

REFLECT Initiative

Researching Electronic portfolios: Learning, Engagement, Collaboration through Technology

Researching Electronic Portfolios in Secondary Schools

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





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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.




The screenshot shows the TaskStream website with a navigation menu on the left, a search bar, and a main content area titled 'Many Needs - One Solution'. It features several promotional boxes for 'The Universal Toolset for Demonstrating Learning Achievement' and 'Electronic Portfolios'.

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

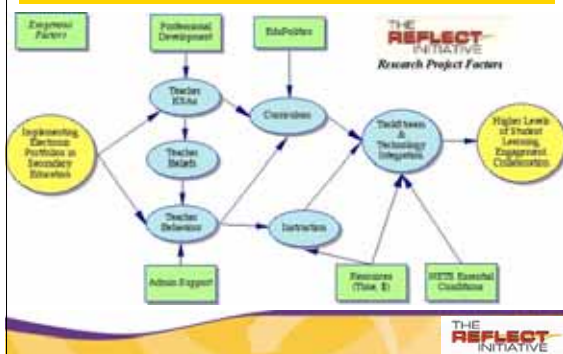


How Were Schools Chosen?

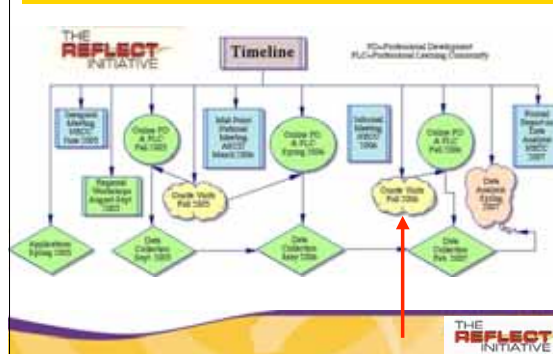
- Schools submitted a proposal for their project in Spring 2005
- All participating organizations needed to send at least one representative to the Inaugural meeting (Philadelphia just prior to NECC 2005)
- Students must participate (and be supported) for the length of the entire program (2 years)



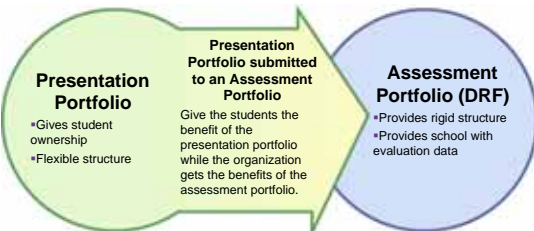
Research Project Factors



Timeline



What Type of Portfolio?



Presentation Portfolio

- Gives student ownership
- Flexible structure

Presentation Portfolio submitted to an Assessment Portfolio

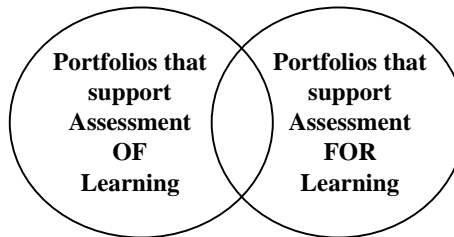
Give the students the benefit of the presentation portfolio while the organization gets the benefits of the assessment portfolio.

Assessment Portfolio (DRF)

- Provides rigid structure
- Provides school with evaluation data

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Overlap of Assessment Types



Institution-centered

Learner-centered

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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?

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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

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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

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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

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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

Teacher Demographics

Male	18	33%
Female	36	67%

Bachelors Degree	24	44%
Masters Degree	20	37%
Ed. Specialist Degree	2	4%
Doctoral Degree	4	8%



Student Demographics (AZ CTE only)

Male	13	18%
Female	60	82%

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

High School Diploma	1	1.4%
Associates Degree	1	1.4%
Bachelors Degree	30	41.1%
Masters Degree	29	39.7%
Doctoral or Advanced Degree	9	12.3%
Don't know	3	4.1%



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?

Hours using at home	Computers	Internet
0 hours per week	7%	13%
1-4 hours per week	24%	31%
5-10 hours per week	33%	35%
10-20 hours per week	26%	13%
More than 20 hours per week	9%	7%

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?

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 - Teachers

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

Hours using at school	Computers	Internet
0 hours per week	0%	2%
1-4 hours per week	15%	48%
5-10 hours per week	24%	28%
More than 10 hours per week	61%	22%

N=54



Computer Access at School - 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



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 _____.

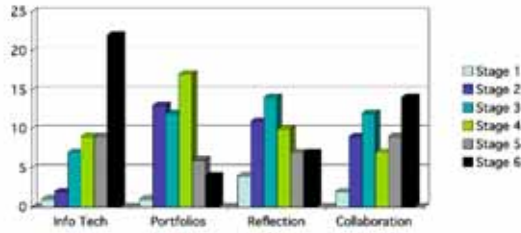
Stage 5: Adaptation to other contexts - I think about _____ as a tool to help me and my students and am no longer concerned about it as _____. I can use it in many applications and as an instructional aid.

Stage 6: Creative applications in new contexts - I can apply what I know about _____ I am able to use it as an instructional tool and integrate it into the curriculum.

n=44



C-BAM - Stages of Implementation



n=44

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C-BAM - Levels of Use

Level 0: Non-Use - I have little or no knowledge of _____, no involvement with it, and I am doing nothing toward becoming involved.

Level 1: Orientation - I am seeking or acquiring information about _____.

Level 2: Preparation - I am preparing for the first use of _____.

Level 3: Mechanical Use - 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 _____.

Level 4 A: Routine - I feel comfortable using _____. However, I am putting forth little effort or thought to improve _____ or its consequences.

Level 4 B: Refinement - 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.

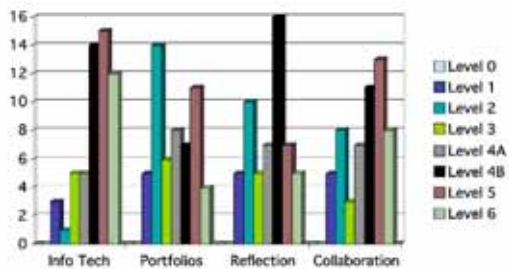
Level 5: Integration - I am combining my own efforts with related activities of other teachers and colleagues to achieve impact in the classroom.

Level 6: Renewal - 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.

n=44

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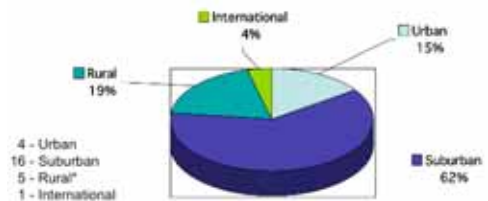
C-BAM - Levels of Use



n=44

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School Demographics



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

*more than 50 miles from a Major Metropolitan Area

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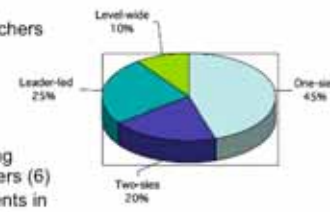
Site Visits

- 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/ or 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

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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)



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Level of Implementation (from 20 Site Visits)

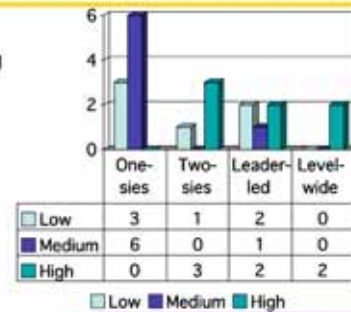
- **Low** - students using TaskStream primarily as online storage - little or no interactive feedback (teacher-to-student)
- **Medium** - promising, emerging use of TaskStream - using DRF - some interactive feedback (primarily teacher-to-student)
- **High** - creative use of TaskStream and/or other technologies,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



Level of Implementation (from 20 Site Visits)

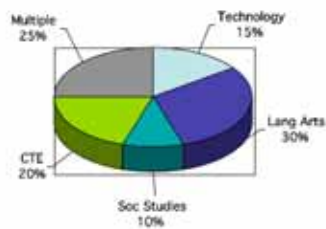
By Who is Implementing

- Low (6)
- Medium (7)
- High (7)



Curriculum Areas (from 20 Site Visits)

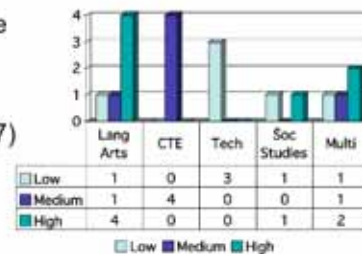
- Technology (3)
- English/Language Arts or Foreign Language (6)
- Social Studies (2)
- Career & Technical Education (CTE) (4)
- Multiple disciplines (5)



Level of Implementation (from 20 Site Visits)

By discipline

- Low (6)
- Medium (7)
- High (7)



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



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Examples of portfolios

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

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Validating my dissertation research

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

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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

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- <http://electronicportfolios.org/reflect>



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