Out of the classroom and beyond

Gary Brown, Nils Peterson, Adrian Wilson, and Jim Ptaszynski

Synopsis

E-portfolios that function as collaborative, personalized learning spaces rather than just showcases offer a means of assessment that can support generative learning and build the skills essential for 21st century students. Gary Brown, Nils Peterson, Adrian Wilson, and Jim Ptaszynski identify the challenges and discuss some lessons learned in the Washington State University effort to adopt an e-portfolio program based on Microsoft® Office SharePoint Server 2007. The emerging technology supporting e-portfolios and personal learning environments present opportunities to engage students and external stakeholders more fully by making learning visible.

The confluence of new technologies coupled with students' diminishing engagement with traditional models of learning has created an imperative that education move out of the box — literally and figuratively. According to Prensky (2008), schools suffer from a "boredom crisis": "School instruction is still mostly cookie cutter and one size fits all, despite the fact that we live in an era of customization" (¶18). Older and returning students, too, are dismayed by the lack of imagination and innovation that characterizes much of education; they find few technologies relevant to their careers in the traditional classroom and are frustrated by the kinds of assessment they encounter there (Brown, Smith, and Henderson 2007).

Employers echo these concerns when the lament the skills deficits of newly graduated hires; what passes muster in the classroom does not prepare graduates for the workplace. The important irony to note for those who bristle at the suggestion that education should prepare graduates for the workforce is that the skills employers value — communication, team skills, and critical thinking skills (NACE 2007; Partnership for 21st Century Skills 2007) — are increasingly understood to be cornerstones of good pedagogy. Furthermore, in a recent American Association of Colleges and Universities survey (Hart Research Associates 2008), business leaders reported little confidence in transcripts, tests, or cross-institutional comparisons as indicators that students will succeed in the workforce. More interesting and valuable are "faculty-assessed internships, community-based projects, and senior projects" (Hart Research Associates 2008, 6) — activities that, more than half the respondents recognized, might be facilitated by technologies like e-portfolios. That recognition is spreading, and as it does, interest in e-portfolios is building (Batson 2008; Groom 2008).

Student-managed e-portfolios and related technologies such as personal learning environments (PLEs) can help mediate and present projects like these while capitalizing on students' affinities with virtual and online environments. Using such tools to supplant or supplement traditional online course management systems will allow students to create and manage their own intellectual property beyond the classroom and even beyond matriculation. In turn, the use of such new tools to promote students' agency can enhance their connections with alumni, employers, and wider communities in exciting and mutually valuable ways. In what follows, we illustrate these benefits through a current initiative at Washington State University (WSU) where students and instructors have adopted Microsoft Office SharePoint Server 2007, an application that can be used to realize the potential of e-portfolios in a variety of educational contexts.

Why e-portfolios (and why SharePoint Server)

Like the rapidly growing community of educators at the International/National Coalition for Electronic Portfolio Research, the Center for Teaching, Learning, and Technology (CTLT) at WSU is working to establish an approach to e-portfolios. Such an approach should promote assessment processes that meet the escalating expectations of stakeholders, including employers of our graduates, accreditors, the legislatures to which they report, and the community that subsidizes our work. Often narrowly conceptualized as showcase venues to which students submit their best work, e-portfolios have much greater potential in their capacity to support authentic, sustained forms of collaborative and generative learning. Instructional technologists and faculty partners at WSU have been working to identify an online application that has the flexibility to exploit that capacity, allowing faculty members and students access to all of the learning possibilities available when learners command their own online learning environments (Brown, Myers, and Roy 2003).

Microsoft Office SharePoint Server 2007 is a particularly flexible tool to meet these needs. This application can be designed easily enough to meet the showcase potential, allowing for one layer of the application to be a world-readable Web page while another layer holds a private repository (Peterson et al. 2008). However, SharePoint also provides a rich set of tools for developing and sharing draft work that a learner might later show to an outside audience. For example, the permissioning flexibility of SharePoint allows the owner of the e-portfolio site to invite selected colleagues to collaborate in the creation of such work; that collaboration can take place via a number of resources, including a wiki, a blog, a library, threaded discussion forums, file uploading, surveys, project management tools, or document version control and tagging. SharePoint thus provides a robust collaborative workspace by allowing Web 2.0 tools to be embedded within the online environment. As a result, it can be used not only to create self-contained, individual Web sites for exhibiting student work but also to establish roundhouse learning hubs for broader networks of users. In short, the application allows site owners to create layered and flexible personal learning environments that support a wide range of collaboration models and distribution preferences.

The diversity of innovation

When individual students command their own learning environments, learner-centered pedagogy truly becomes possible. When students move outside the boundaries of the traditional classroom, it is not chaos that emerges but a variety of innovations. Each implementation of a learning-centered e-portfolio brings important lessons as well as significant challenges. What follows are a few examples of the different contexts and adaptations of the e-portfolio initiative at WSU, along with emerging lessons and possible implications for students and educators.

Case one: expanding the community of educators

Students in a WSU teacher-preparation program developed a group e-portfolio in SharePoint to augment a more traditional course management system. The e-portfolio site provided a forum for student teachers to share their experiences with one of their teacher mentors. The students in this group visited a local elementary school to perform required classroom observations and meet with one of the school's teachers; they then used the group e-portfolio as a place to share materials in order to extend the discussion of the issues they encountered during their observations. The site thus provided a shared space for building a small community and leveraged the benefits of peer review. The approach here differed from that of most course management systems in an important way: Unlike a typical CMS, which provides strictly controlled access and an environment predefined by the system and the course instructor, the SharePoint e-portfolio application gave the mentor teacher and the student teachers full control of the learning environment. The mentor teacher reported that she learned from the discussions and reflections of her charges, deepening her own growth as an elementary school teacher. The collaborative project space extended the boundaries of the traditional classroom, creating a venue for student interaction and cross-institutional collaboration between an elementary school and a university charged with preparing future teachers.

Case two: expanding the definition of "educator"

The student employment assessment initiative at WSU developed an e-portfolio site to link programs that hire students and to help the student employment office better coordinate its efforts. Pressed to demonstrate learning growth outside of the classroom, units from Student Affairs, Equity, and Diversity adapted WSU's widely recognized Critical and Integrative Thinking Rubric to meet the specific needs of the student employment program. Recast as the Guide to Rating Professional Performance in Learning Organizations, this new version of the rubric was intended to help supervisors assess the performance of student hires in a way that helped both groups understand the important similarities in expectations (critical thinking and communication, for instance) between classroom learning and their on-campus work. The ongoing initiative is coordinated by professionals in WSU's Career Services office; the pilot initiative included a group of ten programs.

The SharePoint e-portfolio teamsite allows participating programs to share work and progress. This sharing process brings together faculty and staff members from such disparate organizations as the library, the Health and Wellness Center, the University Recreation Center, Campus Involvement (a unit that coordinates campus clubs), Career Services, and CTLT. In WSU libraries, for instance, students assess themselves using the Guide to Rating Professional Performance in Learning Organizations and then meet with their supervisors, who have assessed them using the same criteria. The assessment, posted in their space in the SharePoint teamsite, is used to compare the student's self-assessment with the supervisor's assessment as a way to begin conversations about student performance. By foregrounding the gap between students' self-assessments and the often slightly less flattering assessments of their supervisors, this use of the e-portfolio teamsite provides supervisors with an opportunity to clarify their expectations and deepen their student workers' understanding of those expectations. Meanwhile, participating units on campus have also been reviewing job descriptions to establish themselves more clearly as learning organizations — that is, organizations that systematically collect and respond to data. In the process, many routine job descriptions are being revised to provide students with greater opportunities for personal and professional development. This outcome, we believe, has ensued from the act of making work visible, which is a key implication of e-portfolios and folio thinking.

Perhaps even more significant is the fact that an advisory board of employers from outside of the university has been established to work with project leaders from all of the units involved. This collaboration benefits students, student employers, and future employers. Students gain by the evolution of their student employment into something with deeper connections to both their classroom learning and their future jobs. Student employers benefit from the cross-unit collaboration, the ensuing exchange of ideas, and the strategy for clarifying expectations and assessing their employees' progress in meeting those expectations. Finally, employers gain not only by building a more efficient hiring process but more importantly by developing avenues for deeper communication with the agents actively involved in preparing their future colleagues.

The project has not been all smooth sailing, of course. The technology that has mediated the collaboration of student affairs educators often frustrates the participants who are also wrestling with the new assessment expectations now reaching into every nook of the institution. Yet at least two of the programs involved have embraced the initiative and expanded it by requiring student employees to develop their own e-portfolios to reflect upon the connections between their learning and their work. In other words, the project has helped to impart a new sense of responsibility for promoting learning within organizations that have previously relegated that charge to the classroom.

Case three: expanding the ownership of education

The third case to note is the alumni Web site for WSU's Edward R. Murrow School of Communication, which was created by graduate students in the program. The project began when a group of students built an e-portfolio designed to increase students' opportunities to interact with busy faculty members. The result was the Collabosite, a pioneering mashup of SharePoint and Web 2.0 technologies, including blogs, wikis, and links to faculty e-portfolios as well as folders for sharing their research work. The site was enthusiastically received by students and faculty alike. After that success, the alumni site was developed so that graduate students could begin to connect with professional alumni working in various fields. Like the Collabosite, this site uses SharePoint technology to connect students with potential mentors and future employers; the site offers surveys, a collection of uploadable forms, and a public discussion board. This initiative underscores the fact that students will find routes to engage with their communities, with or without help or attention from their institutions. Moreover, students' understanding of their needs will no doubt lead to an ever-sharper focus on future jobs.

Case four: unleashing the educational imagination

The culmination of the development process has been the e-portfolio contests we have conducted in 2007 and 2008. The contest was launched to explore SharePoint e-portfolio technology as well as to understand more fully the usefulness of reflection and discussion in an e-portfolio environment. In the first year (2007), the focus was on inviting individual students to share their learning growth. Contest winners interpreted that focus in different ways, illustrating learning in a variety of fields both in and out of the classroom. The value of that focus was particularly visible in one student's e-portfolio where she reflected on a paper she wrote early in her academic career, commenting on the use of complex terminology paper from earlier in her college career: "What the heck are diffusion bonding and casting methods?" she asks. "I don't think that I even knew those things when I wrote this. My guess is that I was parroting an article." The example illustrates the gains in metacognition that an e-portfolio can promote; new possibilities emerge when learning is made visible.

In the 2008 contest, the focus was collaboration. Contest judges were drawn from the faculty at WSU and other institutions in the United States and Canada and also included employers and representatives from regional nonprofit organizations. The judges gathered synchronously in a lab with a projection screen that brought in remote participants using Centra. After calibration, each judge was provided a set of links to e-portfolio sites and asked to assess them over a period of one week. The criteria were presented as an online survey.

There were several winning e-portfolios. The grand prize winner was an Engineers Without Borders project called the Kayafungo Women's Water Project in which a group of WSU student engineers reflected upon and documented their work bringing fresh water to communities in Africa. Another winner was the Calaboz ePortfolio, which is part of a student's ongoing effort to mobilize the community to respond to Homeland Security's effort to build a fence on the U.S.-Mexico border. Her development of the e-portfolio as a workspace mashup of Web 2.0 technologies with a SharePoint hub mediates and documents the ongoing work of a fully transparent activist community organization that, challenged in the courts, has since garnered United Nations recognition and NGO status and attracted voluntary legal support. The Understanding Ecodesign e-portfolio, another winning project, documents team efforts to promote an entire ecodesign education curriculum at the bachelor's level. Other projects range from a business plan for an EEG Patient Monitoring Device to the site for a student group that created the Grace Foundation for assisting disenfranchised communities across Nigeria. When interviewed, judges and students recognized that e-portfolios represent a unique learning opportunity.

Conclusion

The projects described here depart from traditional student work by using technologies in ways that widen and enrich the scope of student engagement. The value of enabling students to tackle real problems in their learning tasks has, of course, already been recognized, but the scalability of these tasks — the ability to empower more students with similar initiatives and opportunities — is now at our fingertips even as the costs and relevance of education have inspired greater scrutiny. These case studies, in illustrating how learners can be put in control of their own learning spaces, hold long-term implications for future pedagogy. They mark a shift in focus from educational product to educational process; from what students know to how they learn to approach authentic challenges; from submitting papers to a single authority to sharing their work, thinking, and learning with peers and professionals alike. Each of the projects described above is, finally, a dynamic example of student work that breaks out of the classroom mold to meet the challenges of the real world, a world where innovators will prevail.

It would be misleading to suggest that the innovations presented here have been accompanied by a wildfire of enthusiastic adoption; they have not, and the preponderance of traditional classroom spaces as well as the popularity of teacher-centered pedagogies even within virtual environments suggest why. The openness of the learning spaces provided by personal and collaborative e-portfolios, like the move from transpositional to transformative learning, generates a kind of academic vertigo not for many, but for most. What will drive transformation, if it is to occur, will not be the hopes of professional faculty developers or even faculty leaders or employers. As in the American civil rights movement, positive change will need to happen through the grassroots efforts of the larger community — a larger community in which students will need to take the lead. The students in the Edward R. Murrow School of Communication seem to sense this imperative:

> Each piece of this site that we build is ours forever and a comprehensive e-portfolio is increasingly becoming an academic prerequisite. In the end, the choice to contribute and collaborate belongs to each individual. The benefits are obvious and immediate, the detriments slight and insignificant. It may sound cliché, but the question is clear: If not us, then who, and if not now, then when? (ERMSOC n.d., ¶7)

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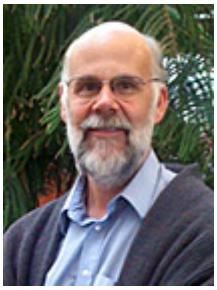
Biographies

Gary Brown

Gary Brown holds an interdisciplinary PhD from Washington State University with an emphasis in media discourse analysis. He frequently speaks and writes about teaching, learning, and assessment. He's been a National Learning Communities fellow, the lead developer of WSU's FIPSE-funded Critical Thinking Project, and in collaboration with the National Learning Infrastructure Initiative (now ELI), the Coalition for Networked Institutions, and the Teaching, Learning, and Technology Group, he was a leader in the Transformative Assessment Practices (TAPS) project. With WSU and CTLT colleagues, he has recently received a National Science Foundation grant to develop and assess hands-on and collaborative learning tools in chemical engineering.

Brown has worked with a variety of professional associations on the assessment of outcomes and costs of educational practices and innovations, including the Sloan-C Emerging Technologies initiative and the National Universities and Technologies Network (NUTN) assessment resource initiative. He has served on the National Information Fluency Advisory Board, and with WSU colleagues, he has received four NUTN awards for best research and was selected to work with the International/National Coalition for Electronic Portfolio Research. Brown was a recipient of the Pacific Northwest's first annual Teaching, Learning, and Assessment Award in 2007. Brown also directed the development of the CTLT Silhouette Project, which serves Flashlight Online, an online survey instrument sponsored by the Teaching, Learning, & Technology Group. Extending that work, Brown has been a leader in the TLT Group's FIPSE-funded initiative for improving online student evaluations. Brown's primary focus has been using technology in the assessment of outcomes with a particular emphasis on assessing critical thinking.

Nils Peterson



Nils Peterson received a master's degree in architecture from UC Berkeley in 1982. He served as a data analyst and programmer in the School of Veterinary Medicine at Washington State University where he began to develop simulations of the cardiovascular system for medical education. Peterson then worked with University of Oregon before pursuing self-employment with From The Heart Software as he continued to develop and market educational simulations. Peterson returned to WSU in 1993 to coordinate educational technology in the College of Education and assumed his current role as assistant director in the Center for Teaching, Learning, and Technology in 2000.

For the last dozen years, he has also explored his passion for traditional timber-frame construction, building barns and inhabited structures with hand tools and traditional techniques.

Adrian Wilson

Adrian Wilson has worked in the IT industry for over twenty years, specializing in the field of software product development and deployment. He has also worked closely with educators for the last seven years. He has been at Microsoft Corporation for almost twelve years and is currently the chair of the Microsoft Higher Ed Consortium, an industry partnership that collaborates on the current and future needs of higher education.

At Microsoft, Wilson has taken on various senior engineering, education technology, and customer/partner facing roles. He was part of the original team which conceived the .NET development environment. Prior to his tenure at Microsoft, Wilson held senior roles at Oracle Corp., ESPNet SportsZone (Starwave), and NYNEX (AGS), which is now Verizon Communications.

In 2002, Wilson served on the Technical Board of the Schools Interoperability Framework. He is currently on the Board of Visitors for the University of Maryland, Eastern Shores.

Wilson holds a BS in electrical and electronic engineering from the National University of Singapore.

Jim Ptaszynski

Jim Ptaszynski focuses on helping to fulfill the promise of technology in higher education. He designs and implements programs that assist in improving the capabilities and uses of technology in higher education. Ptaszynski believes that there exists a great opportunity to significantly advance appropriate uses of technology in higher education. He is passionately convinced that in order for education to remain competitive in an increasingly information-based and global economy, higher education must adopt and better integrate information technologies. While such a scenario is obviously in the best interest of Microsoft, he believes that as good corporate citizens, we must invest in helping higher education achieve these goals. His position at Microsoft allows him to combine three of his professional passions: technology, strategic planning, and higher education.

Ptaszynski joined Microsoft in October 1995, having spent the previous 16 years in higher education. For the six years prior to joining Microsoft, he was the associate dean at the Graduate School of Management at Wake Forest University. In that position, he was responsible for the school's strategic planning, adoption, and integration of technology; student services; human resources; the institute for executive education; financial planning; and budget oversight. He also taught graduate-level marketing courses. In addition, Ptaszynski has consulted for numerous businesses and not-profit organizations in the areas of strategic planning, environmental scanning, market research, and technology planning and implementation.

Ptaszynski received his BA from the University of North Carolina at Chapel Hill, his MS from Shippensburg University of Pennsylvania, and his PhD from the University of North Carolina at Chapel Hill.
