Chapter 9. Strategies for ePortfolio Adoption and Sustainability across Administrative, Faculty, and Student Stakeholders

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Factors for ePortfolio Adoption and Growth

The use and enthusiasm for electronic portfolios has been steadily increasing over the past several decades, building on a rich history of traditional paper portfolios, which have been used in K–12 and professional disciplines for hundreds of years (Challis, 1999; Johnson et al., 2006; Taylor et al., 1999). The study and use of ePortfolios has matured as a discipline in its own right, with over fifty percent of colleges and universities availing themselves of this learning technology approach (Dahlstrom et al., 2013). Additionally, professional organizations, such as the Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL), and journals, such as the *International Journal of Electronic Portfolios* (IJeP), have emerged to further instantiate the value and impact of ePortfolios. Indeed, research is showing that students in some ePortfolio programs have higher grade point averages, credit accumulation, and retention rates (Hakel & Smith, 2009). For example, data from La Guardia Community College show students in ePortfolio courses as having higher pass and retention rates than those in comparable non-ePortfolio courses (Eynon et al., 2014). La Guardia has also seen that the composite one-semester retention or graduate rate for students in impacted courses [in 2011–2012] was 80.4%, versus 61.7% for students in comparison courses. Likewise, students enrolled in impacted courses had higher course completion (96.4%, + 1.8 percentage points), course pass (79.7% + 8.2 percentage points) and high pass—C and above (77.7% + 9.9 percentage points)—rates than students in comparison courses (as cited in Eynon et al., 2014, p. 96).

And yet, despite this growing body of research and application of ePortfolio

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programs, this pedagogical process that is so inextricably bound with its corresponding technology platforms continues to present very real and complex challenges for adoption, implementation, and sustainability. While some of these issues can be attributed to the basic challenges associated with any technology adoption cycle (see Richardson et al., this collection), the pedagogical substance and importance of ePortfolios adds an additional layer of complexity to the already difficult task of planning and executing successful ePortfolio adoption, implementation, and sustainability.

Like other learning technologies, ePortfolios present nuanced challenges to adoption, largely because they represent both a pedagogical process, such as ***folio thinking*** (Chen, 2004, 2012) and a technological counterpart. Perhaps even more than comparable learning technologies, ePortfolios are deeply pedagogy-heavy. Folio thinking, the pedagogic process that is at the core of ePortfolios, involves ***reflection*** on self and identity, as well as personal and professional development (Chen, 2012). ePortfolios are iterative, process-oriented, and ***authentic***. These pedagogical approaches can be new to many instructors and administrators, and considering adopting a new pedagogical approach can be a challenge, especially when it is compounded by also implementing and supporting a new technology (see Garriott, this collection).

An additional complicating factor is that ePortfolios mean so many different things to different students, faculty, stakeholders, and constituents. For some, they are considered tools for program ***assessment***; for others, they are considered reflective learning portfolios, often being integrated at a course level; and for yet others, they are seen as professional websites, showcasing students' skills, experiences, and best work products (see Carpenter & Labissiere, Terry & Whillock, and Coleman et al., this collection). Achieving faculty buy-in can be difficult amidst so many different definitions and approaches for ePortfolios. In all cases, if ePortfolios are being implemented in ways that truly leverage their potential to imbue reflection, self-assessment, and metacognition into the learning process, they have the potential to act as a high impact practice and catalyst for learning and transformation.

As a high impact practice and catalyst for learning-centered institutional change, ePortfolios can be even more difficult to successfully adopt and to continue to scale and support. Ultimately, ePortfolios represent a great deal of potential for positive impact, and consequently require thoughtful planning and development that continuously includes multiple stakeholders and multiple perspectives on adoption. When Bret Eynon and Laura Gambino (2017) propose that ePortfolio initiatives can advance student success; support reflection, social pedagogy, and deep learning; and act as catalysts for learning-centered institutional change, they emphasize an important qualifier: ePortfolio initiatives have this potential when they are done well. Throughout their publications, Eynon and Gambino maintain the importance of planning and thoughtful, collaborative approaches to ePortfolio implementation (see Dellinger & Hanger, this collection). Ultimately,

ePortfolios present challenges to adoption, scalability, and sustainability because they are exponentially complex, representing both new pedagogical approaches and new technology adoptions. In order to have successful ePortfolio adoption and growth, institutions and programs need administrative advocacy and support; faculty programming and support; and meaningful, authentic purposes in order for faculty and students to truly value and use them.

Administrative Support and Resources

Successful ePortfolio adoption and growth is contingent on the contribution of upper-level administrative support and resources. An institutional level of support and resources dedicated to ePortfolio pedagogy and infrastructure must exist in order for the initiative to successfully grow on a college campus. Drawing from author experience at both Virginia Tech and San Francisco State University, we suggest that having one or two full-time position(s), along with at least one part-time position (perhaps a student assistant) dedicated to ePortfolio strategy and implementation can result in a local initiative growing to be a campus-wide program. If the ePortfolio initiative is technology-heavy, meaning that much of the ePortfolio architecture and systems are developed and supported in-house, it may also be helpful to have a full-time technical lead position.

Administrative support also includes the allocation of funds to pay for and support an ePortfolio platform, whether that is part of the LMS or a standalone system. This is largely necessary if departments, programs, or the institution as a whole have an interest in using ePortfolios for any type of course, programmatic, or institutional assessment. If it is important to the school to keep ePortfolio ***artifacts*** or reflections for any type of overarching evaluation or assessment needs, it is best to invest in a platform that enables institutional ownership, including student-centered co-ownership, of that assessment data. This is often only possible through the use of a vendor-supplied platform; however, it is important to negotiate university ownership of the platform data. Moreover, having a central, campus-supported ePortfolio platform creates a sense of cohesion for students between their portfolios and the rest of their academic activities associated with the university (see Terry & Whillock, this collection). A central platform makes it easier for students to access their portfolios and keeps the process integrated with their coursework and other learning activities. As has been described in much of the literature around ePortfolio adoption, it is important for the pedagogical uses of the ePortfolios to dictate any decisions made about ePortfolio technologies or platforms, which requires cross-university strategic thinking and planning (Jafari, 2004; Johnsen, 2012; Meyer, 2016) (see Richardson et al., this collection). Administrative support can help seed and facilitate the formation and work of these groups.

Administrative support also comes in the form of tying ePortfolio development and implementation to strategic, university-wide initiatives (see Sanborn

& Ramirez and Polly et al., this collection). This is true not only in terms of any type of institutional-level educational approach or technology adoption, but also because ePortfolios actually have the potential to provide an added value to institutional initiatives whenever areas such as student engagement, student identity development, authentic assessment, closing the achievement gap, and student success are concerned. ePortfolios, when applied thoughtfully and strategically, have the potential to act as high impact practices and increase gains in all of the aforementioned areas (Watson et al., 2016). When tied to a key initiative (see Terry & Whillock and Day, this collection), ePortfolios can contribute to the achievement of milestones, while also resulting in growth and adoption across the university. The secret ingredient for this success, however, is that ePortfolio initiatives need high-level advocacy and support coupled with grassroots-level customization and authentic use.

We saw success with this coordinated effort when Virginia Tech included the use of ePortfolios for assessment of learning outcomes within the First Year Experience (FYE) program, which was a key component of their Quality Enhancement Plan for their institutional accreditation (see Richardson et al. and Dellinger & Hanger, this collection). Attaching ePortfolios to this key initiative necessitated the involvement of administrators whose advocacy subsequently paved the way and created conditions for adoption, growth, and sustainability. In this example, any course or department participating in the FYE program was required to have students complete ePortfolios that included artifacts and related reflections demonstrating the achievement of three learning outcomes (drawn from the VALUE Rubrics developed through the Association of American Colleges and Universities). This goal to collect assessment data for accreditation created the impetus for high-level administrative support, including funds for participating departments and the development of a cross-institutional support team comprised of the Office of First Year Experience, the Center for Instructional Development and Educational Research, the Office of Assessment, and the ePortfolio Initiatives program. This funding also included built-in support for faculty professional development. Additionally, the ePortfolio Initiatives office worked at a grassroots level with programs to customize their ePortfolio experience to meet departmental learning outcomes and incorporate activities addressing student identity and growth as future professionals in their major (see Polly et al., this collection). The ePortfolio Initiatives team also worked with programs to customize their ePortfolio assignments and prompts. Because they included institutional assessment, along with activities for reflecting on learning and personal and professional development, the ePortfolios were able to meet areas of growth for students and contribute to continuous improvement for the university. This approach addressed the needs of many of the stakeholders and was highly successful for the programs that leveraged the multiple levels of ePortfolio functionality.

Across all of the uses for ePortfolios within an institution (including connections to institution-wide initiatives, as well as co-curricular, programmatic, and

course level uses), another level of administrative support pertains to procuring funding and creating resources for faculty and student ePortfolio development, use, and support. The allocation of funds must include monies for the staffing discussed above, as well as related faculty development programming and support.

Faculty Programming and Consultative Support

Faculty programming and support for ePortfolios has to cover the rich combination of pedagogy and technology that is so representative of ePortfolios. ePortfolios include inherently authentic, non-disposable assignments that matter outside of the classroom; however, as with all technology for teaching and learning, it is vital to explicitly articulate the goals of and reasons for the ePortfolio platform to students (Jagger & Xu, 2016; Pacansky-Brock, 2017). Faculty can provide explicit rationale when they explain the purpose of the ePortfolio assignment. At San Francisco State University, the Center for Equity and Excellence in Teaching and Learning (CEETL) offers ePortfolio workshops to sustain and deepen this discussion, often speaking to the value of folio thinking.

The CEETL team leads 30 to 40 workshops per semester, reaching approximately 750 students per term. We begin the workshops by engaging students in a conversation around ePortfolios and asking students to describe their academic and/or professional online presence. Strikingly, if anecdotally, approximately 85% of students in gateway courses and 50% of students in capstone courses (most of whom are graduating) report that they have no digital academic or professional presence at all. In other words, many of our students have no online space in which to share their work: no LinkedIn, personal website, ePortfolio, or blog, to name a few avenues. Our informal surveying of the room by show of hands opens up the conversation further. We ask students where they want to go next (employment, graduate school, travel, or volunteer experiences) and to consider how they will construct the narrative for themselves and other audiences that connects where they have been (college) to where they want to go. We ask them to reflect on how they will communicate who they are (their style and philosophy) to someone who has never met them and is looking at a stack of applicants.

We then move into hands-on worktime in our campus' ePortfolio platform. We begin by sharing the ePortfolio of one of our ePortfolio Student Ambassadors (see Garriott, this collection) and modeling best practices in action. Our ePortfolio platform tends to be user-friendly, dynamic, and engaging. Nevertheless, we explicitly communicate to our students that even if they never use our ePortfolio system again after their course, the act of reflecting on their narrative arc will be of value to them in future interviews and conversations. Regardless of the platform they might choose for themselves, we aim to leave them convinced of the value of actively constructing their online academic and professional presence. We view this as one of the digital literacies our students will need in order to succeed.

CEETL offers an array of other support for ePortfolios on our campus as well, including faculty Lunch & Learn events where faculty share a meal and discuss their best practices with their peers; Open ePortfolio Lab hours where students can take advantage of one-on-one feedback and help with their ePortfolios; and a self-starter guide for faculty and students (https://docs.google.com/document/d/1Zs8fywR09pKWna9km5fQ69BGmp5BUKjSfzsVs99jWhg/edit?usp=sharing) who prefer to work independently. We have developed an ePortfolio resource website (http://eportfolio.sfsu.edu/) to support a deeper dive into folio thinking, which includes a gallery of student ePortfolios and a discussion of ethical image use and Creative Commons licensing. At SF State, ePortfolios are a doorway to twenty-first century digital citizenship for our students.

SF State has only a small number of staff hours to dedicate to ePortfolio support, and we manage to provide significant assistance by being strategic in our resources and support offerings. Over the last several years, we have focused our support largely on programs and departments. Such focused support helps to assure that the group has some buy-in and the support may be more sustainable over time, and it allows for a small staff to be able to provide services in a scalable or sustainable way. We have found that when a department adopts an ePortfolio project or initiative across its program, there is often broader communication across the department about the uses and value of using ePortfolios within its courses (see Coleman et al., this collection). Students see that their department values the portfolio process when ePortfolio touchstones are embedded within multiple courses and their instructors are all on the same page about the use of ePortfolios within their program. Additionally, integrating the use of ePortfolios within the department also contributes to continuity whenever there is turnover of department heads or chairs. If possible, it is best to be able to offer tiers of support, which is the approach we are taking at SF State. Our current model is to provide workshops each semester to departments and programs that are adopting ePortfolios. We are also providing workshops for individual courses for two semesters, along with support materials and train-the-trainer sessions with instructors and GTAs so that after two semesters, instructors are prepared to orient their students to ePortfolios on their own. This approach is allowing us to foster growth of ePortfolios at our university, while still operating within the capacity of a very small unit. At SF State, we have one lead instructional designer and one deputy instructional designer who focus primarily on managing and growing ePortfolios. These positions split their time providing faculty instructional design consultations and faculty development across a variety of teaching and learning topics with their ePortfolio duties (including developing support materials and scheduling and delivering workshops to ePortfolio classes and programs). Additionally, our two other instructional designers, as well as student assistants (see Terry & Whillock and Garriott, this collection), also offer ePortfolio workshops and staff ePortfolio Open Lab hours.

Finding Your Purpose and Cultivating Buy-In

Even with administrative advocacy and support in terms of infrastructure and resources, many universities and institutions unexpectedly struggle to successfully implement ePortfolios (Straumsheim, 2014). Even as increasing numbers of universities are looking to ePortfolios to address systemic issues of retention, accreditation, and assessment (Dahlstrom, 2012; Kahn, 2014; Knight et al., 2008; Ring & Ramirez, 2012), we have to consider the additional conditions for successful adoption.

While we know that obtaining stakeholder buy-in is key to the ultimate success or failure of its institutional adoption (Seldin & Miller, 2009) (see Dellinger & Hanger and Richardson et al., this collection), an equally important contributor to cultivating buy-in and eventual adoption is a unifying purpose among faculty, students, and administrators (Coleman et al., 2017; Knight et al., 2008; Ring & Ramirez, 2012). While coming to a consensus is one of the most prolific hurdles to ePortfolio adoption (Reis & Villaume, 2002; Strudler & Wetzler, 2008), large-scale implementation is possible and examples are well-documented, even with diverse, urban, and high-risk populations (Eynon, 2011). This mutual, unified purpose is critical because "unless students and faculty see value in creating an ePortfolio, it will be viewed as an add-on and as a result will not include quality evidence" (Ring & Ramirez, 2012, p. 312). George Siemens (2004) also outlined several conditions necessary for cultivating buy-in, stressing the importance of stakeholders' perceptions, the institution's culture, and the availability of both technical and pedagogical resources and support for ePortfolio (as cited in Knight et al., 2008). In Carl Straumsheim's coverage of the e-Portfolio Forum during the 2014 Association of American Colleges and Universities' annual meeting, he cautions readers, saying, "Investing in the tool for the sake of keeping up with the trend is a recipe for failure" (2014, para. 3). It cannot be understated that a successful ePortfolio implementation requires a clear, unifying purpose to propel and sustain ePortfolio adoption.

Unfortunately, reaching a consensus on the driving purpose of ePortfolios can be difficult and arduous (Swan, 2009). It often requires considerable student and faculty time and effort (Knight et al., 2008) and whole-hearted administrative support through a strategic plan (see Day, this collection). Peter Seldin and J. Elizabeth Miller (2010) make several suggestions on how to cultivate buy-in and facilitate institutional adoption, stressing the importance of not rushing the process of adoption, which may take up to two years. They recommend starting small, involving the institution's most respected faculty members from the beginning, not forcing anyone to participate, and allowing space for individual teaching and learning differences. Seldin and Miller (2010) also speak to the significance of candidness around the process, faculty ownership, and clear evaluation criteria and standards.

Authentic Reflective Practices

We want to suggest that reflection can be a strong unifying purpose behind ePortfolio buy-in, adoption, and use at university-wide, programmatic, and course levels. Reflection can be thought of as an opportunity for learners to evaluate their own work and "is both process and product" (Desmet et al., 2008, p. 19). It is a critical thinking skill (Ring & Ramirez, 2012; Ring et al., 2015), and reflection is how learners make sense of standards and the underlying purpose of their curriculum (Rickards et al., 2008). As the Alverno College Faculty (2000) explain, "both reflection and self assessment [*sic*] depend on careful observation, but the purpose of self-reflection is understanding, in contrast to the judgment, the evaluation of performance on the basis of criteria, that is the purpose of assessment" (p. 7). They add that "the reflection becomes the evidence of the identity and learning that are transferred across situations" (p. 35). Reflection has many benefits for learners, involving the student as an active participant in assessment (Knight et al., 2008). It also encourages students to combine their learning experiences, received feedback, and course content in a personalized way (Rickards et al., 2008).

ePortfolios are a powerful reflection tool, and they "bring to the forefront the richness of student work and teacher practice. E-portfolios celebrate the body of student work, as well as show the reflection and dialogue generated between students and teachers" (Ahn, 2004, para. 17). They also inherently foster reflection on the process of learning, in addition to the artifacts and tangible products of learning, which often amplifies and blends their learning (Watson et al., 2016). However, to fully receive the reflective and metacognitive benefits of ePortfolios, they must be considered by stakeholders as a key part of the curriculum; when viewed as an additional, incongruous task, ePortfolios are rarely as effective for learners (Coleman et al., 2017; Ring & Ramirez, 2012; Siemens, 2004; Tzeng, 2010; Watson et al., 2016).

The case studies that follow show examples of ePortfolio reflection across courses, as well as one student's experience with her ePortfolio. The role of reflection is a theme, showing its potential as a unifying purpose. These case studies highlight a student's perspective, as well as programmatic and course ePortfolios in practice, including challenges and strategies for success, culminating in suggestions for best practices and resources for faculty success with ePortfolios. When faculty have a clear purpose for use of ePortfolios and are prepared with strategies to overcome challenges, there is a stronger chance of cultivating buy-in, adoption, and successful use of ePortfolios.

ePortfolios in Practice

A Student Perspective (Rachel)

As a graduate student in math education at San Francisco State University, with a year teaching in a classroom and my own educational career on the horizon, I

have had significant exposure to electronic portfolios and have spent a great deal of time reflecting on and building my ePortfolio. Building my ePortfolio prompted me to reflect and think deeply on my own learning and practice. Teaching reflective practice is a difficult task and putting together a portfolio also allowed me to reflect on and think deeply about the purpose and intent of the work I selected. Finally, as I continue to hone my skills as an educator, the ePortfolio has given me the tools to be reflective and intentional, and it has helped me revise and guide the construction of new ideas.

My instructors taught the ePortfolio as a process of reflective practice as well as a tool for seeking employment and applying to various programs, such as graduate school or internships. The instructors that best helped me understand the purpose of an ePortfolio believed that it was a process of learning and not just a project to be completed. I think if these professors did not honestly foster this belief in themselves, then I would not have gained so much insight and actualized reflective practices within myself.

The instructor plays a large part in helping students understand the purpose of an ePortfolio. On the surface, many instructors tend to describe the ePortfolio as similar to a traditional, paper portfolio. The idea of a traditional portfolio is to collect assignments to curate evidence that you have completed work in the applicable field. However, an ePortfolio is not simply intended to gather completed work; it is a teaching tool, which must have some academic rigor and purpose. Many instructors who are simply told by their department to implement these ePortfolios may not find academic purpose or rigor and just see the ePortfolio requirement as part of a checklist of items to be completed (see Dellinger & Hanger, this collection). Another challenge that many students face is that an ePortfolio, at least at a department level, needs to be implemented and communicated early so that students may save their work and begin to curate their proud achievements. Many of the students in my program had difficulty obtaining work from a few years prior since the expectation was not clearly communicated by all professors far enough in advance.

From my perspective as both a student and future educator, I encourage instructors to think about how the ePortfolio is a teaching tool and what makes it an academically purposeful project. Like any other assignment, an ePortfolio must have a purpose for the course and/or program. Additionally, in order for any project to be meaningful for students, instructors must first believe that the assignment is meaningful in some way.

Case Study 1: Family Interiors Nutrition & Apparel ePortfolio

In the Family Interiors Nutrition & Apparel (FINA) department, there are four separate content areas: Family & Consumer Sciences, Interior Design, Nutrition & Dietetics, and Apparel Design & Merchandising. All of these programs share a Professional Development Class in which students enroll in the spring of their se-

nior year. One of the requirements of this course is the development of a portfolio that contains and is reflective of work completed throughout a student's undergraduate education. Until 2016, students had the option to turn in this portfolio in a paper or online format. In 2018, all 160 portfolios were turned in online via the university ePortfolio platform or a blogging/website building system.

Strategies for Success

The concept of strategies for success with an ePortfolio assignment are many, with three being: 1) a clearly described grading rubric, 2) access to software, and 3) peer evaluation.

Grading Rubric

In the FINA department, when we ask students to ***showcase*** their best work, we emphasize that it is not the students' work and assignments that are being evaluated; rather, their means of visually displaying this work is being graded. FINA has four distinctly different content areas represented by students within a class, and faculty teaching the Professional Development course have not taught nor are proficient in each of the four content areas. A rubric (see Appendix A) is essential for clearly informing the students about requirements and grading expectations for the ePortfolio. The rubric is where the objective of the ePortfolio must be clearly defined. The objective for our department reads as follows: "Your final semester portfolio is intended to be utilized as an ongoing professional tool for job interviews, publicizing your skills, and other professional uses. As such it is designed so that it can be further modified to meet your future and changing needs." We further go on to explain that a high-quality portfolio tells a cohesive story, has a good narrative, and actually describes the skill set of the student and soon-to-be industry professional.

Access to ePortfolio Software

As students become aware of the importance of the storytelling aspect of the ePortfolio, the importance of the ePortfolio platform shouts out to them. If faculty have not experienced the tools offered through various sites, we strongly suggest that they take the time to at least investigate before expecting their students to understand the various functions, features, and creation processes. We are fortunate that the university's Center for Equity and Excellence in Teaching and Learning has developed guidelines and fully supports questions from both faculty and students for using the SF State ePortfolio platform. Because of this support, our faculty members are able to focus largely on content and how students best represent themselves through the platform. Some students have shared that they feel constricted by the layout and storytelling aspect offered to them through the portfolio tool, while others totally enjoyed the parameters. When constrained students (mostly in the Interior Design and Apparel Design & Merchandising

program areas) were given the option of finding other sites (free portfolio and blog platforms), they gladly did, and this option offered them full ownership of their ePortfolio assignment.

Peer Evaluation

Access to review student ePortfolios along the way from initial to final development via the web is an intrinsic part of the beauty of this assignment. Students tend to be more successful when fellow students are given the opportunity to view and comment on their work in progress. Research supports that students report significantly higher awareness of growth and development as learners when receiving feedback on their ePortfolios (Eynon et al., 2017). As the ePortfolio represents work and personal growth outside of the Professional Development class, it is presented as an assignment due for online review at two predetermined dates throughout the semester. For the assignment, ePortfolios are posted online and fellow students must choose to view three portfolios and comment on three strengths and three areas that require greater clarity. This peer evaluation offers students within a content area the ability to offer suggestions of alternative artifacts because they actually are aware of the work required from other classes throughout the curriculum. Peer evaluation also offers students the ability to view other portfolios and find images, labeling, explanations, or other elements that they like and will then possibly integrate into their own ePortfolio.

Challenges for Success

The challenges for success within an ePortfolio assignment are many, including lack of time, content, and creativity.

Lack of Time

It is imperative that students understand that the creation of an ePortfolio takes time. For this particular assignment, it is more than an accumulation or compilation of work, but rather a thoughtful progression that tells a story about an individual. The creation of such a work takes reflective time for self-assessment, as well as time for peer evaluation. As many students tend to wait until the last possible moments to complete an assignment, the two peer reflection assignments throughout the semester offer firm deadlines that allow for helpful and creative feedback.

Lack of Content

Often students report that they do not save assignments, that their images are not clear enough, or that they do not feel that what they have is representative of who they are. For each of these potential stumbling blocks, there is a possible solution. Generally, an entire assignment, such as the entire paper or reflective analysis, is

not required. Instead, students may need to create an abstract for a paper or summarize their reflections and add an image or graph or diagram. When images are not clear, a photo editing program can help students crop an image or add color and brightness. As of this writing, some free programs students can use to edit images include Microsoft Word, Microsoft PowerPoint, GNU Image Manipulation Program (a free, open source program referred to as GIMP that is similar to Photoshop), PicMonkey (a free drag-and-drop web application) or applications for their phones, such as one called Aviary. When the work is not representative of the student, a narrative is key to explaining the pathway or journey to where or who they currently are. These issues also connect to lack of time, because it takes time to develop the content, to post that content in the ePortfolio, and to reflect back and analyze if the selected content tells the student's story accurately.

Lack of Creativity

Not all careers require creativity, but if an ePortfolio is a tool for obtaining a job, it must be viewed through the eyes of a manager whose attention the prospective employee must grab. One example is the student who has discovered new combinations of food components to create recipes for those with food allergies. Writing a paper is the academic assessment piece, but for the ePortfolio, an image of the food components or of the student measuring out products will make the accompanying text abstract come alive. Similarly, for students working in the community, a reflective analysis is an integral academic requirement. Within the ePortfolio, however, this assignment is enhanced by adding an image of the poster, a link to a website, or a picture of the student engaged in the activity. Lastly, our ePortfolio platform comes preloaded with a banner image of San Francisco State University. While a good image, some students have shared that this is an image of where they have been, not where they are going (see Polly et al. and Coleman et al., this collection). To enable the creative response here, the portfolio site allows the student to upload a new banner image, one that is representative of who they are or where they want to go.

Case Study 2: English Freshman Composition ePortfolio

At SF State, English 114, Freshman Composition, is the first sequence of a "First Year Experience" composition course. This class focuses on writing for inquiry, belonging, and self-development; developing rhetorical knowledge and information literacy; and using reflection and metacognition to enhance writing, critical reading, and the habits of mind. These learning goals are accomplished through a shared curricular framework that includes a variety of student-centered projects, one of which is the digital portfolio project (see Terry & Whillock, this collection).

Strategies for Success

In English 114, ePortfolios are used as an invitation for students to showcase and reflect on their best works. To accomplish this objective, students are guided

through the building blocks of ePortfolios via the portfolio platform. However, before ePortfolios are introduced to students, faculty are encouraged to explore the technology themselves, as instructors tend to be more confident in the classroom if they have experience with the tools that they want students to use (see Desmet et al. and Garriott, this collection). Once the self-learning has been accomplished, faculty can then imagine how to support students in using ePortfolios as a learning technology.

Emphasize Pedagogy and Reflection

One success strategy is to place emphasis not on the platform but on the kind of thinking behind the creation of an ePortfolio: folio thinking. This term was coined by Helen Chen (2004) when she was trying to address an institutional learning problem. Since then, the pedagogy of folio thinking has been redefined, refined, and tailored to specific disciplines. Within the context of our composition classroom, however, folio thinking refers to the process of collecting, reflecting, and connecting assignments that allow students to articulate their competence and new learning experiences (Suter, n.d.). When this concept is applied to ePortfolios, students are not simply collecting completed/graded assignments and then depositing them into their ePortfolio. Instead, they are using a student-centered approach to capture their learning and make their learning visible. Specifically, students are asked to *select* projects that are meaningful to them to showcase and share publicly. Then, they are asked to *reflect* on the projects, to describe their selected projects and the learning and engagement process behind them. Lastly, students are asked to *connect*, to explain their new learning and competence and to explain how their projects, holistically, show their growth as students, writers, and learners in the first year.

Scaffold Assignments

Another strategy for success is to appropriately scaffold the ePortfolio assignments into the 16-week semester so that students don't perceive ePortfolios as a stand-alone, value-less project. To start, the creation of an ePortfolio and the discussion of its importance, benefits, and value occurs early in the semester (Weeks 1–2) along with an assignment page (see Appendix B), so students know what to expect from the ePortfolio project. Then, throughout the semester, depending on the timing of other major assignments, students are asked to submit artifacts (from the first-year composition class and other classes) in intervals, one each from the beginning (Weeks 1–5), middle (Weeks 6–11), and end (12–15). Students are reminded that these artifacts are not fixed and can be modified or deleted. While the submissions are taking place, students receive oral and written feedback on their ongoing submissions, either through peer or teacher feedback. As Week 16 approaches, students write a cover letter that includes reflection and connection; that is, they describe their new understanding, engagement, and habits of mind and explain how their new learning shaped them as students and

writers. During finals week, the assessment takes place at the ePortfolio Party—an in-class party scheduled on the last day of class where students introduce their ePortfolios to the class, view each other's portfolios, leave feedback, and connect digitally with peers.

By the end of the semester, these students' ePortfolios not only provide opportunities to display their accomplishments, but they also give students a way to capture their learning and growth that enhances their development as lifelong learners.

Challenges for Success: Balancing Creativity with Technological Complexity

Challenges vary from one student to another, depending on the digital writing and technology experience students bring to the classroom and the approach to learning they exhibit. Quite often, the design-minded students find our ePortfolio platform constraining because it does not have as much functionality as they would like it to have in order to express their authentic selves. These students resist the predefined templates and tabs that box in their creativity or identity. On the other hand, another group of students have a hard time picking up all of the components of the ePortfolio and its related assignments, even when they are scaffolded carefully. For these students, the reasons are varied too: it could be that their class attendance is spotty, their engagement lacking, or that this is their first exposure to digital text. For them, repetition, practice, exposure, and feedback are key, but given the short 16-week semester along with the many additional outcomes that need to be taught, once again time can be a real challenge. Lastly, for unknown reasons, there will always be a tiny percentage of students asking this question during Week 15, "What is the digital portfolio assignment?"

Best Practices and Resources for Adoption and Growth of ePortfolios

Several overarching themes emerge when considering adopting and growing ePortfolios in practice at the course level, which is where most student ePortfolio engagement occurs. From the student perspective, we see that instructor attitude and emphasis on reflection has a strong impact on how students view and use their portfolios. This is reinforced in the English Department's emphasis on pedagogy and reflection and making those values transparent to students. Additionally, instructor and peer feedback, transparent expectations (including providing rubrics), and scaffolded assignments are all strategies used in both case studies that make ePortfolio implementations more effective.

Both case studies also represent overarching themes of challenges for ePortfolio implementation, including lack of time and content, as well as the ways in which ePortfolio platforms can be difficult to use or can limit creativity. The importance of ***scaffolding*** assignments underscores an effective way to address time management, which is a real concern for teachers and students when working with ePortfolios. It is helpful to build in time throughout the semester for students to work on their portfolios, as well as time for students to engage in peer

review and feedback, both in terms of reviewing the artifacts and showcasing the ePortfolios. Another strategy to achieve greater effectiveness and to maximize potential is to introduce the ePortfolio at the beginning of the semester, along with the course learning outcomes or objectives (see Coleman et al., this collection). Doing so early shows students that the ePortfolio is a valued course activity, and it creates transparency in terms of the learning goals. Introducing the portfolio assignment alongside the course objectives also provides students a clear reference when it comes time for them to produce their reflections throughout the semester and compose their self-assessments on how they are progressing towards and achieving course outcomes.

Planning Matrix for Adoption and Supporting ePortfolios

Drawing on our experiences across institutions that are seeing success with ePortfolios based on a variety of strategies and approaches, we created the matrix seen in Table 9.1. Its purpose is to highlight important questions that can help guide stakeholders involved in ePortfolio planning, implementation, and support. It can also serve as a useful metric for assessing where a department or institution is in terms of developing and sustaining a successful ePortfolio program. The assessment categories are:

- Developing: Campus and faculty interest is expressed in ePortfolios and use is happening sporadically across the institution.
- Partially Developed: ePortfolios have some level of staffing and resources dedicated to the program and portfolios are used in pilot or a small number of programs and courses across the institution.
- Fully Developed: ePortfolios have strong staffing and resources and are used across multiple programs or tied with a key initiative on campus. Robust support is in place.

Stakeholders can use the guiding questions and matrix (see Table 9.1) to gauge where they are in terms of ePortfolio adoption, growth, and support. The matrix can also be used as a guide to address areas for success, describe what has been accomplished, and identify which pieces still need more attention.

Guiding Questions

Where do you think ePortfolios would be most useful or impactful at your institution? Check all that apply.

- ☐ Institutional initiative
- ☐ Institutional assessment
- ☐ Program general use
- ☐ Program assessment
- ☐ Co-curricular and experiential learning programs
- ☐ Individual courses

Rank the ePortfolio uses/approaches in order of your highest priorities or needs

_ ePortfolios for Learning
_ ePortfolios for Assessment
_ ePortfolios for Professional Development

Table 9.1. ePortfolio planning matrix, developed at San Francisco State University

Areas for Success	Developing	Partially Developed	Fully Developed
Administrative Resources and Support: What resources has or can your university dedicate to advancing and supporting ePortfolios?			
Staffing (below are some possible staffing models): • Percentage of a full-time staff position • One full-time dedicated position • 2+ full time dedicated positions • 1 or more graduate student assistants • 1 or more undergraduate interns	Based on the size and goals of your institution, you are planning for dedicated staff positions.	Based on the size and goals of your institution, there is enough staffing to support pilots and small projects/programs.	Based on the size and goals of your institution, one or more dedicated staff members support programs and university-wide initiatives.
Technology platform: this will vary based on your school size and identified needs. The more institutionally-based and assessment prioritized, the more need for an institutionally-provided and supported platform. The more that learning and student identity are prioritized, the more possible it is to use free, more creative, and open blogging and website building platforms.	Projects and programs use external, third-party platforms. The institution may be considering purchasing a university license.	The institution provides some form of technology for building ePortfolios, with limited documentation and support.	The institution provides an ePortfolio platform and some projects/programs use third-party platforms when appropriate. Technology support is robust.

Areas for Success	Developing	Partially Developed	Fully Developed
Administrative Resources and Support, continued			
Inclusion in working groups and planning committees.	ePortfolios and related staff are rarely considered or invited within planning committee.	ePortfolios and related staff are occasionally considered or invited within planning committees, often added at the end of the process.	ePortfolios and related staff are considered and included within planning committees from the beginning and are built into strategic planning.
Resources to provide faculty development workshops and student support.	There is planning for or a small amount of staff and funds for faculty development, help documentation, and student support.	The institution has at least one staff member to provide a limited amount of faculty development, create support documentation, and provide student support.	The institution has enough staff to provide faculty development and student workshops that meet the demands of the university, with robust help documentation.
Faculty Buy-in: What is the level of faculty participation and buy-in? And what are you doing to garner support and buy-in?			
Involve faculty in development and planning.	Faculty are minimally involved in planning.	Faculty are frequently included in the development of the ePortfolio initiative, once the planning is underway.	Faculty are included in the beginning stages of planning for the ePortfolio initiative and contribute to regular feedback and development.
Provide choices for faculty design of ePortfolio components.	The ePortfolio platform and approaches are highly templated and leave little room for faculty choice in design.	The ePortfolio platform and approaches have space for faculty to customize the ePortfolio assignments to match their curriculum.	Faculty use of ePortfolio and their related assignments are taken into consideration with the platform and ePortfolio approaches. The platform and approaches can be customized to meet goals.

Areas for Success	Developing	Partially Developed	Fully Developed
Faculty Buy-in, continued			
Facilitate faculty identification of authentic uses and meaningful assignments and purpose for ePortfolios at the course and program levels.	ePortfolio design has little inclusion of reflection or meaningful assignments beyond fulfilling requirements.	Much of the purpose of the ePortfolio is to meet requirements but there are some specific moments for reflection and meaningful assignments.	The ePortfolio balances needs for requirements with multiple moments of reflection and a variety of meaningful assignments. Students have choice for selecting ePortfolio artifacts.
ePortfolios in Practice: On a practical level, have these considerations been met?			
ePortfolios are introduced early in the course/program/ePortfolio experience.	ePortfolios are introduced at the end of the curriculum as a final or culminating experience.	ePortfolios are introduced early-to-mid-curriculum, with some explanation of the pedagogical purpose.	ePortfolios are introduced early and often throughout the curriculum, with explanation of the pedagogical purpose.
Learning outcomes and goals for ePortfolio experience are introduced early and across periodic time intervals to students.	Learning outcomes and goals of ePortfolios are introduced at the end of the curriculum as a final or culminating experience.	Learning outcomes and goals of ePortfolios are introduced early-to-mid-curriculum.	Learning outcomes and goals of ePortfolios are introduced early and often throughout the curriculum.
Instructors promote value of ePortfolio and reflective pedagogy.	Faculty rarely discuss the value of ePortfolio and reflective pedagogy.	Faculty occasionally discuss the value of ePortfolio and reflective pedagogy.	Faculty frequently discuss the value of ePortfolio and reflective pedagogy, including related assignments.
Considerations for time are included within course/program/ePortfolio experience to create space for working on ePortfolios.	ePortfolios are assigned at the end of the curriculum, with much of the work happening outside of class.	The curriculum is designed for students to develop ePortfolios over time, with opportunities for feedback.	ePortfolios are embedded throughout the curriculum, with many opportunities for development, feedback, revision, and showcasing.

Areas for Success	Developing	Partially Developed	Fully Developed
ePortfolios in Practice, continued			
Touchpoints are built into ePortfolio courses/programs/experiences to create opportunities for instructor and/or peer feedback.	ePortfolios are assigned at the end of the curriculum, with much of the work happening outside of class.	The curriculum is designed for students to develop ePortfolios over time, with opportunities for feedback.	ePortfolios are embedded throughout the curriculum, with many opportunities for development, feedback, revision, and showcasing.
ePortfolio assignments and experiences are appropriately scaffolded to promote learning development.	ePortfolio assignments provide little scaffolding to promote learning development.	ePortfolio assignments are more structured in the beginning and build up over time in complexity and student creativity and choice.	ePortfolio assignments are more structured in the beginning and build up over time in complexity and student creativity and choice, culminating in more collaborative ePortfolio experiences with authentic audiences.
ePortfolio platform and technology meets three criteria: (1) it meets your institutional, programmatic, and/or course priorities around learning, assessment, and professional development; (2) it has a relatively intuitive interface; and (3) it provides space for student creativity and personalization.	The ePortfolio platform and technology only meets one of the criteria.	The ePortfolio platform and technology meet two of the criteria.	The ePortfolio platform and technology meet all three of the criteria.

Conclusion

While the above considerations may seem overwhelming, a helpful approach may be to view the ePortfolio process (an iterative cycle of self-assessment and reflection) as a metaphor for the ePortfolio development, implementation, and support at your institution. The components involved in building portfolios, such

as identifying goals; reflecting on achievements; seeking and receiving feedback; revising; and continuing to build upon ongoing work, are the very same processes that contribute to successful ePortfolio initiatives. These successes happen over time, in iterative ways that are enhanced by being student-centered and including multiple perspectives and stakeholders.

The contributions and connections between stakeholders contribute to the richness of the impact of ePortfolios. When administrative stakeholders see the value of portfolio processes for student success and contribute resources and advocacy, this empowers learning technology specialists to promote and support ePortfolio use within departments, programs, and at the faculty level. When programs and faculty feel supported and can engage in conversations and planning around integrating ePortfolios into the curriculum, the space is created for them to consider the meaningful purpose behind their own use of ePortfolios. Ultimately, students should see that the university places value on portfolio processes. Once that significance is more transparent to students, it increases opportunities for them to engage in folio thinking. ePortfolio initiatives that have the highest chance for success have administrative support coupled with faculty participation in emphasizing meaningful reflection. ePortfolio initiatives may ebb and flow depending upon the availability or scarcity of these various avenues of support and engagement, but this cyclical process parallels the folio thinking process. Instructors, educational technology staff, and university members who continue to pursue ePortfolio growth will learn and grow themselves throughout their journeys with ePortfolios on their campus.

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Appendix A. FINA Department Portfolio Rubric

Your final semester portfolio is intended to be utilized as an ongoing professional tool for job interviews, publicizing your skills, and other professional uses. As such it is designed so that it can be further modified to meet your future and changing needs. A high quality portfolio will:

- tell a cohesive story,
- have good narratives,
- be appropriate for your industry, and describe your skill set.

Instructions:

- From your major area options below, select a minimum of eight (8) examples of your best works/projects to include in your portfolio. You may add as many additional items as you like.
- Written essays should be reduced to an abstract and include a visual such as a picture or graph. Full essays/papers may be included as downloads for further readings.
- Please include clear well written narratives describing what the viewer is looking at.

	MISSING OR NEEDS IMPROVEMENT				EXCELLENT
MEETS 8 WORK/PROJECTS REQUIREMENT	0	4	6	8	10
WORK/PROJECTS VISUALS INCLUDED	0	2	4	6	8
WORK/PROJECTS NARRATIVES INCLUDED	0	2	4	6	8
PHILOSOPHY STATEMENT INCLUDED	0	1	2	3	4
OVERALL COHESIVENESS	0	2	4	6	8

Appendix B. Assignment Sheet

The Digital Portfolio Project: Showcasing Your Writing

English 114 | C. Wong

This assignment is an invitation to polish and showcase your writing. You can design your portfolio in a way that captures your sense of yourself and your growth and accomplishments as a student and as a writer.

Task: Create a digital portfolio of your favorite pieces of writing from this semester using Portfolium. Writings can be of varying length and should showcase some of your best work. Design your portfolio so that it represents your authentic self, using images, titles, and blurbs as you see fit.

Grade Distribution

50 points total	Expectations	Check off when complete
25 points	Personalize your ePortfolio **(profile tab)**	
	• Showcase at least 3 artifacts—one from the beginning, middle, and end of semester—that show your growth as a student and as a writer **(portfolio tab)**	❒
	• Reflect on your artifacts, that is, to describe what they are, what they say about you, and what kinds of learning / competence you achieved as a result of creating them **(portfolio tab)**	❒
	• Make connections with at least 3 people **(connections tab)**	❒

Continued

25 points	Attend our ePortfolio party—this is scheduled on the last day of class • At the party, say a few words about your ePortfolio: your intentions, what you want the viewer to know about you, how you decided on images, etc. • View at least 3 ePortfolios and leave feedback (suggestion: you might want to comment on their visual and/or rhetorical devices)	❒ ❒