# Electronic Portfolio Research

# Final Report

## Project Background

The University of San Diego (USD) established a Committee on Integrated Learning: First Year Experience during 2005-06 to explore the features of integrated learning experiences targeted at first year students, with an emphasis on creating the institutional framework to support those experiences. The committee was comprised of representatives from academic and student affairs working together to assess and enhance first year student programs such as Torero Days new student orientation and USD's preceptorial program.

As the first year experience continued to develop under the joint support of Student Affairs and the College of Arts and Sciences, the opportunity to participate in the International/National Coalition for Electronic Portfolio Research (I/NCEPR) was pursued by the Office of Student Learning Initiatives (Student Affairs) and the Office of Assessment (Academic Affairs). USD joined the third cohort of the Inter/National Coalition for Electronic Portfolio Research (2006-2009), which included teams from campuses emphasizing collaboration between academic affairs and student affairs to support in-class and out-of-class learning. Participation in electronic portfolio along with several prestigious universities provided a chance to explore possibilities to build upon USD's Student Learning & Development Transcript. Developed at USD, the Student Learning & Development Transcript (SLDT) is an online tool used to capture students' co-curricular college experiences including internships, athletics, student clubs and organizations, community service, part-time employment, and leadership. Participation in I/NCEPR research provided an opportunity to assess the effectiveness of electronic portfolios as pedagogical tools for integrated learning. Faculty and administrative representatives from the First Year Experience Committee believed that electronic portfolios offered extended and unique advantages to students beyond the SLDT.

## I/NCEPR Project Beginnings

During Spring, 2006, upon the acceptance of USD's research proposal by the I/NCEPR, Provost and Vice President Julie Sullivan and Vice President Carmen Vazquez appointed an E-Portfolio Research Committee including faculty and administrative representatives from a broad range of disciplines and departments including Career Services, Hard and Social Science Faculty, Student Affairs and Academic Technology Services administrators. The

committee was charged with advising project leaders and keeping apprised of issues pertaining to collecting and presenting student work electronically.

With campus resources and efforts toward first year experience, electronic portfolios provided the perfect opportunity to begin to gather documentation about the learning experiences among first year students. Research questions on deep learning were established and the project was tied into the University's Strategic Directions Initiatives as a primary feature of the Integrated Learning: First Year Experience. It was proposed that though research targeted first year students, several capstone courses would also be investigated as broad comparisons group. It was also clear that many campuses were using electronic portfolios for senior-level summative work.

During the fall semester, 2006, the goals for electronic portfolio research and development over three years (2006-2009) were established with guidance by the electronic research committee. It was initially hoped that we could build upon the university's existing Student Development Transcript and that a major learning and assessment tool for USD's First Year Experience could be established. Longer term, it was thought that perhaps electronic portfolios could be used as the primary tool for documenting and assessing student learning as part of a "four-year plan" for undergraduate student learning and development. Under new leadership in Fall, 2006, the study's proposed research questions were considered and redefined. The project purpose was to explore the benefits of electronic portfolios for student reflection on learning and the development of online identity and self-presentation.

**Study Research Questions**

Primary questions to be answered during the course of the project included the following:

1. What kinds of technology experience do students have as they enter and exit the university?
2. How are e-portfolios perceived as distinct from social networks (Facebook, etc.) as self-presentational formats?
3. How do e-portfolios engage students in identity constructions and self presentations?
4. What distinguishes more complex e-portfolios from simpler constructions?

**Project Implementation**

During Spring 2007, conversations with Information Technology Services administrators and project leaders took place in order to consider the adoption of an electronic portfolio tool. Products were considered with presentations from four electronic portfolio vendors: Blackboard's electronic portfolio course tool, Angel Learning's ePortfolio 2, Chalk and Wire's ePorfolio2, and Avenet eFolio. Because Chalk and Wire's ePortfolio 2 product offered a hosted solution with a high degree of adaptability and user ease, 300 Chalk and Wire electronic portfolio licenses were purchased jointly by Information Technology Services and Student Affairs for student research participant use beginning in Fall, 2007.

Principle researchers drafted a research proposal and submitted it for expedited review by the University of San Diego's Institutional Review Board. The methodology proposed included participant consent to take two surveys and share their electronic portfolios with researchers.

Data was collected by means of an initial online survey [Survey$_1$] designed to gauge students' level of experience with educational technology and a follow-up survey [Survey$_2$], designed to learn more from students about their experience with electronic portfolios which was administered at the end of each semester. The proposal was approved and faculty were chosen to begin training in order to integrate electronic portfolios into their classes for fall semester 2007.

Training with Chalk and Wire personnel took place in June 2007. Project leaders met with each faculty member to share current electronic portfolio literature and clarify the ways in which their pedagogy would be influenced by the use of electronic portfolios.

During the fall semester 2007, electronic portfolios were used in 5 preceptorial classes, 1 Emerging Leaders class, 1 senior seminar in Marine Science, and through 2 First Year student workshops in the "FRESH@USD" program. In the spring semester, 2008, students in 2 capstone courses (Honors seminar and 2 sections of a Business Strategic Management senior seminar) were also introduced to electronic portfolios. Electronic portfolio training sessions for students were scheduled for each course, and desktop support was offered throughout each semester.

Faculty participants introduced electronic portfolios to their students in a variety of ways. Generally, in the preceptorial courses, electronic portfolios were added as an "end-of-semester" extra credit project. In the Marine Science and Honors seminars, students embedded their final projects. Students attending either of the FRESH workshops were simply given an account and introduced to electronic portfolios to use as they desired. By introducing electronic portfolios in the two sections of Business Strategic Management researchers explored differences in electronic portfolio formats to test for influence on student motivation and assessment of student learning.

Of the 343 electronic portfolio accounts established for USD students, the research team collected 276 responses to various study instruments (76 Survey$_1$ responses, 94 Survey$_2$ responses, and 106 shared electronic portfolios. Most student responses came from class participation; only 2 student participants were recruited from the FRESH workshops. Faculty participants were also surveyed using an online instrument. Six faculty provided feedback about how they integrated electronic portfolios into their classes, their initial impressions about the technology, and their opinions about the tool's contribution to student learning.

**Findings**

**1. What kinds of technology experience do students have as they enter and exit the university?**

- Increasing proficiency in knowledge and use of MS Office programs, calculators, and social networks; less proficiency in knowledge about and use of web design, web blogs, and image systems.
- Increases in use of technology for class assignments for doing research on the Internet, using course-based management systems, and creating presentations, but decreases for use of social networks and creating personal web pages.
- About the same percentage of First Year students and Seniors use Facebook (85%), and report spending 1-2 hours 6-7 days a week online with their social networks.

- Most reported having to learn about new technologies (CE6, class blogs, e-reserves) for their classes, and that the role of technology is adequate (82% First Year students; 94% Seniors).

**2. How are e-portfolios perceived as distinct from social networks (Facebook, etc.) as self-presentational formats?**

Students used these words to describe social networks: "interactive," "accessible," "community," "personal self," and "easy to construct." Descriptions about self-presentation using electronic portfolios included "a collection of materials," "academic assessment," "primarily dyadic," "professional self," and "more training needed."

**3. How do e-portfolios engage students in identity constructions and self presentations?**

Among older students, themes about identity constructions emerged as follows:

Personal identity
"Pictures symbolize my personality and information expresses who I am as a student."
"I can give background information on who I am."

Collection
"An electronic portfolio is a showcase of myself."

Depth
"An electronic portfolio allows me to be more flexible and creative, and show myself in more depth than a resume."

Older students also reported more frequently and in more depth about Self-Presentation as follows:

Skills
"With my electronic portfolio, I can show my ability to handle school as well as outside activities to potential employers."

Best Self
"Since I knew it would be judged, I wanted to make the best impression."
"I wanted employers to get a better sense of what I can do."

Appearance
"I wanted it to appear professional and appropriate."
"I wanted it to be appealing."
"My electronic portfolio presents an older, more mature me to teachers and employers."

**4. What distinguishes more complex e-portfolios from simpler constructions?**

Responses about what distinguishes more complex e-portfolios from simpler constructions included:

"More pages"
"Additions or changes to template TOC (table of contents or navigation)"

"Modification of format (e.g., background, font)"
"More information"
"More images"
"More attached artifacts"

Responses about electronic portfolio complexity varied among students according to age, type of class assignment, instructor directions and explanation.

**Implications**

Chalk and Wire electronic portfolios were well received among students involved with the research pilot. Seventy-five percent of study participants recommended electronic portfolios for all students at USD, while only 13% stipulated that it shouldn't be required.

The research indicated that if electronic portfolios continue to be used at USD, we should consider helping students develop multiple portfolios for varied audiences and purposes. The tool has potential for academic assessment, for potential employers, and for graduate school admissions.

It would benefit students if they are provided guidance early on for creating identity profiles and self-presentations. The showcasing of best work versus developmental work, writing accuracy, clarity, and organization, visual appeal are factors students need to think about as they design and construct electronic portfolios.

**Recommendations**

The results from both semesters of electronic portfolio use can be summarized in the following ways: whereas the majority of students felt that the electronic portfolio was a fairly easy tool to learn how to construct, they had greater difficulty perceiving its overall utility and relevance to their education and to their careers. Although electronic portfolios offer students a way to showcase their learning through a web-based approach, it may be more cost effective at this point to equip them with webpage construction skills and consider ways to introduce these into the existing curriculum. Additionally, students may benefit from learning effective ways of creating professional profiles and self-presentations with existing online professional networks (e.g., LinkedIn) and e-portfolios (e.g., Epsilen) rather than through campus-wide adoption of a proprietary electronic portfolio product. As a tool for student learning outcomes assessment, the Chalk and Wire electronic portfolio is powerful in creating aggregates of data for identified competencies; however, this application would necessitate considerable training on the part of faculty to learn course design using standards and rubrics since few USD faculty currently use this approach in their classrooms. Clearly, one of electronic portfolio's greatest strengths is its ability to store complex collections of student work while providing detailed assessment summaries. The use of electronic portfolios may be most beneficial to students in performance-based academic programs, such as Visual Arts and Music, in providing a tool for organizing presentations of student work. Additionally, students and faculty in graduate programs may find it especially useful in tracking progress over time where exploration of richer sources of student learning are necessitated and where student numbers remain small.

The principle electronic portfolio research team at USD recommends that electronic portfolios are not adopted for the general undergraduate population at this time. Programs may choose to adopt various electronic portfolio tools on an individual program basis,

however administrative and technical support for the use of Chalk and Wire electronic portfolios in these programs needs to be identified. As the research project concludes, departments that are using or interested in purchasing Chalk and Wire accounts for their programs should be contacted periodically to determine if faculty interest and program adoption increases, the need for finding a uniform solution can be adequately assessed.

Respectfully submitted,
Carole Huston, Merrick Marino, and Amanda Ryan
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