REFLECT Initiative
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)

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?

Timeline

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

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)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>18%</td>
</tr>
<tr>
<td>Female</td>
<td>60</td>
<td>82%</td>
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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?

<table>
<thead>
<tr>
<th>Hours using at home</th>
<th>Computers</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 hours per week</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>1-4 hours per week</td>
<td>37%</td>
<td>42%</td>
</tr>
<tr>
<td>5-10 hours per week</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>10-20 hours per week</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>More than 20 hours per week</td>
<td>8%</td>
<td>7%</td>
</tr>
</tbody>
</table>

N=73

Computer Access at School – AZ Students

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

<table>
<thead>
<tr>
<th>Hours using at school</th>
<th>Computers</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 hours per week</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>1-4 hours per week</td>
<td>68%</td>
<td>70%</td>
</tr>
<tr>
<td>5-10 hours per week</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>More than 10 hours per week</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

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

Surveys available online

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

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