

ACPE 2003
Supporting Electronic Portfolios
in High Schools:
Definitions, Decisions, and Dilemmas

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As you are coming in...

What are your
questions about
electronic portfolios in
High Schools?

What are your decisions
and dilemmas?

Your Questions:

- How to organize
- Why use one?
- Storage strategies
- How do students take it with them
- Monitoring authorship
- Migrate/change to implement
- What's the difference between a portfolio and a collection files

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*)

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

Why do an Electronic Portfolio?

Make work in many media accessible, examinable, widely distributable

- easy to create copies
- portability

Minimal storage space

Learner-centered

Increases technology skills

It's fun

Helen Barrett's Stages of Electronic Portfolio Development

1. **Determine the purpose, audience, content**
2. **Working Portfolio (Developing the Digital Archive) - Digitizing, Storing**
3. **Reflective Portfolio (What? So What? Now What?)**
4. **Connected Portfolio (Creating a hyperlinked document, adding multimedia, making connections)**
5. **Presentation Portfolio (Publishing and Sharing)**

Decisions

Electronic Portfolio Decision Considerations

Questions to ask:

Stage 1

1. **What is the portfolio's purpose?**
2. **Who is the audience?**
3. **What technology do you have? (and what skills?)**

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
- Teacher/School community
- 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?

Culture

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

Collaboration
Partnerships
Leverage

Assumptions

(from the Teacher /Classroom Point of View)

In many schools, students have more computer access in their homes than in their classrooms. Portfolios (whether paper or electronic) belong to the student.

Assumptions

(from the Teacher/Classroom Point of View)

Teachers don't have a lot of extra time... they need a partner in the electronic portfolio development process to help those students who do not have the necessary technology skills.

Assumptions

(from the Child/Family Point of View)

Children and parents are natural "packrats" Technology is becoming very commonplace in the home, even among single-parent families

Scarcest Resource: Time

TEACHERS

- Professional Development
- Implementation
- Planning
- Reflection
- Assessment

STUDENTS

- (and their Families)
- Collection
 - Selection
 - Reflection
 - Direction

Curriculum Issues

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?

Develop an Action Plan



Identify standards (outcomes) to be addressed

Identify curriculum areas to be changed

Create a timeline and milestones

Assign responsibility

Develop a support system

Identify success indicators

Develop rubrics

Provide examples

Planning into Action

Focus on what you can do with current resources (technological & skills)

Designate an ePortfolio champion

Teacher & Principal support

Identify opportunities in the curriculum to develop digital artifacts

Tie support to student needs

Technology Skill level (Teachers & Students)

1. None
2. basic operations
3. proficiency with tool software
4. Web page authoring
5. Multimedia authoring

Types of Evidence in a Portfolio

Artifacts

documents produced during normal academic work

Reproductions

documents of student work outside the classroom

Attestations

documentation generated about student's academic progress

Productions

documents prepared just for the portfolios

- Goal statements
- Reflections
- Captions

- Barton, James & Angelo Collins (1997) Portfolio Assessment: A Handbook for Educators. Dale Seymour Publications, pp. 4-5

Productions

Goal Statements

Student's personal interpretations of each specific purpose for the portfolios

Reflective Statements

Students write as they review and organize the evidence in their portfolios

Captions

Statement attached to each piece of portfolio evidence, articulating what it is, why it is evidence, and of what it is evidence.

Barton, James & Angelo Collins (1997). Portfolio Assessment: A Handbook for Educators. Dale Seymour Publications, pp. 1-2

Stage 2 Creating the Digital Archive

Archive Creation

–Setting up a Storage System

Digital Conversion

–How to convert to digital format (images, sound, video)

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

Stage 3 Constructing the Reflective Portfolio Stage 4 Connections

Reflections

–The Heart and Soul of the Portfolio

Making Connections

–Linking artifacts to standards, outcomes or goals.

What Tools to Use?

What is the best electronic portfolio program???

IT DEPENDS . . .

on the assessment context and a variety of other factors, human and technological, that exist in a classroom, school or district.

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

Directions in Electronic Portfolio Development

IT Customized Systems Approach

- Online database
 - Assessment Management Systems
 - Examples of commercial companies: **LiveText**, **TaskStream**, **Edmin.com's V-ED**,
 - **Northwestern University's Collaboratory**
- Server programming/purchase (or student fee subscription), maintenance & Internet access requirements
- Ability to aggregate data for assessment

Which approach should you take?

Are you looking for an **electronic portfolio...**

Or an **assessment management system?**

What's the difference?

Electronic Portfolio or Assessment Management System?

Electronic Portfolio

- Multiple purposes: Learning, Assessment, Employment
- Data structure varies with the tools used to create the portfolio; most often common data formats (documents often converted to HTML, PDF)
- Primary type of data: qualitative
- Data storage in multiple options: CD-ROM, videotape, DVD, WWW server, LAN
- Visual design and hyperlinks most often under control of portfolio developer
 - Technology skills required: higher
 - Student-Centered

Electronic Portfolio or Assessment Management System?

Assessment Management System

- Single purpose: Formative and Summative Assessment
- Data structure most often uses a relational database to record, report data
- Primary type of data: qualitative and quantitative
- Data storage primarily on LAN or on secure WWW server
- Visual design and hyperlinks most often controlled by database structure
 - Technology skills required: lower
 - Institution-Centered

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)

Technology - Storage

- How much storage to make available per student?
- 5 MB
 - 20-30 MB
 - 650 MB
 - Unlimited

Security

- Ability to restrict access, setting permissions to view:
- o Artifact only
 - o Artifact with reflection
 - o 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)
- o By standards or learning outcomes
 - o By course
 - o By date (entered, last updated, etc.)
 - o By status of work (Work in progress, ready for assessment, ready for publication)
- Ability to include:
- o Goals for portfolio, Contents of portfolio
 - o Learning Goals or Standards
 - o 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 school 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"

Above all else...

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

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<http://electronicportfolios.org>
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Planning Documents

<http://electronicportfolios.org/EPDirections.pdf> outlines issues between generic tools and computer systems approaches

<http://electronicportfolios.org/EPpedissues.pdf> a list of pedagogical issues to address when planning for electronic portfolios.

<http://electronicportfolios.org/ali/> a set of "at-a-glance" guides that address three issues:

1. Digitizing & Storing Artifacts
2. Construction Tools
3. Publishing Formats