




REFLECT Initiative

Researching Electronic portfolios: Learning, Engagement, Collaboration through Technology

Researching and Developing a Continuum of E-Portfolios for Tomorrow's Teachers



Why The Reflect Initiative?

- Empirical evidence on effectiveness of e-portfolios in secondary schools
- Use portfolios to complement standardized tests
- Conduct a meta-study made of many smaller studies

The Goal:

- To collect data and draw conclusions about the impact of electronic portfolio on:
 - student learning
 - Motivation
 - Engagement

...in secondary schools

The Vision of REFLECT

To provide the teachers with the training and the students with the tools:

- To tell their *stories* with *pride*!
- To put *heart* and *soul* and *voice* into their portfolios!

What participants received:

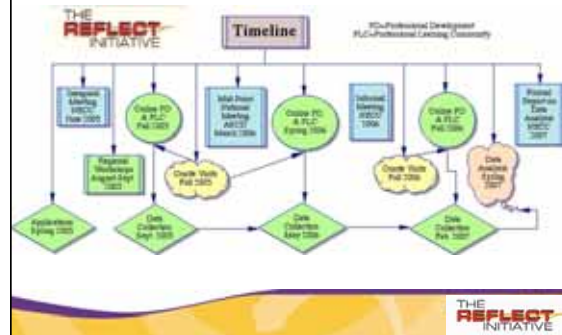
- Free web-based software for all student participants
- Free regional workshops –12 hours (Aug-Sept. 2005)
- Onsite visits (one a year)
- Mid-point meeting March 2006
- Online community for teacher professional development

How Were Schools Chosen?

- Schools submitted a proposal for their project in Spring 2005
- All participating organizations needed to send at least one representative to the Inaugural meeting (Philadelphia just prior to NECC 2005)
- Students must participate (and be supported) for the length of the entire program (2 years)



Timeline



Key Research Questions

- How do e-portfolios provide evidence of deep learning?
- Under what conditions can e-portfolios be successfully used to demonstrate assessment for learning and assessment of learning?
- Under what conditions do students take ownership of their e-portfolios?
- What are the benefits of developing e-portfolios as perceived by students, teachers, administrators, and/or parents?
- What are perceived obstacles to implementing e-portfolios with secondary school students and how can they be overcome?
- How do paper portfolios differ from e-portfolios?

To be reported at NECC 2008



Theoretical Framework (White Paper-IRA*)

- **Reflection** (Moon, Alterio & McDrury)
- **Motivation** (Deci & Ryan)
- **Student Engagement** (Schlechty)
- **Project-Based Learning** (Buck Institute, GLEF)
- **Technology Standards** (ISTE)
- **Portfolio Development:**
 - Teachers (Lyons, Shulman)
 - K-12 Students (Hebert, Davies, Mahoney, Stefanakis)
 - Post-Secondary (Yancey, Cambridge)
- **Assessment FOR Learning** (Stiggins, Davies, QCA)

* Published in IRA's JAAL, March 2007



Summary of Research Protocols

- **Pre:** Fall 2005 (Dec-Jan)
 - Online surveys of students and teachers (UNT)
- **Ongoing:** Teacher Journals & Professional Portfolios
 - Discussion Groups
- **Site Visit observations:** Winter 2005/Spring 2006
 - Focus on introduction and implementation by teachers
- **Mid:** Spring 2006 (May)
 - Online surveys of students and teachers
 - Teacher journals & professional portfolios (with feedback provided)
- **Site Visit observations:** Fall 2006/Spring 2007
 - Student Focus Groups
- **Post:** Spring 2007 (May)
 - Online surveys of students and teachers
 - Teacher journals

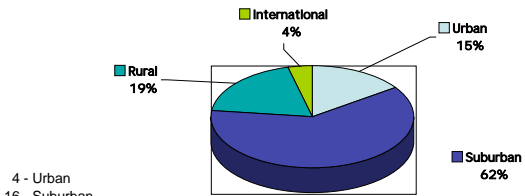


Overall Cohort – Year 1

- **15 Active Projects**
 - Arizona (2+1*)
 - New Jersey
 - California (2+3*)
 - Florida*
 - Maryland
 - Michigan
 - Brazil
 - Tennessee
 - New York
- **26 Active Schools**
 - 6 in Arizona DOE Project
 - 4 in New Jersey DOE Project
 - 1 Elementary School
 - 1 Intermediate School
 - 23 High Schools
 - 2 Private Schools (MD & FL)
 - 1 International School
- **~60 Active Teachers**
- **~2400 Students completed one or more survey out of ~3100 active students**



School Demographics



4 - Urban
16 - Suburban
5 - Rural*
1 - International

*more than 50 miles from a Major Metropolitan Area



Arizona Teacher Education Project

- Creating a continuum of e-portfolios
 - High school → Community College → University
 - Who are all utilizing e-portfolios in AZ Teacher Ed programs
 - Part of the teacher education career pathway
 - Student Career Plans



AZ Teacher Education Project

Education Professions

- Education Professions is an Arizona Department of Education, Career and Technical Education program for high school students who have an interest in pursuing a career in the field of education.
 - Lead by Jan Brite – Education Specialist –ADE
 - Over 60 schools and 900 students
 - 8 active schools in REFLECT; 150 students



Student Demographics (AZ CTE only)

Male	13	18%
Female	60	82%



Computer Access at Home – AZ Students

- 95% have a computer at home
- 90% have Internet access at home
- How many hours do you use computers and the Internet **at home**?

Hours using at home	Computers	Internet
0 hours per week	14%	15%
1-4 hours per week	37%	42%
5-10 hours per week	23%	21%
10-20 hours per week	18%	15%
More than 20 hours per week	8%	7%

N=73



Computer Access at School – AZ Students

- How many hours do you use computers and the Internet **at school**?

Hours using at school	Computers	Internet
0 hours per week	25%	25%
1-4 hours per week	68%	70%
5-10 hours per week	7%	5%
More than 10 hours per week	0%	0%

N=73



Initial Observations from Year 1 Site Visits

- Teacher's role is critical
 - Dual learning curve
 - Learning TaskStream (prior experience in TED program)
 - Using portfolios with students (prior paper portfolio experience)
 - Understanding reflection and metacognition
 - Using Assessment FOR Learning strategies (quality feedback)
 - Technology integration strategies
 - Support system or close collaborator
- Access to technology is also critical
 - Home access by students
 - Classroom access impact on in-school use (scheduling)



Findings from Year 2 Student Focus Groups

- Students...
 - liked using TaskStream - helped them keep **organized**
 - liked access from home - no access to school networks from home
 - said it helped them do their assignments (especially those sites using a DRF)
 - most planned to use portfolios after they graduate
 - compared to MySpace - saw different purpose - about the same ease-of-use
 - wanted more individuality and creativity in TaskStream based on MS
 - perceived purposes: college applications, keeping work organized, seeing growth over time,
 - both **reflection** and **feedback** in the portfolio helped their learning
- Audio Quotes
 - Dobson High School 12/4/06



14.3 hours recordings
43 sessions
19.9 av. minutes

AZ Ed Professions Students

Questions about Your E-Portfolio

Instructions: Select how you feel about your portfolio with each statement.
My e-portfolio... from (select) Type: (select state) (select element) from Author: (select) 17 Author Responses

Rated Neutral	Total	1	2	3	4	Average	SD or D	SA or A
1. Has been fun to do	17	0%	24%	53%	18%	2.8	29%	71%
2. Has made me more interested in my work	17	0%	41%	47%	12%	2.7	43%	59%
3. Has taken up too much time in class	17	24%	36%	36%	0%	2.9	32%	18%
4. Has taken up too much time outside class	17	41%	41%	18%	0%	1.8	62%	18%
5. Is good for doing my progress to other people	17	0%	24%	65%	11%	3.0	18%	82%
6. Tells me about what my friends are learning	17	24%	36%	36%	0%	2.4	39%	41%
7. Helps me think more about my own learning	17	18%	24%	35%	24%	2.7	41%	59%
8. Gives me enough space to show all the stuff I want	17	0%	18%	35%	47%	2.9	24%	76%
9. Makes me take more time with my work	17	12%	24%	41%	18%	2.7	41%	39%
10. Helps me to show people what I really good at	17	0%	0%	12%	24%	2.2	0%	94%
11. Gives me new ways of presenting my work using technology	17	0%	12%	65%	24%	3.2	12%	88%
12. Helps me to be creative	17	12%	24%	65%	0%	2.8	33%	65%
13. Helps me to plan better in classes	17	12%	24%	47%	18%	2.7	33%	65%
14. Helps me to plan better in projects	17	0%	24%	53%	24%	2.7	33%	65%
15. Helps me judge whether I have improved over time	17	0%	24%	65%	12%	3.0	29%	71%
16. Is good for showing my progress to other people	17	0%	18%	65%	17%	3.1	18%	82%
17. Has helped me understand my work better	17	0%	36%	47%	18%	2.8	33%	65%
18. Has made me plan better in all my projects	17	0%	24%	47%	29%	2.8	33%	65%
19. Is something I would like to do again in the future	17	12%	12%	53%	24%	2.8	24%	76%
20. Has helped me to learn	17	0%	35%	47%	18%	2.8	33%	65%
21. Was easy to do because teachers helped me	17	0%	0%	12%	24%	2.2	0%	94%
22. Found me to do things that teachers should have done for me	17	12%	36%	24%	28%	2.2	71%	29%
23. Has helped me to give feedback on each other's work	17	0%	12%	53%	24%	2.1	18%	82%

Response Legend: 1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

Surveys available online

- electronicportfolios.org/reflect/research.html
- GoogleDocs versions:
electronicportfolios.org/surveys.html

ePortfolio Surveys

The following surveys were adapted by Dr. Helen Barrett for gathering data about electronic portfolio use with both teachers and students. These surveys were initially used in the REFLECT Initiative, a research project supported by Taskstream, Inc. and are now reproduced using the GoogleDocs Forms tool as part of the GoogleDocs Spreadsheet.

Teachers	Students
<ul style="list-style-type: none"> Elizabeth Hammett Young's parallel survey for teachers (24 questions plus demographic data) Dr. Helen Barrett's survey for teachers on Portfolios, Reflection and Assessment 	<ul style="list-style-type: none"> Elizabeth Hammett Young's parallel survey for students (24 questions plus demographic data) Dr. Helen Barrett's survey for students on Portfolios, Reflection and Assessment



Looking Back

Success factors

- Content areas: Language Arts, Social Studies and multi-disciplinary
- School-wide or leader-led (at minimum, a pair of teachers)
- Strong principal support
- Suburban schools
- Student-centered philosophy of use
- Teacher leadership



Recommendations for Future R & D

- Support and follow students in one or two schools for the full four years of high school
 - Collect data on high school graduation portfolio development (more longitudinal)
- Develop a different model of training teachers in high schools
 - Two days of hands-on "Training of Trainers" in the summer is not enough for most high school teachers
- Develop a different model of supporting high school students (since a lot of the hands-on work happens at home)
 - Online video tutorials
- Focus on multiple schools in a single state, with the same statewide assessment requirements



If you want to implement ePortfolios...

- Don't go it alone - need a community of practice
- What's your purpose? Audience?
- Questions to ask
- NETS Essential Conditions Rubric

- Web page for conference presentation and paper
electronicportfolios.org/reflect/



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- <http://www.reflectinitiative.com/>
- <http://electronicportfolios.org/reflect>

