

REFLECT Initiative

Researching Electronic portfolios: Learning, Engagement, Collaboration through Technology

Studying ePortfolio Implementation in Secondary Schools

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TaskStream Tools of Engagement

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The Tools Markets Served Supporting Services Content Providers Collaborators

Many Needs - One Solution

Accreditation
Certification
Career Qualifications
Instructional Design and Management
Classroom and Distance Learning
Training and Professional Development
Assessment Analysis and Reporting

The Universal Toolset for Demonstrating Learning Achievement

Competency Assessment & Reporting
Align skills, standards, and other performance indicators with learner evidence. Manage, aggregate, and analyze assessment results.

Electronic Portfolios
Create Presentation, Learning, and Resource portfolios to be shared for feedback, publication, and utilized for competency assessment.

Standards-based Instruction
Utilize the Standards Manager, Rubric Wizard, and instructional management tools to facilitate the development and tracking of instruction.

Resource Management & Communications
Harness powerful local publication capabilities and extensive communication channels for effective sharing and collaboration.

Markets Served

- INDIVIDUALS
- HIGHER EDUCATION
- SECONDARY & ELEMENTARY SCHOOLS
- CONTENT PROVIDERS
- BUSINESS & INDUSTRY
- HEALTH & GOVERNMENT
- NOT-FOR-PROFITS

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

Purposes for Assessment

Assessment OF Learning	=	Assessment FOR Learning
Summative Assessment	=	Formative (Classroom-based) Assessment

Past Present Future

Overlap of Assessment Types

Portfolios that support Assessment **OF** Learning (Institution-centered)

Portfolios that support Assessment **FOR** Learning (Learner-centered)

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 (Aug-Sept. 2005)
- Onsite visits (one a year)
- Online professional development for all teacher participants

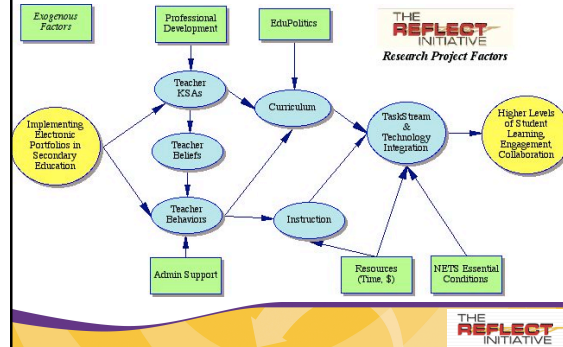


How Were Schools Chosen?

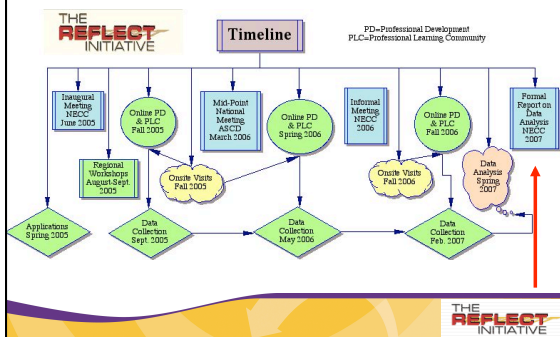
- Schools submitted a proposal for their project in Spring 2005
- All participating organizations needed to send at least one representative to the Inaugural meeting (Philadelphia just prior to NECC 2005)
- Students must participate (and be supported) for the length of the entire program (2 years)



Research Project Factors



Timeline



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)
 - Online surveys of students and teachers
 - Student ePortfolio reviews
 - Teacher journals & professional portfolios



Overall Cohort

- **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**



National Study Data

Data from three sources:
 Student Voices - online surveys and student focus groups
 Teacher Voices - online surveys and journals
 The Researcher's Voice - Site Visit Reports & data analysis

Teacher Demographics

- N=68

Male	21	31%
Female	47	69%

Bachelors Degree	33	49%
Masters Degree	22	32%
Ed. Specialist Degree	2	3%
Doctoral Degree	4	6%



Computer Access at Home - Teachers

- 96% have a computer at home
- 91% 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	28%	35%
5-10 hours per week	32%	30%
10-20 hours per week	24%	15%
More than 20 hours per week	9%	6%

N=68



Computer Access at School - Teachers

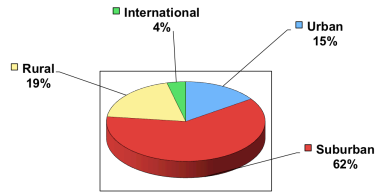
- How many hours do you use computers and the Internet at school?

Hours using at school	Computers	Internet
0 hours per week	0%	1%
1-4 hours per week	24%	54%
5-10 hours per week	26%	25%
More than 10 hours per week	50%	19%

N=68



School Demographics



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

*more than 50 miles from a Major Metropolitan Area



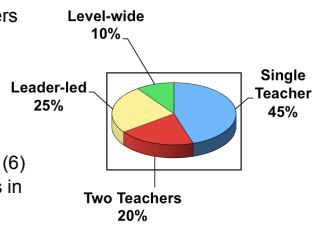
Site Visits - REFLECT Year 1

- 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/for 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)

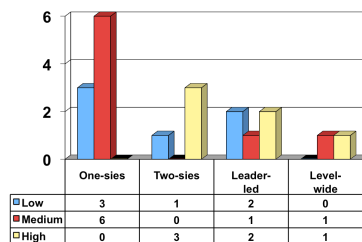
- Low**
 - students using TaskStream primarily as online storage
 - little or no interactive feedback (teacher-to-student)
 - little or no reflection
- Medium**
 - promising, emerging use of TaskStream tools
 - many using DRF - course-based work flow management
 - some interactive feedback (primarily teacher-to-student)
 - some reflection on work
- High**
 - creative use of TaskStream, wide-spread integration into curriculum
 - use of multimedia or other tools (i.e., Inspiration)
 - high levels of interactive feedback (including student-to-student)
 - emphasis on reflection



Level of Implementation (from 20 Site Visits)

By Who is Implementing

- Low (6)
- Medium (8)
- High (6)

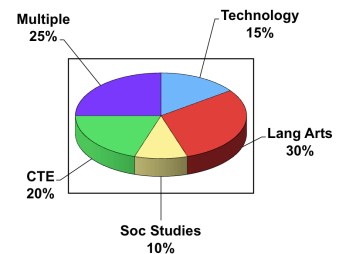


Low Medium High



Curriculum Areas (from 20 Site Visits)

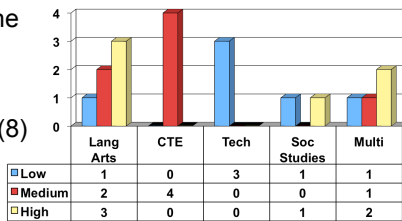
- Technology (3)
- English/Language Arts or Foreign Language (6)
- Social Studies (2)
- Career & Technical Education (CTE) (4)
- Multiple disciplines (5)



Level of Implementation (from 20 Site Visits)

By discipline

- Low (6)
- Medium (8)
- High (6)



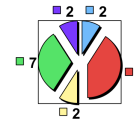
Low Medium High

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How was TaskStream used?

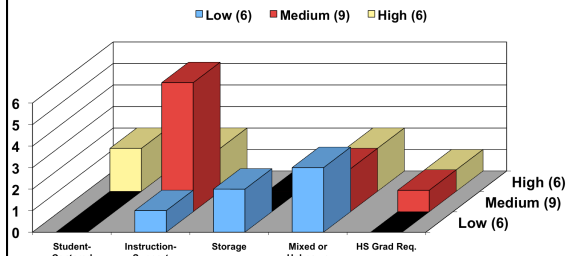
- Most of the sites used TaskStream as an instructional management system (assignments graded in a DRF)
- A few sites provided a template for student-centered portfolios
- None of the sites used TaskStream for high stakes assessment - only a few students used the Standards Manager

- Student-centered
- Instructional support
- Storage of student work
- Mixed or unknown
- HS Graduation Requirement



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By Type of Implementation (from 20 Site Visits)



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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)

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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
 - 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

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How do e-portfolios provide evidence of deep learning?

- impossible to answer that question based on two years of data
- too complex to address in a short period of time
- initial selection of the schools was for *breadth*, involving as many schools as possible, and not *depth*, following a smaller group of students and teachers for a longer period of time.
- Drawing on comments made by students in the online surveys and in the focus groups, we have some indicators that this evidence would be forthcoming, given enough time and appropriate implementation.

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Under what conditions can e-portfolios be successfully used to demonstrate assessment for learning and assessment of learning?

- Teachers rated themselves as just beginning or “on the way” to implementing assessment for learning strategies, which can be more easily implemented when portfolios are used in the classroom to support formative assessment and learning.
- there was not enough elapsed time to see if the implementation of an electronic portfolio would make a change in their assessment practices. As a follow-up to this study, it would be interesting to see if the teachers who implemented portfolios at a high level actually changed their assessment practices.



Under what conditions do students take ownership of their e-portfolios?

- students wanted to be able to express their own individuality, choice, and creativity in their portfolios.
- While most of them did not have prior experience with either a paper-based or electronic portfolio, a majority of these students had experience with other types of web-based publishing, especially in their social networking sites. That experience, and the elements of choice in both the content and design of their portfolios, influenced their attitudes to their e-portfolios.
- In a few examples, where students demonstrated extreme creativity in their e-portfolios, the content was focused on their passions, while not necessarily emphasizing their academic work.



What are the benefits of developing e-portfolios as perceived by students, teachers, administrators, and/or parents?

- Organization:** 65% or more of the students appreciated:
 - having space to store their work;
 - to have access to their work at home as well as at school
 - the e-portfolio gave them new ways of presenting their work;
 - was good for showing their progress to other people
- More than 80% of the teachers following qualities on an e-portfolio were very important
 - Having school work in one location;
 - Being able to have online access to student work from home and school;
 - Being able to view teacher feedback, personal reflections and coursework in one system.



What are perceived obstacles to implementing e-portfolios with secondary school students and how can they be overcome?

- today’s young people want to contribute and collaborate more with their peers, especially in real time conversations.
- Social networks are a fact of life for many teenagers outside of the school day. Using those tools, the students have a lot of freedom of expression -- many of the students expressed a desire for more personalization of their web-based portfolios
- The major obstacle for teachers was **time**. The complementary issue of **competing priorities** was also mentioned often by teachers. Other teachers expressed frustration with technical issues and, for many, their lack of proficiency with technology and the specific e-portfolio tool.



How do paper portfolios differ from e-portfolios?

- This question could be answered on two levels: the obvious paper vs. computer storage, or the differences in the portfolio development process.
- technology created a level of complexity that was frustrating for many teachers; it might seem easier to store student work in file folders
- benefits of using technology for maintaining an e-portfolio were recognized by many of the students. By having an electronic portfolio, the students used the computer more often. Many of the positive comments from students related to how much they enjoyed doing their assignments online, or how much it helped them to keep their work organized.



What are the skills necessary to effectively implement e-portfolios?

	Students	Teachers
Portfolio skills	<ul style="list-style-type: none"> Collect evidence of learning Select specific evidence that demonstrates a particular outcome, goal or standard Reflect metacognitively on learning represented in evidence, making a case that the artifacts constitute evidence of achievement Make connections in their learning Set goals for future learning 	<ul style="list-style-type: none"> Model all of student competencies PLUS: Implement classroom-based assessment FOR learning strategies to provide specific and detailed feedback to learners about their learning Support student reflection through modeling and research-based practices Create an environment that facilitates students’ deep learning
Technology skills	<ul style="list-style-type: none"> File Management Skills (i.e., naming files, organizing in folders, able to move and copy files, search and find files on a network folder, a hard drive, or a portable flash drive) Using a Web Browser and E-Mail Program, including attaching files Common tools used for constructing portfolio artifacts, depending on curriculum (i.e., word processing, concept mapping, spreadsheet, presentation software) Converting artifacts into digital format (i.e., scanning images, taking photos with a digital camera, recording audio, digitizing video – depending on technological background of teacher or student) Skills in using the specific e-portfolio software being used to organize the portfolio 	

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 do 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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