Researching the Process and Outcomes of Electronic Portfolio Development in a Teacher Education Program

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SITE2002

Literature
- There is currently an ambiguity in the literature about the benefits of developing electronic portfolios over the traditional use of paper-based portfolios
- May be due to:
  - Lack of widespread training and implementation of e-portfolios in Teacher Education programs
  - Lack of a conceptual framework, resulting in limited empirical research on electronic portfolios.

UAA’s Context
- 2000-2001 First cohort of a brand new, restructured Professional Development School, Post-Baccalaureate one-year model
- Benefits of two PT3 grants
  - 1999 Capacity-Building Grant
  - 2000 Implementation Grant
- 1999 Title III Partnership Grant

Timeline
- July, 2000 - Interns begin program, technology assessment
- August 2000 - Interns introduced to Portfolio requirement, given use of laptop, workshop on how to keep track of artifacts
- November, 2000 - 2-hour workshop for all interns on using Word to create mid-point portfolio
- December, 2000 - Mid-point portfolio work session with some (not all) interns
- May, 2001 - Capstone course began
- June, 2001 - Portfolio Presentations

Survey
- After the presentations were over, interns were asked to complete a survey

Changes as a result of survey
- Faculty workshop to support the electronic portfolio development in every course.
- Electronic Portfolio Handbook was developed on CD-ROM including Step-By-Step tutorials and videos
- Introduce iMovie earlier in program
- Finish reflective portfolio PRIOR to Capstone course
Electronic Portfolio Survey
Dr. Helen Barrett
University of Alaska Anchorage
June, 2001

Research Questions
1. Does creating an electronic portfolio enhance a teacher candidate's self-esteem?
2. Does creating an electronic portfolio enhance a teacher candidate's multimedia development skills?
3. Do teacher candidates understand the multiple purposes that can be met from creating an electronic portfolio?
4. Do teacher candidates need a support system to develop their electronic portfolios, and are certain types of support more useful than others?

More Research Questions
5. Will multimedia skills gained from the process of developing electronic portfolios transfer to student use in the classroom?
6. Is there a positive relationship between the time spent developing the electronic portfolio, and the teacher candidate's attitude toward their portfolio and whether they will use it in the future?
7. After having full time access to a laptop computer, will teacher candidates want to purchase one when they get a teaching job (for our partner)?

1. Estimate how many hours you spent working on your electronic portfolio: ____hrs

- Average: 70 hours
- Minimum: 21 hours
- Maximum: 150 hours
- St. Dev. 39.4

2. Now that you are finished, how do you currently feel about your electronic portfolio or the process of developing it?

- Generally positive
- Stressful with time crunch at end
- Many wanted to work on it more
- Many liked working with iMovie

Quotes:
- “I feel the portfolio is a type of frosting on the cake”
- “I feel that if could have been better if I had had more time to work on it.”
- “Like I need to redo it! I enjoyed doing it and need to do it again,. Luckily, I have a computer on the way.”
- “I enjoyed reflecting on the portfolio (standards etc.) and I enjoyed assembling the artifacts.”
3. What do you think is the primary purpose for the electronic portfolio that you created?

- Reflection on year (more than 50%)
- Assessment of standards
- Learning
- Setting goals
- Job Search

Quotes:
- “Reflection and growth in ourselves as students and teachers.”
- “Make us think about our work and how it applies to our profession.”
- “I feel the portfolio is a way to reflect and gather all of the info we learned and used.”
- “Mine is to reflect on my own growth and development as a learner and as a teacher and as a human over the course of the year. I am also considering using mine as a tool for principals to use in considering me as a candidate.”

4. In the future, how do you think you will use or adapt the electronic portfolio that you created?

- More than half were not sure they would use their portfolio in the future
- Several mentioned how much they liked iMovie and the video
- Several mentioned use for employment

Quotes:
- “In an ideal setting, which is to say having the necessary available hardware and tech support, I could use this technique with students of my own.”
- “I’d like to keep it updated or at least keep electronic versions of my work in an organized portfolio-type file.”
- “I think I will use the videos and the skills I learned to create a new portfolio with new reflections and with new artifacts as I learn and grow.”
- “Look at it in 10 years and wonder :’(”

5. How could we at UAA have improved the electronic portfolio development process?

- More scaffolding throughout the year
- More support in regular course work
- Start earlier
- More time
- More help
- Make it an ongoing process

Quotes:
- “Scaffold the process - it would have been nice to have addressed a portfolio throughout the year. It would also be beneficial if our methods instructors (common and subject) and/or FIR would remind us what should be accomplished by what point in time. The extent of this process didn’t hit me until the Capstone when it was too late for many things (videos, work samples, etc.)”
6. Do you have suggestions for times during the last year when UAA could have provided more training or support, to keep from leaving so much work for the end of the year?
- More consistently over the year
- During seminars
- Several people suggested weekly sessions
- Teach iMovie at beginning of year

Quote:
- “Train on the digital camera, Powerpoint, iMovie, scanners prior to Capstone course. Have the reflection portion accomplished in Methods class and then just assemble the material in the labs. Have students be aware that they need to collect artifacts throughout the year to support the standards.”

7. Which support resources were useful when creating your electronic portfolio?
   a. Full time use of laptop computer
   b. Handouts provided by instructor
   c. Templates provided by instructor
   d. Open lab hours
7. Which support resources were useful when creating your electronic portfolio?

**e. Lab aide assistance in lab**

Not Used

Used but not useful

Somewhat Useful

Very Useful

Could not complete without it

**f. Class sessions in lab**

Not Used

Used but not useful

Somewhat Useful

Very Useful

Could not complete without it

**g. One-on-one meetings with instructor**

Not Used

Used but not useful

Somewhat Useful

Very Useful

Could not complete without it

**h. Internet-based tutorials**

Not Used

Used but not useful

Somewhat Useful

Very Useful

Could not complete without it

**i. Help from a friend or relative**

Not Used

Used but not useful

Somewhat Useful

Very Useful

Could not complete without it

8. When did you learn each of the following multimedia development skills?

**a. Set up folders to organize files on computer hard drive**

I don't know this skill

Capstone Course

Spring 2001

Summer/Fall 2000

Before entering program
8. When did you learn each of the following multimedia development skills?

b. Use File Sharing to copy files to and from laptop and another computer

<table>
<thead>
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<th>Spring 2001</th>
<th>Capstone Course</th>
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<tbody>
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8. When did you learn each of the following multimedia development skills?

c. Use the Location Manager on the iBook to change preferences

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8. When did you learn each of the following multimedia development skills?

d. Use advanced features of Microsoft Word

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8. When did you learn each of the following multimedia development skills?

e. Use advanced features of Microsoft PowerPoint

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8. When did you learn each of the following multimedia development skills?

f. Use a digital camera to take pictures

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8. When did you learn each of the following multimedia development skills?

h. Transfer video into a computer for editing

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8. When did you learn each of the following multimedia development skills?

i. Edit a digital video using iMovie (or other program)

j. Record digital audio to the computer with a microphone

k. Create and edit Adobe Acrobat files from a variety of computer applications

m. “Burn” a CD-ROM

9. Do you think you will use these multimedia skills with your students when you get your own classroom?

10. After having use of a laptop all year, are you planning to buy your own laptop computer by the time you get a teaching job?
Need for more Research

• Develop a survey that can be adapted and delivered to students in Teacher Ed Programs throughout the country
• Need for more data collection and longitudinal research on the perceptions of teacher candidates and faculty on the value and purpose of electronic portfolios

More questions and issues

• Do the benefits extend to the classroom and enhance student learning?
• Is the extra effort worth it? (only one study included this year compares paper-based and digital portfolios).
• The time is right to move beyond implementation issues to research and evaluation.