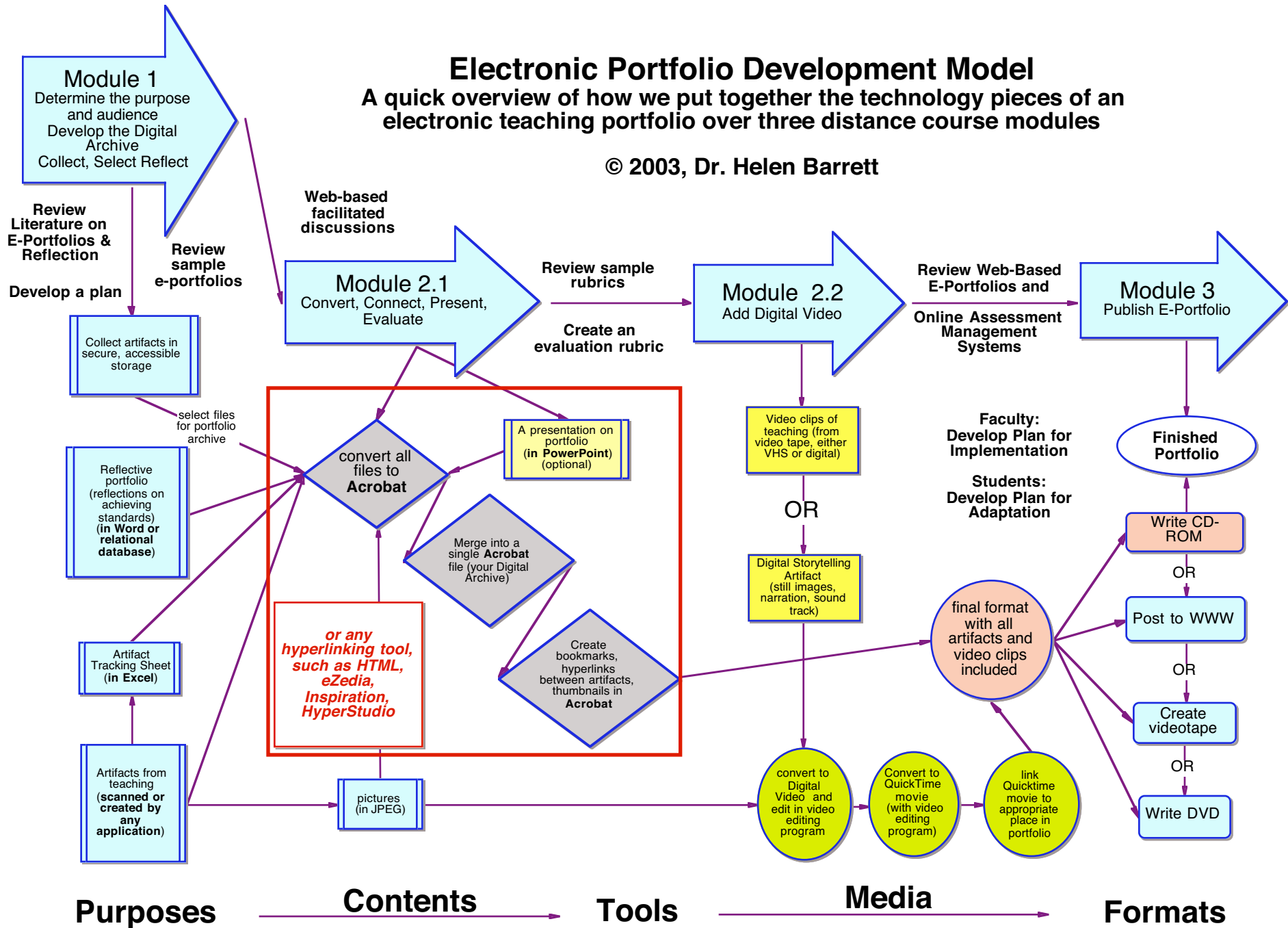
**Teaching Portfolios**

**Early Childhood Portfolios**

# Electronic Portfolio Development Model

A quick overview of how we put together the technology pieces of an electronic teaching portfolio over three distance course modules

© 2003, Dr. Helen Barrett



A Variety of Definitions, Decisions, & Dilemmas

**Above all else...**

**Electronic portfolios  
should provide a  
dynamic environment  
for learners to  
document and  
celebrate their learning  
across the lifespan**



# Contact Information

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**<http://electronicportfolios.com>**

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

# Planning Documents

<http://helenbarrett.com/EPDirections.pdf>

**a paper by David Gibson that outlines issues between generic tools and computer systems approaches**

<http://helenbarrett.com/EPpedissues.pdf>

**a list of pedagogical issues to address when planning for electronic portfolios.**