


**Electronic Portfolios:  
Decisions and *Dilemmas***

A presentation for *AAHE 2003*  
 by Helen Barrett and Joanne Carney

*Campfires Around Which We Tell  
Our Stories*



Confronting the Dilemmas of Professional  
Portfolios and New Technologies

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Campfires Around Which We Tell Our Stories

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

—Pearl and Leon Paulson

*Technology is the campfire around which  
we tell our stories.*

—Laurie Anderson



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*What stories will be told in the flickering  
glow of electronic portfolios?*

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**Personal experiences that have given me  
insights into portfolio issues —**

- Case study research
- Teacher educator initiating an electronic portfolio program and teaching a course in electronic portfolio design
- Assistant professor constructing her own electronic portfolio for pre-tenure review

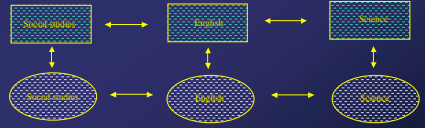
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**Case study research**

Three traditional paper and three electronic  
portfolios authored with generic software tools  
and posted on the web



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### Participants

- Preservice teachers—secondary certification
- Candidates for a Masters in Teaching at a large research university
- In the final quarter of a 5-term teacher education program

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### Research design

- Qualitative methodology
- Sociocultural frame

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### Research question

*How do the portfolios in this setting, with their distinctive profile of technical and psychological tools, help preservice teachers think about and communicate their knowledge of teaching?*

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### Data collection by means of

- Semi-structured interviews
- Think-aloud reports
- Observation
- Analysis of portfolios and other written documents

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All tools have distinctive affordances and constraints (Gibson, 1979).

*How will the affordances and constraints of portfolio authoring technologies interact in a particular setting with our decisions about portfolio content and format?*

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To devise effective portfolio assessment systems for teachers, one must make wise decisions in four key areas:

1. Purpose/audience
2. Ownership
3. Focus
4. Technology

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Dilemmas are inherent in our decision-making:

- Multiple-purpose dilemma
- Personal-revelation dilemma
- Cognitive-overload dilemma
- Self-expression dilemma
- Dead-end dilemma
- Data-aggregation dilemma

### Purpose & Audience

Several reasons for doing a portfolio were suggested to the preservice teachers who were participants in my study; each author had to decide which of these purposes, or combination of them, to embrace.

### Decision:

*For what purpose(s) am I doing this portfolio?*

The two purposes most commonly suggested to teachers for doing a portfolio may be incompatible, if they imply audiences with quite different needs and perspectives — *as they generally do.*

### *Multiple-purpose dilemma*

In suggesting teacher portfolios might accomplish many purposes, we make it likely they will accomplish none of them well; yet suggesting the portfolio is for one purpose only, arouses a certain amount of recalcitrance among preservice teachers, especially among those who are not naturally reflective or who find writing to be laborious.

*What effects did the technology used for authoring electronic portfolios have on these purpose and audience issues?*

### *Personal-revelation dilemma*

The technology that affords teachers the opportunity to share teaching knowledge widely may prove too revealing for novices to deal candidly with problems of practice.

**Personal-revelation dilemma**

At the same time, the technology offers the potential for dealing with the multiple-purpose dilemma:

- Password-protected environments
- Portfolios on CD
- Different portfolios for different purposes
- Use of hypertextual linking to create multiple paths for different audiences.

*What effects did the technology used for authoring electronic portfolios have on these purpose and audience issues?*

Learning the technology as one is trying to reflect deeply about one's practice may result in a "cognitive overload."

**Cognitive-overload dilemma**

The technology that is most effective in helping preservice teachers develop high-level NETS competencies, may at the same time make it difficult for the portfolio authors to achieve important portfolio goals related to content.

However, using the most fully-developed customized systems or traditional authoring tools will mean giving up an excellent opportunity for developing preservice teachers' technological skills.

**Purpose & Audience—Summary**

*How shall we define purpose/audience and use our technologies so as to deal with these three dilemmas?*

**Ownership**

- Who is allowed access?
- What tools are to be used for its construction?
- Where is the portfolio to be stored?

*To what extent is the portfolio an expression of the individual author?*

**Ownership**

In selecting artifacts, a portfolio author is saying:  
"This is who I am as a teacher—*me* doing what I think is good teaching."

### Ownership

Mary Diez (1994) conceived of portfolio as *mirror, map, and sonnet*.

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### *Self-expression dilemma*

Customized systems enable teachers with limited technology skills to create attractive electronic portfolios with relatively little effort, but will they also constrain teachers from making portfolios that are truly an expression of self?

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### *Self-expression dilemma*

On the other hand, teachers will need some facility with the generic tools to be able to create something true to their intentions.

Relatively few teachers have those skills.

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### *Dead-end dilemma*

Using fully-developed CS might result in teachers lacking the skills to author their own portfolios outside the system. And by producing teachers who lack the skills to do web authoring and multimedia design with off-the-shelf tools, we may be, in effect, disempowering them — which has implications for continuing professional development

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### *Dead-end dilemma*

*Will novice teachers have to begin their portfolios anew, making their preservice CS portfolios nearly as much of a dead-end as the traditional portfolios in my study?*

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### Focus (*determined by evaluation standards & rubrics*)

Many programs focus on national standards (i.e., INTASC) to structure and evaluate portfolios. These broad guidelines are not sufficient guides to teacher thinking and portfolio authoring.

Small details in program requirements and rubrics can have big implications for the content of a portfolio.

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Focus

The portfolio authors in my study were focused on teacher action rather than student learning; requiring careful analysis of student work artifacts, especially *non-exemplary* student work would be one way to prompt deep reflection about the inadequacies of a teacher's pedagogy.

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*Data-aggregation dilemma*

Customized portfolio systems are designed for the aggregation of data and are being developed by large institutions with high-stakes interests in that data.

*Might there be a conflict of interest here?*

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*Data-aggregation dilemma*

Ball and Cohen (1999) have called for a new emphasis in teacher education on the investigation of practice—making “systematic study and analysis of *learning* the core of professional education” (p.19).

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*Data-aggregation dilemma*

New technologies may inadvertently contribute to the culture of isolation in the profession—encouraging more defensive posturing by teachers imbued with the idea that the problems of their teaching practice ought to be hidden.

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*We must confront the dilemmas posed by our new technologies and make wise decisions about how to use our tools.*

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