

The Digital Me

Standards, Interoperability, and a Common Vocabulary Spell Progress for E-Portfolios

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Dylan Harnick is an art history major at the University of Somewhere, a well-respected art and architecture school in the northeastern United States. A few months into his freshman year, Dylan begins work on his electronic portfolio—a multimedia, digital container that captures and presents his educational progress, personal perceptions, and feedback from instructors as well as artifacts and examples of his work. Within two years, Dylan transfers to the University of Elsewhere, at which he finishes his undergraduate education. Following graduation, Dylan attends the University of Wherever to get a master's degree, after which he begins work at his first job. By the time Dylan is 30, he's changed jobs four times.

For Dylan, his electronic portfolio is a lifelong work in progress. He wants to easily transport its contents from each of the three schools he attends. He wants access to all of his e-collections both during and after his undergraduate and graduate education. And he wants to be able to continue his e-portfolio well into his career. He does *not* want to restart it at each new school he attends; nor does he want to be denied access to collections either from previous schools he attended or long after his disassociation from whichever institutions granted him his degrees.

What will make it possible for Dylan's e-portfolio expectations to be met? Standardization, interoperability, a universally agreed-upon set of definitions, and adoption of policies that will help guide both behavior and expectations when it comes to copyright law and easy access to digital information.

Three NLII 2003 annual meeting sessions addressed varying aspects of e-portfolio advancements and challenges. In a session titled, "Designing an Electronic Portfolio System for Multiple Universities: Some Early Lessons"

(http://www.educause.edu/asp/conf/function.asp?PRODUCT_CODE=NLII031/SESS18&MEETING=nlii031), Ali Jafari of Indiana University–Purdue University Indianapolis (<http://www.iupui.edu/>) presented a prototype developed by the ePortConsortium (<http://www.eportconsortium.org/>)—a

collaboration of higher education and information technology institutions working to define, design, and develop software for electronic portfolio environments and systems. The prototype demonstrates where in the development of e-portfolios the need for interoperability will arise and why a common language that defines this increasingly popular form of information collection and presentation is necessary.

With its popularity rising among both students and faculty, educators can expect more than one e-portfolio management system to appear in the marketplace, ranging from commercial stand-alone systems developed by software companies to homegrown systems developed by higher education information technology service units, to those that spring from research and development laboratories. However, without a set of standards for interoperability, students will, at best, be frustrated by the limitations imposed on their efforts to compile their work and, at worst, abandon their e-portfolio efforts altogether. To prevent the worst from happening, ePortConsortium is seeking development partners to move forward its comprehensive and ambitious e-portfolio management system, with the goal of making it easy to use, customize, and maintain. Beyond that, Jafari says the right system would enable every user to have a URL; would allow for custom templates; make it possible to present, manage, and even hide or keep in storage artifacts; would incorporate student learning outcomes; would allow for dynamically presented resumes and curricula vitae; would dynamically create accounts for every student, staff member, and faculty member; and would support a variety of authoring tools. At the University of California, Los Angeles (<http://www.ucla.edu/>), at which Ruth Sabeen and Eric Splaver are overseeing a beta test site for the ePortConsortium e-portfolio management system, one of the chief requirements is the ability to integrate the system into their existing systems, such as grade books, course management systems, portals, and systems that enable data to be taken from one campus to another.

While interoperability is essential to the future of e-portfolios, Gary Greenberg of Northwestern University (<http://www.northwestern.edu/>) says information about e-portfolios should be shared so those who want to jump in now won't get held back. He advised session attendees to get started before waiting for the time when they think they can get it right. "Too much time can be wasted trying to find or develop the perfect tools," he said. Instead, Greenberg suggests

campuses get started and then inform and guide the tool builders as they're using the tool. "All of the technology that we need for successful e-portfolio implementation already exists," he said, "but it usually can be found in course management systems, which don't always support collaboration or lifelong learning." One electronic portfolio project underway at the Northwestern is associated with the Collaboratory Project - everyone with a Collaboratory account has a personal ePortfolio! – "Teachers create the binders and folders that students use to organize and manage their work. Student work is created using well-designed Web document templates that support text, graphics, sound and video. Students can exchange comments with their teacher and discuss their work with classmates. Work can also be made public for people without Collaboratory accounts to view." (For more information, see <http://collaboratory.nunet.net/cwebdocs/communities.html>.)

Jumping in is just what the University of Washington (<http://www.washington.edu/>) did. And the result is the Catalyst Portfolio (<http://catalyst.washington.edu/>)—a tool the institution decided to build on its own following extensive surveying and interviewing of faculty and students that determined the requirements and goals of an e-portfolio system. UW's Tom Lewis and Scott Macklin said preliminary surveys revealed useful data that helped drive the development process. While students wanted ownership of their portfolios, instructors needed to be involved to invite students to participate in exercises that promote reflection. So that mechanism has been built into the tool. Both the students and the faculty saw feedback as invaluable in supporting two-way learning between instructor and student.

The surveys also revealed that e-portfolios facilitate learning when students are encouraged to take a series of steps, such as selecting relevant artifacts for inclusion, selecting artifacts for a specific purpose, taking time to reflect, designing the e-portfolio for a particular audience or purpose, and receiving feedback. Similarly, surveyors found that teaching with electronic portfolios becomes learner centered when instructors assign and/or produce relevant artifacts for inclusion, assign artifacts for a specific purpose, give clear guidelines for artifact selection, give examples of relevant or good reflection, give examples of good design, and give feedback on quality, reflection, and design.

Student and faculty support for UW's Catalyst Portfolio tool has been overwhelming—so much so that students recently voted to have a portion of their fees pay for its continuing support. One student expressed delight that “the portfolio tied the program together and forced us to reflect on what we really learned.” Another added that “the portfolio shows what I have learned and thought about during my freshman year. It will be interesting to look back at it in future years.”

Implementation of any new system is bound to be a challenge, and not all of those challenges are technological. Kathleen Paris of the University of Wisconsin–Madison (<http://www.wisc.edu/>) presented the results of a student e-portfolio feasibility study that focused on needs assessment and interest level (<http://wiscinfo.doit.wisc.edu/ltde/ORFI/eportfolio/>). Kathleen Yancy of Clemson University (<http://www.clemson.edu/>) presented research that focused on the e-portfolio as an assessment tool, looking at the question, How can technology showcase development? “You can't rely on a single course or set of courses to reap the transformational benefits of e-portfolios,” she said, “but, rather, you should look at the e-portfolio as a lifelong tool that supports backward and forward reflection.”

See the NLII Annual Meeting featured session on Electronic Portfolios at <http://www.educause.edu/asp/doclib/abstract.asp?ID=NLI0301>.

NLII Activities

Darren Cambridge, an NLII fellow for 2003, is researching electronic portfolios as just such a tool for learning across a lifetime. He's investigating pedagogical issues, such as the place of reflection in intellectual development; technical issues, such as interoperability among e-portfolio systems and with existing enterprise systems (and heading the Instructional Management Systems special interest group on e-portfolios that will develop a specification available to all developers); institutional issues, such as developing stronger bonds between types and levels of educational institutions; and policy issues, such as privacy and ownership of student work (see <http://www.cwrl.utexas.edu/~cambridge/nlii/>).