

E-LEARNING IN ACTION

# Learning by Doing

HCT Educational Technology Series, **Book 3**

Edited by  
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**Helen Donaghue**  
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Series Editor  
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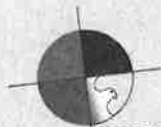
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**(Re)Inventing Education: ePortfolio as a  
General Education Requirement at  
Salt Lake Community College**

David Hubert / Kati Lewis

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## Abstract

*Salt Lake Community College has instituted an ePortfolio requirement for all students taking General Education courses. This article situates our ePortfolio implementation in the growing literature on ePortfolio pedagogy and assessment. It describes how we designed our ePortfolio requirement, the supporting resources we created for faculty and students, our faculty development efforts with respect to ePortfolio pedagogy, and how we use ePortfolio to assess essential learning outcomes. We finish by imparting lessons learned as we moved from piloting ePortfolios in a few courses to a full ePortfolio requirement for nearly all of our students.*

**Keywords:** ePortfolio, General Education, Assessment, Community College

## Introduction

In 2010 Salt Lake Community College (SLCC) began an ePortfolio requirement in all of its General Education courses and structured its learning outcomes assessment strategy around the assignments and reflections in student ePortfolios. Students are not required to have an ePortfolio to graduate—nor does the quality of their ePortfolio affect their graduation—but faculty in each General Education course must require students to archive at least one “signature assignment” and reflection from the course, and faculty decide for themselves how much to weigh the ePortfolio in the student’s final grade. A signature assignment is one that applies course knowledge in some meaningful way that achieves two or more of our General Education learning outcomes. The signature assignments and reflections become artifacts that we assess for the improvement of teaching and learning, and for our periodic accreditation reports.

Students contract individually with free Web 2.0 platforms in order to make their ePortfolios. SLCC supports certain platforms, meaning that it can provide technical support for those platforms, but does not endorse a particular platform. Indeed, students are free to use any platform they wish, as long as it results in a website that the college can access. Students own their ePortfolios and can continue to use them after they leave SLCC. We have found that student ownership pays important dividends in terms of student creativity and buy-in



**Figure 1:** The Welcome pages of two SLCC student ePortfolios. (Used with permission)

While students have a great deal of creative license when setting up their ePortfolios, as illustrated by the two examples above, they follow a common outline that contains these pages:

**Welcome**—Students welcome readers to the ePortfolio and tell a little about themselves.

**Goals and Outcomes**—Students list their goals and SLCC’s General Education learning outcomes. They can revisit their goals at any time. As the ePortfolio begins to fill with artifacts, they create hyperlinks from them to the relevant learning outcomes.

*Coursework*—Students list their courses and organize them by semester. Each course title becomes a hyperlink to a page in the portfolio that showcases the student's work and reflection.

*Outside the Classroom*—Students describe their extra-curricular activities, hobbies, work, or any other aspects of their lives that they'd like to highlight.

*Résumé*—students can choose to include their résumé.

This common outline helps faculty navigate ePortfolios created on a variety of different platforms. We have been pleasantly surprised at how much imagination students put into their ePortfolios, and by how well they personalize them with their own header images and other content. Personalization, combined with the unique reflection that students put into the ePortfolio, helps them develop a sense of themselves as scholars who are navigating their way into a new situation.

## Discussion

### Situating Portfolio Implementation

Institutions of higher education around the world have implemented or are seeking to implement ePortfolio initiatives because ePortfolios provide flexible spaces for outcomes assessment and learning. It is the very flexibility of these electronic learning spaces that make ePortfolios an effective vehicle for collecting, organizing, and storing information. However, ePortfolios are also spaces through which students, to borrow David Bartholomae's (1985) language about student writers, "invent [and reinvent] the university for the occasion" (p. 134). Bartholomae argues that liberal arts institutions require students to learn and take up and take on numerous "voices and interpretative schemes" in their writing so that they can complete any writing opportunity from across their liberal arts curriculum (p. 135). To do this, students must learn how to navigate, appropriate, assemble, and sometimes mimic numerous discourse communities, often at once (p. 135). "Portfolio thinking" involves similar forms of student invention to help them become reflective practitioners who understand and can evaluate their learning across discourses and across their development as "lifelong" and "lifewide" learners (Chen, 2009, p. 29).

Advancements in technologies have significantly altered the dynamics of the learning landscape for teachers and students (Siemens, 2004, p. 1). This landscape is one in which students are still expected to communicate in a variety of specialized discourses, but they are also remixing and mashing up those discourses, inventing the university for our occasions and their own. EPortfolios, when designed with student ownership and authorship in mind and not only for evidence/data collection, give students a concrete learning space for tracking their own development and thinking over time. These learning spaces also offer institutions an insider's view of curriculum as experienced and authored by students.

In a March 2012 Educause article, Randall Bass argues, "our understanding of learning has expanded at a rate that has outpaced our conceptions of teaching" (p. 24). As institutions adopt and adapt to student-centered teaching and learning methods that invite learners to become both critic and "author" of their own learning (Baxter Magolda, et al., 2004), they face the challenge of creating authentic and experiential curricula that also require students to produce evidence of having met outcomes outlined by the institution. EPortfolio pedagogy—developing dynamic and integrative assignments, encouraging intentional reflective practice, and using appropriate communication modalities—in many respects is a response to the challenges presented by the outpacing ~~and~~ Bass highlights, and the need for authentic and experiential learning in the classroom.

Much of the literature on the concept of ePortfolio frequently focuses on three of its main functions: deepening student learning through integrative and inquiry-based curricula, self-authorship of learning via reflection, and outcomes assessment. EPortfolio is a multifaceted conceptualization of student-centered learning that, when used as a learning space, functions simultaneously as a technological outlet for showing "your work", connecting work, and thinking

about that work in multiple contexts. Chen and Black (2010) describe the multifaceted concept of ePortfolio as a "technology, a pedagogical approach, and a process, as well as a product" (p. 1). SLCC's ePortfolio initiative asks students to use the technology to show and own the story of their learning. While our student ePortfolios are standardized in terms of the structure, they are also personalized. Thus, they function in at least two ways: "portfolios as tests" and "portfolios as story" (Barrett & Wilkerson, 2004). Our synthesis of these two primary ePortfolio models demonstrates, in the words of Darren Cambridge (2010) "shared commitment to authenticity [that] makes it possible to see how the impact on both individual self-development and institutional innovation can be multiplied when linked" (p. 21).

According to Bass (2012), ePortfolios provide faculty with a mechanism for organizing "learning around the learner rather than around the course curriculum" (p. 26). Put another way, ePortfolios are not about the technology—they are about deep learning. The technology is the space in which faculty ask students to show the products of their learning—the assignments and projects they have produced for the course. However, giving students a space to collect, assemble, and store their work is not enough to help students shape and structure themselves into lifelong and lifewide learners (Chen, 2009, p. 29). Reflective practice is the key for this shaping and structuring. Intentional reflections on experiences are how students mold the learning space that an ePortfolio offers into their learning place, and thereby mold themselves into reflective practitioners.

By space, we mean the digital locale for their work. By place, we are referring to what happens when a student makes that space their own by reflecting on the implications of their work and the processes through which they crafted that work. The reflective process is critical in any learning environment because it fosters inquiry, connection making, application of knowledge beyond the borders of a classroom, and development of the metacognitive habits and skills associated with higher-order learning, such as connection and meaning making (Dewey, 1938; Rodgers, 2002; Schön, 1983). Reflections deepen, for learners and their audiences, the continuities among learning experiences.

Similar to interactive mapping, reflection requires learners to layer their learning experiences so that they can construct meaning from complex relationships. Interactive maps are composed of a series of layers arranged in a specific order. Each layer defines and symbolizes a specific feature for users to analyze. Layering provides stronger connections between map features and helps users discover physical and cultural geographic patterns (A. Dastrup, personal communication, March 21, 2014). In a learner's reflections layering provides stronger connections between courses and the real world, and it helps both the learner and audiences discover patterns of learning. For each course, the learner arranges and represents particular experiences from their learning (e.g. developing their own writing process in a composition course) and connects those experiences to other lived experiences. Thus, the learner defines and symbolizes, with each reflection, their learning across academic and real world experiences layer by layer. Taken together, all of the learner's reflections become an interactive "map" of their learning. This map tells a story about what, when, why, how, and where learning occurred, as well as where that learning could be applied in other contexts.

In order to integrate student invention, place making, and layering of learning in an ePortfolio program, an institution must first recognize that pedagogy and process has to come before the technology. According to Connect to Learning (C2L) Catalyst for Learning (Eynon, Gambino, & Török, 2014, p. 4), the most effective and integrative ePortfolio initiatives involve three core-learning levels: inquiry reflection, and integrative learning.. Pedagogy, Professional Development, Outcomes Assessment, Technology and Scaling Up are the five interlocking sectors in which the core-learning levels are defined, deployed, and examined (ibid., p. 3). Like our students, we must invent and re-invent the university for the learning occasion.

## Implementing ePortfolio Across General Education

SLCC's journey to full ePortfolio implementation began in 2005 with two initial steps. The college received a Utah state grant to pilot ePortfolios in specific class sections, which ultimately came to include Geosciences, Math, English Composition, and Political Science courses. The

pilot focused on evaluating different ePortfolio platforms and experimenting with ePortfolio pedagogy; it lasted four years, and SLCC gained important experience with ePortfolios in the classroom. The second development from 2005 entailed a joint administrative-faculty proposal to overhaul the structure of SLCC's General Education program and to include ePortfolios in General Education courses across the college. The structural changes were rejected by the college's curriculum process, but a number of people were intrigued by the possibility of using ePortfolios in General Education, so the college continued with the pilot.

In 2008 a group of faculty, staff and administrators—satisfied that SLCC now had sufficient experience with ePortfolios in the classroom—made a proposal to our curriculum committee and faculty senate to require ePortfolio integration in all General Education courses. The four goals of the proposed requirement were to create more coherence in our General Education program by having the ePortfolio serve as a “capstone in progress” for students; to help students work more intentionally toward achieving General Education learning outcomes; to engage students in deeper learning; to assess our General Education program. After much debate and some modification of the proposal, it was adopted in the fall of 2009, and SLCC formally began its ePortfolio requirement in General Education with the summer semester of 2010.

We took several steps to ensure the success of the ePortfolio initiative. We created online tutorials and free get-started workshops so students could seek assistance outside of class, because faculty did not want to take class time to help students set up their ePortfolios. Later, we added two drop-in ePortfolio support labs for students and faculty. Even though students can use a variety of free Web 2.0 platforms to build their ePortfolios, we created a way for faculty to easily access them in their online class rolls. We use this same ePortfolio interface to access random samples of ePortfolios for assessment.

We have been working to develop an ePortfolio culture at SLCC. The college's first step was to hire an ePortfolio Coordinator who dedicates herself to promoting what Chen and Penny Light (2010, p. 3) have termed “folio thinking” among students and faculty. Our professional development activities have centered on technological and pedagogical workshops for faculty. Working with the General Education committee, we have been helping faculty better integrate signature assignments and reflection into their courses. We host an annual ePortfolio Showcase event in which students who have used their ePortfolios to demonstrate their excellence win scholarships and present their ePortfolios to friends, family, and the college community.

### **Assessing General Education with ePortfolios**

One of our motivations for adopting ePortfolios was to use them to directly assess student work to see a) whether our General Education program is asking students to do the kinds of things that will result in progress toward essential learning outcomes, and b) the level of student attainment of those outcomes.

We have established an assessment process in which we examine the ePortfolios of 100 graduating students each May. The Institutional Research Office provides us a list of randomly selected students who have just received their A.S. or A.A. degrees, and we arrange for pairs of faculty to assess them. Each pair of readers is tasked with examining artifacts in the ePortfolios that speak to specific learning outcomes. Using a scoring rubric, they count artifacts that represent evidence that students are addressing General Education outcomes, and then come to a consensus rating as to the performance level demonstrated by each artifact. Thus we have quantitative evidence shedding light on whether our courses are providing students sufficient opportunities to practice and demonstrate essential learning outcomes, and we have quantitative evidence regarding the performance of students on those very outcomes.

For example, Table 1 shows the percentage of sampled ePortfolios in 2012 that demonstrated “some” or “considerable” evidence that students had performed the kinds of tasks that are directly related to our General Education learning outcomes. We have never before had this kind of insight into our General Education program. We can be fairly confident that the curriculum



is structured in a way that provides students with opportunities to write in multiple genres—an activity that is key to our “effective communication” learning outcome. However, we are rightly concerned that students might not be given sufficient opportunities to work collaboratively with others to complete academic projects. This is important information that can guide our faculty professional development and our curriculum revision processes.

<b>Student Activities Documented in Sampled ePortfolios</b>	<b>Percent</b>
<b>Writing in Multiple Genres</b> (Some = 3 or 4 assignments; Considerable = 5 or more assignments)	74%
<b>Addressing Unstructured Problems</b> (Some = 2 assignments; Considerable = 3 or more assignments)	63%
<b>Using and Interpreting Information Represented as Data, Graphs, Tables, or Schematics</b> (Some = 2 assignments; Considerable = 3 or more assignments)	47%
<b>Making Connections Across Disciplines</b> (Some = 2 or 3 assignments; Considerable = 4 or more assignments)	28%
<b>Working with Other Students to Complete Projects</b> (Some = 2 assignments; Considerable = 3 or more assignments)	3%

**Table 1:** Percentage of sampled ePortfolios that had “some” or “considerable” evidence of the following in 2012

Table 2 illustrates the kind of data we are obtaining with respect to student attainment of General Education learning outcomes. In 100 student ePortfolios sampled in 2013, the reviewers found 262 assignments in which students attempted to use quantitative evidence in support of an argument or the purpose of the work. In 49% of those artifacts, students either met or exceeded expectations on a modified VALUE rubric (see Resources), indicating to us that we have some work to do in helping students progress with respect to this aspect of quantitative literacy. A separate pair of reviewers identified 338 assignments in which students attempted to use outside-of-class research to accomplish a specific purpose. Again using a modified VALUE rubric, the reviewers determined that 66% of those artifacts met or exceeded expectations.

<b>Quantitative Literacy Assignment</b>	<b>Well Below Expectations</b>	<b>Below Expectations</b>	<b>Meets Expectations</b>	<b>Exceeds Expectations</b>
Students express quantitative evidence in support of the argument or purpose of the work—in terms of what evidence is used and how it is formatted, presented, and contextualized. (n=262 assignments)	11%	40%	35%	14%
<b>Information Literacy Assignment</b>	<b>Well Below Expectations</b>	<b>Below Expectations</b>	<b>Meets Expectations</b>	<b>Exceeds Expectations</b>
Students use information effectively to accomplish a specific purpose. (n=338 assignments)	9%	25%	48%	18%

**Table 2:** Quality of assignments in sampled ePortfolios in 2013

EPortfolio implementation at SLCC has been a boon to our General Education assessment efforts. In addition, implementation helps us fulfill a promise outlined as part of one of the

College's Core Themes (2011): "Provide students a comprehensive and integrated General Education experience". We now understand more fully what and how our students learn as they progress from their first semester to their last, as well as the level of integration that students experience in our General Education program.

## Conclusion: Lessons Learned

With four years of experience with a full ePortfolio implementation—backed by five previous years of piloting ePortfolios in the classroom—we are in a position to identify important lessons that might be relevant to other institutions who seek to use ePortfolios in their academic programs.

- *It's about the pedagogy (and not so much the technology)*—It can be easy for institutions to get wrapped up in the technological intricacies of different ePortfolio tools and platforms. While it is true that different platforms offer their own unique bells and whistles, the focus of any ePortfolio implementation should center on the pedagogical shift entailed by integrating ePortfolios into courses and programs. That shift needs to happen regardless of the chosen ePortfolio tool, and embodies student-centered learning in which faculty help students create significant artifacts of their learning, reflect deeply on that work or on themselves as learners, and showcase both reflection and artifacts in ways that illustrate how students are achieving essential learning outcomes.
- *Faculty professional development is essential*—Institutions new to ePortfolio will probably do what we did, which was to focus initial faculty training on mastering the new technological interface. But that only scratches the surface of the professional development required for a large ePortfolio implementation. Reflective pedagogy is often not familiar to faculty, nor is designing signature assignments to address multiple learning outcomes. Most faculty need guidance to develop the kind of integrative and inquiry-based assignments that can be effectively showcased in ePortfolios. While students can showcase any kind of assignment that takes digital form—from research papers to math problems—modern ePortfolios open up other possibilities to represent academic work using images, video, audio clips, animations, web pages, self-playing presentations, and so forth.
- *Faculty have to walk the talk with students*—Students instinctively distrust faculty who ask them engage in activities that their professors are unwilling or unable to do themselves. In addition to knowing the ePortfolio technology, faculty should demonstrate to students how they use it. One way to do so is for a professor to create a mock ePortfolio that shows students how he would like the course page set up. Or she might show students the professional ePortfolio that she uses in the tenure or post-tenure review process. That simple action confers instant credibility on the faculty. The professor can also model the importance of reflective practice to the discipline.
- *Anchor the ePortfolio in the curriculum*—In our case, ePortfolio is a course-level requirement for all General Education courses. In some institutions, ePortfolio is an institutional or program-level graduation requirement. For others, ePortfolio use is determined by the faculty who volunteer to use it in their courses. Regardless of the route an institution chooses, ePortfolio has to be anchored in the curriculum in ways that tell students that the institution (or the program, or the faculty member) wants them to take it seriously. EPortfolio cannot be seen by students as an "add on" that matters little to their grade. Whether implemented at the institutional, program, or course level, ePortfolio has to change the culture of teaching and learning to privilege collecting work, reflecting on that work and the efforts that produced it, making connections at the academic and personal level, and showcasing for a broader audience. This change must manifest itself throughout the experience rather than being an exercise reserved only for the end.

As Batson (2010) argues, ePortfolio technology is "profoundly disruptive" in that it "anticipates the learning and education models of the coming decades". It invites students to be authors

of their own education, to think deeply about what they are doing as they are doing it, and to become archaeologists and curators of the artifacts that might otherwise have disappeared from their minds as soon as they submitted them. The disruption of ePortfolio implementation can be mitigated by thinking of the ePortfolio as a capstone in progress—a syllabus and experiences the students construct for themselves—or as an interactive map that students use to navigate for themselves the unfamiliar territory of higher education. It is in these ways that students invent the university for themselves.

## Resources

- AAC&U VALUE rubrics link: <http://aacu.org/value/>
- SLCC's ePortfolio resource site for faculty: <http://facultyportfolioresource.weebly.com>
- SLCC's ePortfolio resource site for students: <http://eportresource.weebly.com>

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