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

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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)?
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?
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

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

Picture taken by Helen Barrett at AERA, Seattle, April, 2001
“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.”
“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.”
“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

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.

The portfolio as
Map
Creating a plan and setting goals

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.

The portfolio as Sonnet

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

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.
...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
Many purposes:
– Learning
– Assessment
– Marketing/Showcase
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?
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
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
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

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<table>
<thead>
<tr>
<th>Levels of Portfolio Development (based on level of difficulty)</th>
<th>Stages of Electronic Portfolio Development</th>
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<tr>
<td><strong>1</strong> Defining the Portfolio Context &amp; Goals</td>
<td><strong>2</strong> The Working Portfolio</td>
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<tr>
<td>Identify: the portfolio's purpose and audience; the standards (goals) or organizing framework; the resources available (hardware, software, level of technology skills). Select the appropriate level/technology to begin.</td>
<td>Identify, collect and store portfolio artifacts based on purpose/audience/goals. Interject personality into the portfolio design by using appropriate multimedia to add style and individuality to the portfolio.</td>
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| **3** The Reflective Portfolio | **4** The Connected Portfolio |
| Select the artifacts that represent achievement of standards/goals. Reflect on why artifacts were selected, indicating meaning and value to the portfolio. Project learning goals for the future (direction). | Organize the digital artifacts. Create hypermedia links between goals, artifacts, reflections. Identify patterns through the "linking" process. |
| Development Software: Any Word Processor | Development Software: Microsoft Word (linking to other Word documents) AppleWorks (linking to other Works documents) |

| **5** The Presentation Portfolio | |
| Record the portfolio to an appropriate presentation and storage medium. Share the portfolio with an appropriate audience. | Storage/Publishing Tools: Zip Disk or Floppy Diskette or Hard Drive or Server |

<table>
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<tr>
<th>1 - Text only. 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.</th>
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| 2a - With Graphics. 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. | |
| Development Software: Database PowerPoint or slide show HyperStudio Inspiration (mind mapping software) | Development Software: Database PowerPoint or slide show HyperStudio |

| 2b - With Audio & Video 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 |

| 3 - With Navigational links 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. | |
| Conversion Software: Adobe PDF/Writer or PrintToPDF (Mac only) Acrobat Distiller | Development/Editing Software: Adobe Acrobat Exchange |

| 4 - With WWW links 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. | |
| Development & Publishing Software: HTML authoring software | Development & Publishing Software: HTML authoring software PowerPoint* |

| 5 - With Interactive Multimedia 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. | |
| Development & Publishing Software: Macromedia Director | Development & Publishing Software: Macromedia Director |

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Storage/Publishing Tools: Zip Disk or Floppy Diskette or Hard Drive or Server

Storage/Publishing Tools: Videotape (digital-to-analog conversion)

Storage/Publishing Tools: CD-ROM

Storage/Publishing Tools: CD-ROM

Storage/Publishing Tools: WWW Server

Storage/Publishing Tools: 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
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.
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
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
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

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

“…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.”

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

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

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Module 1
Determine the purpose and audience
Develop the Digital Archive
Collect, Select Reflect

Web-based facilitated discussions
Review sample e-portfolios
Review Literature on E-Portfolios & Reflection
Develop a plan

Collect artifacts in secure, accessible storage
Reflexive portfolio (reflections on achieving standards) (in Word or relational database)
Artifact Tracking Sheet (in Excel)
Artifacts from teaching (scanned or created by any application)

Module 2.1
Convert, Connect, Present, Evaluate

Convert all files to Acrobat
A presentation on portfolio (in PowerPoint) (optional)
Merge into a single Acrobat file (your Digital Archive)
Create bookmarks, hyperlinks between artifacts, thumbnails in Acrobat
pictures (in JPEG)

or any hyperlinking tool, such as HTML, eZedia, Inspiration, HyperStudio

Module 2.2
Add Digital Video

Video clips of teaching (from video tape, either VHS or digital)
Digital Storytelling Artifact (still images, narration, sound track)

Create an evaluation rubric
Module 3
Publish E-Portfolio

Review sample rubrics
Review Web-Based E-Portfolios and Online Assessment Management Systems

Faculty: Develop Plan for Implementation
Students: Develop Plan for Adaptation

Review sample e-portfolios

Finished Portfolio

Write CD-ROM
OR
Post to WWW
OR
Create videotape
OR
Write DVD

Purposes
Contents
Tools
Media
Formats

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.
Helen C. Barrett, Ph.D.
hbarrett@uaa.alaska.edu
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.


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