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<td>OVERVIEW</td>
<td>All portfolios participate in and support a curricular ecology. In the case of print portfolios, the ecology tends to reward process. In the electronic portfolio model, the curricular ecology expands in three ways: (1) in terms of kinds of texts (image, audio, video, alphabetic); (2) in terms of contexts, given the availability of an almost infinite number of contexts on the Web; and thus also (3) in terms of potential audiences. At the same time, a single vehicle, even an electronic portfolio, cannot operate in all curricular ecologies; rather, each model assumes a specific curricular ecology. One such ecology is oriented to <em>processes</em> composers engage in: it includes the verbal but tends to privilege the visual as a means of documenting practices contributing to composition. A second ecology is oriented to ways that the <em>structure</em> of a digital portfolio can foster learning: it privileges scaffolding and context, and, through arrangement, seeks to construct a student in explicit ways. A third model of eportfolio is not based in print, but is from the beginning electronic; it is keyed not to revision, but to a <em>reiterative process</em> in which one portfolio acts as (1) foundation for other portfolios; (2) source of material that can be re-mixed for successive portfolios, and (3) site and occasion for interacting with others inside and outside of school. The hope of this model is that it leads to a <em>self-sponsorship</em> of writing, thinking, and representing self in a self-designed, dynamic, continuing ecology of learning.</td>
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Portfolios, Circulation, Ecology, and the Development of Literacy
Kathleen Blake Yancey

A portfolio is never neutral: it assumes a circulation of texts, a set of relationships, and an ecology of learning.

During the last 25 years, writing teachers have engaged in three remarkable shifts in their teaching and assessment practices. Specifically, they have moved from

1. the assignment and review of single, finished print texts to
2. the review of multiple print texts, including drafts of finished texts, inside a portfolio to
3. the review of multiple kinds of (sometimes print and) digital texts linking work inside school to that outside school and linking composers and texts to multiple contexts and audiences.

In terms of what we might call the circulation of texts, these shifts signify in two ways. First, collectively, the shifts mean that a single channel of communication, between teacher and student, has been multiplied, inside the portfolio specifically—be it print or digital—to include many channels: between students and other students, between students and other teachers, between students and audiences outside of school. Second, the individual text-without-context has been replaced by the text-with-its-own-context of drafts and notes and composing and thinking, which itself has been replaced in turn by multiple kinds of texts in dialogue with each other in multiple kinds of contexts. An electronic portfolio, with drafts and outtakes and reflective commentary, assembles and articulates its own ecology of composing and composer. Like a Web site, however, this portfolio’s “system of circulation” can also include Internet-based and interactive links, contexts, and audiences. Circulation thus refers both to the distribution of texts and to the relationships among composer, texts, and audiences.

Implicitly, inside each of these portfolio models is likewise a model of composing assuming a kind of textual circulation, which itself is one dimension of a curricular ecology. In the “finished print model,” the curricular ecology is tutorial in nature: focused on a single student submitting to a single audience a single completed document. In the print portfolio model, the curricular ecology is more social, encouraging writers to engage inside a limited discursive space, that of the classroom, as they work together in drafting and re-drafting situations to create a variegated portfolio composition that is itself an ecology of texts showing development and achievement. In the electronic portfolio model, the curricular ecology expands in three ways: (1) in terms of kinds of texts (image, audio, video, alphabetic); (2) in terms of contexts, given the availability of an almost infinite number of contexts on the Web; and thus also (3) in terms of potential audiences. Ironically, although such widening is often claimed to be an advance on earlier ecologies of learning, it also means that, given diverse possibilities, creating a rhetorical situation for a Web-sensible digital portfolio (Yancey, 2006a) is a fundamentally new composing task.

Ecology . . . is the scientific study of the distribution and abundance of living organisms and how the distribution and abundance are affected by interactions between the organisms and their environment.

(Wikipedia)
At the same time, a single vehicle—even an electronic portfolio—cannot operate in all curricular ecologies, and a review of current models of electronic portfolios demonstrates that each model assumes a specific curricular ecology. One such ecology is oriented to processes composers engage in, and it tends to privilege the use of the visual to document practices that contribute to composition. A second ecology is oriented to ways that the structure of a digital portfolio can foster learning, and it privileges scaffolding and context, and, through its structure, seeks to construct a student in explicit ways. A third model of eportfolio, such as that developed at institutions such as LaGuardia Community College, at Clemson University, and at Florida State University, is not based in print, but is from the beginning electronic; it is keyed not to revision, but to a reiterative process in which one portfolio acts as (1) foundation for other portfolios; (2) source of material that can be re-mixed for successive portfolios, and (3) site and occasion for interacting with others inside and outside of school. The hope of this model is that it leads to a self-sponsorship of writing, thinking, and representing in a self-designed, dynamic, continuing ecology of learning.

To foster learning, the ecologies of eportfolios are not exclusively online; rather, when situated in face-to-face occasions—for instance, student presentations of their portfolios and portfolio gallery events—students develop a kind of authority and expertise that seem directly related to the effects of mixing the eportfolio with and into a real-time rhetorical situation. As in the case of other artifacts of literacy—and here, in this chapter, the case of embroidered samplers will be instructive—eportfolios, too, flourish when the ecology of learning that contextualizes and interacts with them is a both/and, mixed-use set of real-time and electronic rhetorical situations; of individual representation and communal knowledge-making; and of domestic and public cultures.

In this chapter, then, I'll first address three models of electronic portfolios, demonstrating the specific curricular ecology informing each. The argument here is not evaluative, but descriptive: It's not that one model of electronic portfolio is inherently “better” than another, but rather that each privileges certain assumptions about learning and thus fosters certain kinds of engagements. These engagements are located in processes and practices; in structures; and in habituated behaviors, especially those that contribute to sustainability. Another way to think about such behaviors is through the lens of the everyday, and I'll conclude by rewinding to a literacy artifact of the past—the sampler—and consider how the everyday-ness of samplers has contributed to their continuing relevance and to what that might tell us about the potential everyday-ness of electronic portfolios as another kind of sustainable literacy artifact.

And one final note before beginning: the focus here is largely (although not exclusively) on electronic portfolios in rhetoric and composition contexts. As the literature on electronic portfolios demonstrates, however, considerable work in eportfolios is occurring in other curricular and co-curricular contexts. (See, for example, both the Web site for the Inter/National Coalition for Electronic Portfolio Research [http://ncepr.org/], and the Coalition volume of research, *Electronic Portfolios 2.0: Emergent Research on Implementation and Impact*, Cambridge, Cambridge, & Yancey, 2008).
THE CURRICULAR ECOLOGY OF ELECTRONIC PORTFOLIOS-QUA-PROCESSES

For many, the first model of electronic portfolios was one that morphed from a print model. As has been well-documented, writing portfolios allow composers to document processes as well as products and, through a reflective text, to comment on any number of related topics (e.g., their development as writers, an analysis of the processes contributing to final texts, an assessment of portfolio texts). In general, such portfolios have been principally if not completely verbal, assembled into book-like texts (Yancey, 2004b), which, as Michael Allen, Jane Frick, Jeff Sommers, and I (1997) pointed out, is not necessarily the way the portfolios are read. In other words, although students may have used various visual strategies in their composing—from doodling on a draft to graphing an exercise in invention to using digital notes to mark part of text to be reconsidered—the portfolio itself did not highlight such visuals. In part, such dearth wasn’t so much the result of prejudice against the visual in favor of the verbal, but rather the result of portfolios that emerged from but didn’t necessarily include full processes of invention, multiple drafting, peer reviewing, reflecting, and other practices associated with composition in the late 20th and early 21st century (for a discussion of the late 20th, see Lindemann, 2002; for the 21st, see Fulkerson, 2005; for an overview of both, see Yancey, 2006a).

What was immediately apparent in the morphing from print to digital was that even the screen of the now-ancient-seeming word-processing machine is more visual than the pages on which texts are printed.¹ This observation and experience led to the use of the visual as a means of making meaning such that the portfolio became, almost without intention, an exercise in the visual and the verbal combined. Moreover, because students were using common tools—from Microsoft Word to PowerPoint to Web-composing software—they were creating their own structures and artifacts. Two such practices, and their artifacts, exemplify the new exhibits associated with this first model of eportfolio.

The first is the use of the visual, quite literally, to highlight drafts in one of several ways. Sometimes, for example, differences among drafts are highlighted. Despite the fact that composing inside word-processing software makes plain the anachronism involved in thinking of “drafts” as discrete entities, as Pam Takayoshi (1996) noted, there are still iterations of a draft, and the visual can help writer and reader see what is different from one textual iteration to the next. Other times, areas within a text might be highlighted, with the writer providing annotations as to the rationale for rhetorical choices. In other words, inside a digital portfolio, writers use the visual and the verbal together to show development, rhetorical sophistication, and reflection. For example, first-year Clemson student Josh Reynolds, in arguing that some college athletes are heroes, highlighted a specific part of his essay,

It is rare, but not impossible to find an athlete like the quarterback for N.C. State, who is only a junior, but is married, has a daughter, and is the leader of his team, an outstanding athlete, and whose grades aren’t too shabby either. This is someone to look up to. Or consider Willie Simmons, Clemson’s quarterback, who recently volunteered his time to raise money to fight a deadly disease plaguing young people.

¹ Cathy Burnett and Julia Myers (2006) documented changes in composing processes when students, in their study of elementary students, write to the screen itself. As they are documented, these processes are very different than the processes children engage in print (see Yancey, 2004a). Likewise, the New York Times (Donadio, 2007) highlighted the role that software plays in helping writers keep track of multiple narratives.
and in the margin, explained why:

\[I \text{ used these examples because, when I first heard the stories, I was impressed and inspired. These are not the kind of people talked about in our readings. I felt cheated to be given one side of the story, and my readers deserved a more balanced view.}\]

Here, Josh explains the why of specific examples he highlighted, directly linking them to the logic of creating a “more balanced” argument.

A second innovation in early models of electronic portfolios was the use of mapping as a means of representing composing processes. Sometimes, the maps were used to show before and after representations of composing to illustrate change—especially elaboration and the inclusion of the social—in processes; sometimes, maps were used initially as a tool for analysis (so that the ways students compose were made visible and then enhanced); and sometimes, they were used simply as a means of documenting process (see Figure 1). These maps spun off other mapping activities, like the mapping of different discourse communities that students participate in (Peagler & Yancey, 2005), so that students could see different communities and could consider how their behavior changes from one to the next. Put differently, students saw through their own mapping that they are already very adept as communicators. More generally, in making abstractions visible through mapping, students and faculty found the abstractions more specific and easier to address.

Taken together, these innovations define the first model of the digital portfolio, one that assumes a learning ecology with process and the individual at the center. With that focus, it replicates composition’s early emphasis on process (Lindemann, 2002), but relies on the affordances of the electronic for new ways of showcasing process. And although electronic portfolios can be available for worldwide audiences to read, the attention of this model, as has been the case with writing portfolios generally, is on the opportunity portfolios create for the representation of learning inside the classroom. In that sense, this ecology is a closed system. At the same time, the innovations introduced through this model—highlighted text and maps and reflective annotations—could as easily be accomplished in print; that is, they are not medium-specific practices. The ecological system is thus open, interacting with and informing other ecologies where other values and media operate.

**THE CURRICULAR ECOLOGY OF ELECTRONIC PORTFOLIOS-QUA-STRUCTURE**

A second model of electronic portfolio provides a structure intended to assist students in one of two ways: by creating a framework that students can work within, or by articulating assumptions and frameworks that, in print, have been unarticulated. In each case, the
structure brings together outcomes for students and the resources students can tap in order to meet those outcomes.

The general education electronic portfolio at Indiana University–Purdue University Indianapolis (IUPUI), for example, invites students to think of their learning not in the familiar terms of courses or even in terms of experiences outside courses, but rather in terms of outcomes satisfied by learning both in school and out of it. In the portfolio itself, students find a matrix that builds in developmental learning as well as experiential learning keyed to the six outcomes for IUPUI’s principles of undergraduate liberal studies: Core Communication and Quantitative Skills; Critical Thinking; Integration and Application of Knowledge; Intellectual Depth, Breadth, and Appropriateness; Understanding Society and Culture; and Values and Ethics. Thus, when a student chooses to include an artifact in his or her portfolio, he or she engages in a process including two steps: (1) identifying where in the matrix (see Figure 2) it belongs, and (2) commenting on that inclusion in a reflective text. Moreover, once a file has been loaded, faculty can read and respond to it; thus a sense of community is built into the eportfolio system. This general education “matrix thinking” (Hamilton & Kahn, 2004) can set up a second iteration of matrix thinking as well. When a student later includes pieces of work in a discipline-based eportfolio, she or he engages in a “doubled” matrix thinking, or what we might call multiple mapping: thinking through and with the general education matrix as well as through and with the disciplinary matrix. Such mapping—the ability to see a given artifact in the several different contexts provided by the matrix—is one hallmark of intellectual development.

A second eportfolio with structure as a central feature has been developed in the composition program at the University of Washington. There, six graduate students experienced in print portfolio development collaborated with information technology staff to craft an electronic portfolio for use in writing classes. As is often the case, these teachers were morphing portfolios from one medium (print) to another (digital), but in this situation, the teachers were using Catalyst, a home-grown software that includes a portfolio tool (see Figure 3). Working together but coming from different disciplines, the participants in the collaboration spent considerable time explaining assumptions and practices to each other to customize the tool for use in writing classes. One of the key decisions the team made was to articulate, in an explicit way, much that was invisible in the print model. For example, as students work on an outcome, they are reminded about that outcome, about ways to demonstrate it, and about the eportfolio-as-genre itself and expectations accompanying portfolios. In other words, the portfolio itself functions directly as a teaching tool, with the portfolio environment including, by design, reminders about the curriculum as well as a scaffold to support portfolio completion. In the print portfolio model, at UW as elsewhere, such information is usually shared with students verbally, but not in a systematic or consistent way, nor, typically, has such information explicitly framed the process of portfolio-making. But the collaborative design process at the University of Washington persuaded the participants that building this scaffolding into the model, where
it became a part of the environment, would support students in new ways and sustain their work over months, semesters, and years (Lane & Fournier, 2006).

Generally, then, the ecological system assumed in the model of eportfolio attuned to structure is oriented to curricular outcomes—to the inclusion of learning across courses and experiences—and to explicit instruction in the genre of the electronic portfolio. In its inclusion of various types and artifacts of learning, it seems an open ecology, and its structure supports insights generated both within a single course and across several courses and experiences. At the same time, given a focus on institutional outcomes rather than student-generated outcomes, the ecology tends toward closure.

THE CURRICULAR ECOLOGY OF ITERACTIVE, EVERYDAY ELECTRONIC PORTFOLIOS

A third electronic portfolio model is defined by two features: (1) the opportunity to work at the intersection of the personal and the public; and (2) the conceptualization of portfolio-making not as a one-time opportunity, nor revision as one-time occurrence, but as a reiterative process. Three versions at three very different schools exemplify this model.

The first version has been developed at LaGuardia Community College, where over 50% of the students are immigrants, 70% of them are women, and nearly all of them are first-generation college students. Funded by a Title V grant (for Hispanic-serving institutions), LaGuardia developed a 5-year eportfolio plan, hoping that each student would create an eportfolio. Given the different kinds of programs offered—from vocational programs to associates degrees to transfer programs—the eportfolio project leaders looked for ways that the eportfolio might connect to all students. In designing their model, they turned to the strengths of the students and thematized the model as an exercise in two cultures: home culture and school culture. The two-culture approach accomplished two aims: (1) it provided a space that linked the personal and public; and (2) it provided a doubled frame or lens through which students could see their development and achievement. Thus, for instance, one student, born in Korea and educated there as a medical professional, Kyoung changed careers when she came to New York. At LaGuardia, she used her ePort-folio to integrate her artistic talent with her interest in art as a tool for healing. Her ePort-folio, which she has presented and released for public discussion, includes papers based on research in the Museum of Modern Art, essays on art history, discussions of Korean language and her family history in Korea, and a thoughtful reflection on art therapy careers. Her ePort-folio also displays her own original artwork, giving depth and visual power to her story. (Clark, online)

The LaGuardia faculty also conducted research into the ways that eportfolios fostered student learning; this research was conducted both as an institutional project and as team participation in the International Coalition on Electronic Portfolio Research. One goal of the Coalition is to understand more about reflection inside of electronic portfolios and the ways reflection can assist student learning. One mechanism Coalition members have used to take up this inquiry is “a review of a reflective artifact” (Yancey, 2006b). In their review, LaGuardia focused on the electronic portfolio of a single student, whose eportfolio over time became three eportfolios. In other words, what the LaGuardia faculty found themselves inquiring into wasn’t a single portfolio, or a portfolio under revision, but a rather set of portfolios developed in a reiterative process. Their analysis began with Kyoung’s first portfolio:

In the first iteration, Kyoung seems to be mostly interested in developing an electronic portfolio that speaks of herself as an individual. She utilizes one of
the templates available to her, but she customizes it in such a way that it becomes a reflection of self-expression. (Doyle, 2005, p. 2)

A second eportfolio iteration shows Kyoung adapting the portfolio and its contents to show what she does well and to think about her future. Its intent seems dual: to document and to explore.

In the second iteration, Kyoung has become more comfortable with the form of the electronic portfolio and begins enriching its content. She edits most of her previously posted work by revising the text of an essay, adding an image, and/or reorganizing how she presents her work on a page. Also interesting is what Kyoung chooses to add and to delete from her electronic portfolio in this iteration. For instance, in her revised essay concerning her educational goals, she has narrowed down her career choice and is now thinking about her abilities, strengths as a student, personal likes and dislikes, reasons for her selection of a career path, and is making connections with her past experience. Moreover, she has begun to consider courses that will enhance her knowledge and that might benefit her future employment opportunities and impact on salary possibilities. (Doyle, p. 2)

In the third iteration, according to the LaGuardia researchers, “It is no accident that. . . Kyoung turns metaphorically and reflectively to face the world” (Doyle, p. 2). In a move characteristic of other changes in her eportfolio, Kyoung changes the opening portfolio page dramatically:

The page is deep blue; to the left is a repeating sequence of five images of Kyoung, all but one of them close-up head shots. In the center, her name is spelled out in large capitals. To the right, in marked contrast to the five “portraits” is Ingres’ image, Odalisque, a la Fauve and flat as a sand painting, which Kyoung has appropriated from her earlier essay. “Who am I,” Kyoung seems to be asking the reader, “the plucky young woman of the flickering portraits, or the sensual icon?” (Doyle, p. 2)

In moving from one eportfolio to the next, then, Kyoung shifts from a focus on self to a focus on self-as-student to a focus on self-in-presentation to a public audience, and in these shifts, she displays increasing intellectual maturity and rhetorical sophistication. And the role of the model itself matters: it is located in a curricular ecology assuming reiteration of self and portfolio, through the use of both new and appropriated materials. Perhaps as important, what the LaGuardia faculty also learned was that students wanted to show these eportfolios to others—colleagues on campus and families around the world. What began as an academic exercise had become something more.

In a completely different context, Josh Reynolds, an engineering student at Clemson, also has re-iteration at the heart of his eportfolio. And he, too, has three electronic portfolios. The first was one created for a speech class and includes four texts: the written texts of two talks in addition to a Microsoft PowerPoint slideshow that accompanied one, and a video of Josh making the other presentation. Like many electronic portfolios, it seems intended to show that his work for the class is satisfactory, but it includes no process work and no reflection. Accordingly, while the portfolio is multimedia, its curricular ecology is product-based.

Josh’s second portfolio also documents work for a course, but the electronic portfolio itself participates in its own self-designed ecology, as the buttons on the left side indicate: Home, About Me, My Photos, Storyboards, Speech Class, and Contact Me (see Figure 4). The writing class eportfolio has taken on an identity of its own, and it includes several assignments as well as a writing process map. In talking about the portfolio process, Josh identified this portfolio as the one that helped him understand what a portfolio could be:
freshman english is really where all of this portfolio business started. it was the first portfolio i had ever attempted, and it turned out pretty well.... i learned that reflection is a key element in portfolio design. it's important to make connections across subjects and relate course material to the real world.

Josh's third iteration was developed inside a course as well, but this time inside an independent study that offered Josh the opportunity to craft his own design. He reviewed many electronic portfolios, compiled an inventory of exhibits he might include, worked with images and visual design, and decided on two key design elements: (1) a dual focus on inside school and outside of school; and (2) the use of a synthesizer and its component parts—which represents both the synthesizing function of the portfolio as well as Josh's interest in music—as a unifying visual (see Figure 5). In this reiteration, Josh carried forward his earlier English portfolio in two ways. First, he provided a link to it so that viewers interested in seeing the earlier model could do so. Second, he chose exhibits from the earlier model and included them inside this one. And in talking about the electronic portfolio later, he noted:

The whole point of the portfolio that I made was to help me realize the connections that I made across the curriculum, and to make these connections obvious to the people who view my portfolio, to show that I indeed did learn something, and not just how to regurgitate the assignments of the past semester. (qtd. in Weaver, 2005)

Taken together, Josh’s reiterations help us understand three aspects of eportfolios.

First, as eportfolios are reiterated, their contents tend to expand in number and in file type. Thus, we see the first iteration’s products of a class; the second iteration’s inclusion of products, processes, and reflection; and the third iteration’s very diverse set of exhibits, including verbal texts; images and photographs; a writing process map; internal and external links, for both academic and social purposes; schematics with discussion; assignments; a review of other portfolios; his resume; publications; and texts read for pleasure.

Second, as was the case with Kyoung, Josh’s portfolio moves ever outward, in his case from a focus on meeting the goals of a class to meeting his own goals as learner, student, writer, thinking, musician, etc. And like Kyoung, whose learning is dually framed, Josh’s learning is as well, through the dual frame he creates with outside school and inside school.2 Third, Josh’s own sense of curricular ecology changes: In his third eportfolio, he understands learning as occurring in multiple sites, and he sees connections as the key to learning.

2 As Judith and Geoffrey Summerfield (1986) observed two decades ago, working an idea in contrast is a useful exercise in invention.
The third electronic portfolio that helps us understand a reiterative eportfolio process was created by Clarissa Owens, a junior English major at Florida State University who enrolled in a one-credit studio portfolio course. Clarissa brought several advantages to the task of eportfolio-making: she had already completed one portfolio, so she had engaged in the processes of creating an eportfolio; she had a strong sense about her own identity; and she saw other Web sites as a resource for her own re-design. In completing a first reflective text, she remarked:

I feel like much of my identity is connected to what I do that isn’t necessarily required. What website do I use most often? What websites do I enjoy the most? [Posing questions like these]. . . might give us an opportunity to explore the website design we like to use the most or what we are most comfortable with.

In fact, Clarissa created two possible portals; shared her eportfolio (as did other members of the class) in a showcase event; carried forward into the new portfolio several texts from the initial portfolio as well as links to the first portfolio; and provided for the future of the portfolio in two ways: (1) by linking to a blog where she maintained a journal of her activity during a summer abroad experience (see Figure 6); and (2) by creating a space that she can grow and develop later. As she says on her eportfolio:

My plans to study abroad in Florence in Summer 2007 inspired me to create an online travel journal. My journal will include first person narrative, short stories, and of course, photography. . . Painting and Photography are two areas that give me the greatest sense of relaxation and freedom. The challenge of expressing myself without words is an excellent contrast to the English academic setting. The ability to explore and outpour myself through the arts has provided me with much insight into the complexity of human communication and connection. I am currently showcasing a small portion of my photography. The Travel Writing section of my portfolio will also include photography from my study in Florence. The painting portion of my portfolio will be updated at the end of Summer 2007.

Here then, we see the eportfolio process as particularly dynamic. It includes reiteration from an earlier model, a link to a blog that functions as an extension of the eportfolio, and provision for future exhibits with an explanation of what they may include. Not least, it has morphed from an initial beginning as a school exercise to a place to “explore and outpour.”

Each of these eportfolios—composed by Kyoung, Josh, and Clarissa—assume a curricular ecology that is site-flexible, site-multiple, and site-mobile, occurring in many places, with school serving as one site only, and that assumes the student is the principal agent of his or her own learning, that understands learning as a social phenomenon, and that enacts learning as an ongoing process.
Overall, these three models of electronic portfolio—the classroom-located, process-based model; the structured learning model; and the reiterative model—co-exist. It is possible for them to interact, such that, for example, the classroom-located model contributes to the reiterative model. Each model, however, assumes a different curricular ecology, and each model understands sustainability—in terms of learning—quite differently. In the first model, where process is central, the hope is that the portfolio itself is superfluous, that the processes engaged in by the students, both in composition-making and in portfolio-making, are internalized and made sustainable. In the second model, the aim is likewise to inform students such that the portfolio is merely a vehicle, its path to the goal a structure that literally links individual student with texts and responses and institutional outcomes. The third model intends a different goal: it aims to foster learners who see portfolio-making, and work in related genres like blogs, as an ongoing way of being that continues beyond school day, semester, year, and graduation. Thus, in this model, both the artifacts and the processes aim to be sustainable. To accomplish its aim, this model specifically builds in two features: (1) links between a student’s personal life and intellectual life (even more than the academic life), and (2) a notion of reiterative processing.

In these learning ecologies, is sustainability possible? In raising this question, the editors of this collection probably mean sustainability in terms of the human and technological resources needed to keep such efforts alive. But another angle on sustainability focuses on learning and how it is sustained, and on how an electronic portfolio contributes to that outcome. Just as faculty offices and hallways are littered with print portfolios that students never retrieved, so too do students send electronic portfolios to instructor offices and the digital trash can simultaneously. At the same time, one of the current buzzwords in the world of electronic portfolios is “life-wide,” which speaks to a new ambition for eportfolios generally—to engage students now and in the future to facilitate ongoing personal and intellectual engagement. Examples of the move in this direction, as Clarissa shows us, are evident, but the challenge is how to accomplish this life-wide goal on a large scale, with many students, and with many types of students. Is it possible to invite students to create electronic portfolios that they would willingly continue working on once due dates and deadlines have passed? Put differently and borrowing from Deborah Brandt (1998), how might an electronic portfolio become a sustained site of self-sponsored writing and learning?

To think about this question, I want to return to an artifact of learning and literacy that in the context of a discussion on electronic portfolios will seem both out of time and out of place: samplers that women made for centuries prior to their admission to schools of any kind and that they continue to make today. We actually know very little about samplers, and much of what we do know is contradictory, in part because as practice and text, samplers are dynamic, changing over time to suit varying purposes and audiences. Initially, as Maureen Goggin (2004) suggested, samplers provided a text for invention, each one involving many different kinds of stitches; at another moment, they provided a site of learning where children were

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3 Josh was asked by Clemson to attempt to re-create his third eportfolio inside Blackboard; this reiteration, as he says, was not satisfactory: “Reynolds reported that the ease of the Blackboard portfolio template has the potential to make the process more like filling in the blanks of a form with a bare minimum of effort and less impressive results” (Weaver, 2005).

4 As Maureen Goggin (2004) suggested, not all sampler-makers are women, but because what we know about samplers as practice and text derives largely from those of women, I am using the female pronoun throughout.
schooled as they practiced their alphabets, numbers, and even geographies; at still another
time, they provided an artistic artifact first hung on the wall and then bequeathed from mother
to daughter.\(^5\)

Today, of course, they serve new purposes—a hobby for some, an art form for others, a way
of thinking for still others. In my home, one sampler commemorating the birth of my daughter
hangs in her bedroom, one I stitched is in the family room, and a framed print facsimile of an
18th century sampler is in my living room. Moreover, I have used a photographic image of the
sampler in my family room in several slideshow presentations—to remind us of our past and to
demonstrate the material quality of literacy (see Figure 7). In addition, this sampler, its image,
and my digital capturing of it has provided material for me to think with and about literacy,
about the materials we use in compositions of many kinds, about the visual and the verbal
working together, and about how—in re-working an artifact of the past—I engage in a
collective reiterative process.

For 600 years at least, samplers have survived, while other textual practices—like manuscript-
making—have not. Why have samplers survived, and what might such survival teach us about
the viability, the sustainability, of any site of self-sponsored learning, be it fabric and thread or
screen and the digital?\(^6\) The history of samplers, in this regard, teaches us four lessons (at
least):

1. In the language of the digital, samplers provide a flexible platform for literacy.
   Initially, they provided a site for invention; today they provide an opportunity for
   creativity and community. The idea that meaning can be created through a
   material practice of embroidery has continued, while the “platform” fabric has
   changed over time, as have the kinds of stitches employed. As a platform,
   samplers have been adapted to different ends as needs warranted without losing
   their identification as samplers.

2. Initially, as sites of invention, samplers were not formatted or templated except
   through the size of the fabric worked, which, like any genre, was conventionalized.
   Later, when sampler patterns were printed and more widely available, templates
   became a beginning point for many sampler-makers. Even when used, however,
   the expectation was that they would be only the starting point; the creator still
   needed to personalize the template by
   means of color and design. From a
   Bakhtinian perspective, through material
   practices including the use of templates, the
   sampler composer made the sampler her
   own and put her sampler in dialogue with
   the de facto community of samplers.

3. Samplers are understood to be reiterative. As a cultural practice, they are reiterative in
   the sense that, at different times, they have
   literally taken different shapes and played
   different cultural roles. Samplers are
   reiterative on an individual level as well, with sampler-makers replacing earlier
   stitches with new ones to create a different effect, adding borders, placing

\(^5\) Goggin (2004) has provided a more detailed historical review and analysis.
\(^6\) Many might argue with the comparison here, especially given the differences in medium. As I
explain later, medium is important (as is technology), but the principles of literacy seem to
cross both.
samplers inside frames, re-winding to re-think and begin anew. Samplers come in a context, with an expectation that change is a convention defining the genre and the text.

4. Samplers are a composition, a unified text speaking to a personal and cultural expression of the sampler-makers. In that sense, in providing a text for composition and like all literacy practices, the sampler plays an identity-making role.

What does all this mean for electronic portfolios and their sustainability in terms of learning? First, students need to set their own outcomes. In general, a system that is keyed to outcomes can be very helpful in terms of assisting student learning; research shows that asking students to evaluate their learning in the language of outcomes is one of the two most important tasks we can set (Murphy & Yancey, 2007). At the same time, once those outcomes are met, the task is concluded, suggesting that assisting students in setting their own outcomes—outcomes that span the personal and the institutional and that take them beyond the latter—is critical.

Second, asking students to create but one portfolio doesn’t provide them with enough experience in portfolio-making, which is itself a reiterative process, as is learning itself. Like learning, portfolio-making in this sense is never done, but rather always in process. Showcasing the ways students have engaged in reiterative processes and the results of such reiteration is a task that institutions should undertake.

Third, inviting students to situate their eportfolios in larger contexts—be those in portfolio gallery events on campus or to their own blogs—brings a new salience to the portfolio, making it a public exercise as well as a personal one.

Fourth and not least, we don’t know enough about how identity is shaped by means of electronic portfolios; this is a task we might try ourselves and we might take up with students. Fifth, instead of seeing portfolio-making as a culminating activity, we might see it as beginning activity; we might create portfolios in diverse media, including print; and we might celebrate (and learn from) those that demonstrate the ongoing.

A SCENE

In 1991, a friend and I are in Indianapolis for a meeting on print portfolios and ways to integrate them into K–12 settings and curricula. A leader in writing portfolios, my friend looks to me, saying, “I think portfolios have crested. I wonder what will come next.” At the time, neither of us could imagine electronic portfolios, although it was a mere 3 years later that NCTE hosted an electronic portfolio conference in Indianapolis.

Upon reflection, I’d note that at least some of what I’ve claimed here for digital portfolios is true for print. All models of portfolio assume a curricular ecology, for example. All portfolios can be showcased in public, and, at some places, students do showcase print portfolios, while elsewhere students showcase eportfolios. All portfolios could invite students to document their learning in a context of outcomes, and again, in some places, students do so in print.

But beyond the integration of word and image (and now sound and video); beyond the marriage of multiple media; beyond the linking that connects doubly, both electronically and cognitively; beyond all the affordances of the eportfolio are others that distinguish it in terms of the everyday: its continuation as a reiterative process, its ability to circulate, especially as it links to other genres both print and electronic; and its provision of a site to return home to and of a site of self-sponsored. These are new. What this means long-term, how we make sense of it, and how it will influence our own views of literacy and learning are questions for a tomorrow beginning today.
REFERENCES


