REFLECT Initiative
Researching Electronic Portfolios in Secondary Schools

Developing a Continuum of E-Portfolios for Tomorrow’s Teachers

Introductions
- Who we are
- Who you are - where are you from?
- Why are you here in this session? What questions do you have

Research Project Sponsor
- TaskStream
  Comprehensive Internet-based toolset for Standards-Based Curriculum Planning and Assessment, Electronic Portfolios
- States’ Career Clusters has approved TaskStream to facilitate a turn key, Web-based infrastructure for the competency-based career pathways or programs of study.

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 receive:

- Free web-based software for all student participants
- Free regional workshops (Aug-Sept. 2005)
- Onsite visits (one a year)
- Online professional development for all teacher participants

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)

Research Project Factors

- Professional Development
- Stabilizers
- Teacher's Focus
- Strategies
- Technology
- Learning Environment
- Higher Level
- Problem Based Learning
- Experimental Experiences
- Action Research
- Innovations

Timeline

- Fall 2004: Orientation
- Spring 2005: Inaugural Meeting (Philadelphia, NECC)
- Fall 2005: Project Launch
- Summer 2006: Mid Year Training
- Fall 2006: Evaluation
- Spring 2007: Final Reporting
- Summer 2007: Project Close Out
- Fall 2007: Visit Project Sites
- Fall 2007: Final Reporting
What Type of Portfolio?

**Presentation Portfolio**
- Gives student ownership
- Flexible structure

**Assessment Portfolio (DRF)**
- Provides rigid structure
- Provides school with evaluation data

Overlap of Assessment Types

- **Portfolios that support Assessment**
  - Assessment FOR Learning
  - Institution-centered

- **Portfolios that support Assessment**
  - Assessment OF Learning
  - Learner-centered

Some 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?

Summary of Research Protocols

- **Pre:** Fall 2005 (Dec-Jan)
  - Online surveys of students and teachers (UNT)
- **Ongoing:** through Online PD & Teacher Journals (blogs)
  - Sample student ePortfolio reviews
- **Site Visit observations:** Winter 2005/Spring 2006
  - Focus on introduction and implementation by teachers
- **Mid:** Spring 2006 (May)
  - Online surveys of students and teachers
- **Site Visit observations:** Fall 2006/Spring 2007
  - Add Student Focus Groups
- **Post:** Spring 2007 (March-May)
  - Repeat online surveys of students and teachers (UNT)
  - Paper survey of parents (English & Spanish) (tentative)
  - Student ePortfolio reviews

Overall Cohort

- **15 Active Projects**
  - Arizona (3)
  - New Jersey
  - California (5)
  - 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**
- **~3100 Students**
  - Could double in Year 2

Arizona Teacher Education Project

- Our REFLECT Project is a partnership with the National Center for Teacher Education - Maricopa Community Colleges and the Arizona Department of Education- Education Professions Program
Arizona Teacher Education Project

- Why this partnership in REFLECT?
  - Role of community colleges in teacher education
    - Nationally
    - Arizona (Maricopa Community Colleges)
  - Critical need for teachers
    - Areas of greatest need
  - The importance of this project for students, schools, & higher education

Arizona Teacher Education Project

- Creating a continuum of e-portfolios
  - High school → Community College → University
    - Who is utilizing e-portfolios in AZ
  - 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

AZ Teacher Education Project

- Created in 2003; Based on Teacher Cadet
- Programs standards were developed through a large curriculum development team consisting of representatives from higher education teacher preparation programs, organizations, school districts and classroom teachers.
- Field experience component
- Dual enrollment opportunities

National Study Data from Teachers

With Student Data from the Arizona CTE Project Only

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>18</th>
<th>33%</th>
</tr>
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<tbody>
<tr>
<td>Female</td>
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<td>36</td>
<td>67%</td>
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<table>
<thead>
<tr>
<th>Degree</th>
<th>Count</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Bachelors Degree</td>
<td>24</td>
<td>44%</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>20</td>
<td>37%</td>
</tr>
<tr>
<td>Ed. Specialist Degree</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>4</td>
<td>8%</td>
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</table>
Student Demographics (AZ CTE only)

- 82% Female
- 18% Male
- 4.1% Don’t know

Goals (How far do you think you will go in school?)

- 39.7% Masters Degree
- 41.1% Bachelors Degree
- 1.4% Associates Degree
- 1.4% High School Diploma
- 26% Doctoral or Advanced Degree

Computer Access at Home - Teachers

- 96% have a computer at home
- 93% 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>
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<tbody>
<tr>
<td>0 hours per week</td>
<td>7%</td>
<td>13%</td>
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<tr>
<td>1-4 hours per week</td>
<td>24%</td>
<td>31%</td>
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<tr>
<td>5-10 hours per week</td>
<td>33%</td>
<td>35%</td>
</tr>
<tr>
<td>10-20 hours per week</td>
<td>26%</td>
<td>13%</td>
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<tr>
<td>More than 20 hours per week</td>
<td>9%</td>
<td>7%</td>
</tr>
</tbody>
</table>

N=54

Computer Access at Home - 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>23%</td>
<td>21%</td>
</tr>
<tr>
<td>5-10 hours per week</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>10-20 hours per week</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>More than 20 hours per week</td>
<td>8%</td>
<td>7%</td>
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N=73

Computer Access at School - Teachers

- 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>0%</td>
<td>2%</td>
</tr>
<tr>
<td>1-4 hours per week</td>
<td>15%</td>
<td>48%</td>
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<tr>
<td>5-10 hours per week</td>
<td>24%</td>
<td>28%</td>
</tr>
<tr>
<td>More than 10 hours per week</td>
<td>61%</td>
<td>22%</td>
</tr>
</tbody>
</table>

N=54

Computer Access at School - 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

C-BAM - Stages of Implementation

Stage 1: Awareness - I am aware that _______ exists but have not used it. - perhaps I'm even avoiding it. I am anxious about the prospect of using ________.

Stage 2: Learning the process - I am currently trying to learn the basics. I am sometimes frustrated using ________, I lack confidence when using ________.

Stage 3: Understanding and application of the process - I am beginning to understand the process of using ________ and can think of specific tasks in which it might be useful.

Stage 4: Familiarity and confidence - I am gaining a sense of confidence in using ________ for specific tasks. I am starting to feel comfortable using ________.

Stage 5: Adaptation to other contexts - I think about ________ as a tool to help me and my students and am no longer concerned about it as ________. I can use it in many applications and as an instructional aid.

Stage 6: Creative applications in new contexts - I can apply what I know about ________ in new and innovative ways. I am able to use it as an instructional tool and integrate it into the curriculum.
### C-BAM - Levels of Use

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 0: Non-Use</td>
<td>I have little or no knowledge of _____, no involvement with it, and I am doing nothing toward becoming involved.</td>
</tr>
<tr>
<td>Level 1: Orientation</td>
<td>I am seeking or acquiring information about _____,</td>
</tr>
<tr>
<td>Level 2: Preparation</td>
<td>I am preparing for the first use of _____,</td>
</tr>
<tr>
<td>Level 3: Mechanical Use</td>
<td>I focus most effort on the short-term, day-to-day use of _____, with little time for reflection. My effort is primarily directed toward mastering tasks required to use _____,</td>
</tr>
<tr>
<td>Level 4A: Routine</td>
<td>I feel comfortable using _____, however, I am putting forth little effort or thought to improve _____ or its consequences.</td>
</tr>
<tr>
<td>Level 4B: Refinement</td>
<td>I vary the use of _____ to increase the expected benefits within the classroom. I am working on using _____ to maximize the effects with my students.</td>
</tr>
<tr>
<td>Level 5: Integration</td>
<td>I am combining my own efforts with related activities of other teachers and colleagues to achieve impact in the classroom.</td>
</tr>
<tr>
<td>Level 6: Renewal</td>
<td>I reevaluate the quality of use of _____, seek major modifications of, or alternatives to, present innovation to achieve increased impact, examine new developments in the field, and explore new goals for myself and my school district.</td>
</tr>
</tbody>
</table>

### School Demographics

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

*more than 50 miles from a Major Metropolitan Area*

### Site Visits

- 1 day classroom observation + conversation with teachers
- 4-8 page report with these topics:
  - Observation of Technology and TaskStream Use by Students
  - Rolling it Out: Planning and Early Implementation
  - General use of goals for TaskStream in this implementation
  - Computer Environment in the School
  - Implementation of Research Requirements
  - School Environment
  - General feelings about TaskStream and ePortfolios from teachers
  - Professional Development Needs
  - Review of Project Goals from the original Proposal
  - Observations and Comments on the Progress of Implementation

### Who is Implementing? (from 20 Site Visits)

- **“One-sies” - Single teacher in a school**: 9
- **“Two-sies” - Two teachers in a school**: 4
- **Leader-led - tech coordinator supporting more than two teachers**: 6
- **Level-wide - all students in a grade level, multiple teachers**: 2
Level of Implementation (from 20 Site Visits)

- **Low** - students using TaskStream primarily as online storage - little or no interactive feedback (teacher-to-student)
- **Medium** - promising, emerging use of TaskStream - using DRF - some interactive feedback (primarily teacher-to-student)
- **High** - creative use of TaskStream and/or other technologies, including DRF or multimedia, high levels of interactive feedback (including student-to-student)

Curriculum Areas (from 20 Site Visits)

- Technology (3)
  - English/Language Arts or Foreign Language (6)
  - Social Studies (2)
  - Career & Technical Education (CTE) (4)
  - Multiple disciplines (5)

Initial Observations from 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)

Looking Ahead... 2006-7 School Year

- Initial Surveys for second cohort
  - Using Survey Builder and DRF within TaskStream
  - Student Survey (UNT’s CAQ)
  - Faculty Survey (UNT’s TAC, CBAM, Davies/Stiggins AFL strategies)
- Teachers submitted products and received feedback
  - Weekly Journal
  - Professional Portfolio
- Phase 2 Professional Development (Pedagogy)
  - Online Discussions
  - Site visits to selected schools throughout Spring 2007
- Final Survey focus specifically on Portfolio Use
- Possible Parent Survey (paper-based in English and Spanish)
Findings from Student Focus Groups

- Students...
  - liked using TaskStream - helped them keep organized
  - found it easy to use
  - said it helped them do their assignments
  - planned to use it after they graduate
- Audio Quotes
  - Dobson High School 12/4/06

Examples of portfolios

- Mine
- CTE DRF
- (Pack n Go versions)

Validating my dissertation research

- When learning new **tools**, use familiar **tasks**
- When learning new **tasks**, use familiar **tools**

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

Dr. Helen Barrett

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