Chapter 12
A Holistic Approach to Integrating ePortfolios as Instructional Methods in Online Programs

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ABSTRACT
The purpose of this chapter is to review a holistic approach to the integration of digital portfolios (“ePortfolios”) as an instructional method in online degree programs. The chapter reviews the evidence-based best practices that support four phases to the integration of ePortfolios as an instructional method in online degree programs: scaffolding, tutorials, course integration, and student engagement. Each phase offers a different way to make a lasting impact on students. The innovative instructional method is not the portfolio itself, the supporting tutorials, or any one piece of the ePortfolio project. Rather, the true innovation is the project as a whole, taking a holistic look at how portfolios fit into the program and how to support the development and evaluation of the portfolio for both students and faculty.

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BACKGROUND

A portfolio is a collection of artifacts collated by an individual or group, usually including reflections on those artifacts, which serve to illustrate knowledge, skills, dispositions, and growth. An ePortfolio is a digital version of a traditional portfolio. The use of ePortfolios has been growing for some time. The number of campuses using ePortfolios for program review and assessment of General Education (“GenEd”) those courses required of all students regardless of major area of study tripled between 2009 and 2013 (Eynon, Gambino, & Török, 2014). More than half of college students in the United States reported using an ePortfolio at some time in their collegiate studies (Eynon & Gambino, 2017), and as of a few years ago, 57% of U.S. colleges and universities offered some form of ePortfolio experience (Dahlstrom, 2015). In 2016, based on a decade of accumulated evidence, the Association of American Colleges and Universities named ePortfolios the eleventh high-impact practice (Watson, Kuh, Rhodes, Light, & Chen, 2016).

The literature describes an ePortfolio in several ways. In brief terms, an ePortfolio is “a pedagogical method for connected and integrated learning” (Matthews-DeNatale, 2013, p. 42) and “more of a process, a way of teaching and learning” (Eynon, et al., p. 108). A useful definition from Barrett (2005), who adds that an ePortfolio includes authentic, diverse, and reflective evidence that is representative of a larger body of work created over a period of time and intended “for presentation to one or more audiences for a particular rhetorical purpose” (p. 5). A more extensive definition emerges from Duncan-Pitt and Sutherland (2006) who described an ePortfolio with these contrasts (p. 70):

- A system that belongs to the learner, not the institution
- Populated by the learner not their examiner
- Primarily concerned with supporting learning not assessment
- For life-long and life-wide learning not a single episode or a single course
- That allows learners to present multiple stories of learning rather than just a simple aggregation of competencies; and, importantly
- Where access to them is controlled by the learner who is able to invite feedback to support personal growth and understanding

Despite this poetic definition reflective of a high-impact practice, some educators, students, and employers think of ePortfolios simply as collections of artifacts used mostly for assessment. Eynon et al. (2014) suggested that it was the increasing pressure for accountability that led to so many campuses using ePortfolios for program review and assessment. This myopic view as portfolio-for-assessment persists despite decades of arguments to the contrary, such as those of Barrett (2005)
who argued that ePortfolios had escaped their confines as evidence repositories and provided features that enabled not only the presentation of artifacts, but even more so the development of advanced learning skills through effective scaffolding. Roberts, Maor, and Herrington (2016) found a middle ground by recognizing that assessment is an important part of the learning process while also recognizing that an emphasis on assessment limits the utility of an ePortfolio to its end product without fully exploring the potential of the ePortfolio as a learning tool. Stefani, Mason, and Pegler (2007) suggested that this full potential of ePortfolios included six key learning requirements: assessment, presentation, learning, personal development, collaboration, and ongoing working documents. Rather than any one typology, Matthews-DeNatale (2013) suggested three “genres” that reflect the purposes of ePortfolios: directed portfolios, developmental portfolios, and showcase portfolios. The ePortfolio integrated into the online master’s degree that serves as the case example for this chapter can be described as a directed and developmental portfolio. While students do use professional standards and program outcomes (directed portfolio), students also work iteratively on several artifacts across courses (developmental portfolio).

MAIN FOCUS OF THE CHAPTER

Issues, Controversies, Problems

As noted above, the main problem with ePortfolios is that they often lack proper scaffolding and are used more for assessment than their broader potential as a learning tool (Barrett, 2005; Eynon et al., 2014; Roberts et al., 2016; Stefani, et al, 2007). This chapter examines a potential solution by adopting four phases to integrating the ePortfolio as an instructional method within an online master’s degree program. These four phases are scaffolding, tutorials, course integration, and student engagement. Each phase offers a different way to make a lasting impact on students. The innovative instructional method is not the ePortfolio itself, the supporting tutorials, or any one piece of the ePortfolio project. Rather, the true innovation is the project as a whole; that is, the innovation is taking a holistic look at how ePortfolios fit into the program and how to support the development and evaluation of the ePortfolio for both students and faculty.

Scaffolding

The first phase of the ePortfolio project is labeled “scaffolding.” Scaffolding was first introduced by Ausubel and Fitzgerald (1962) in their discussion of advance
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organizers. Scaffolding refers to the process of building new information and skills on those previously introduced or acquired. Scaffolded learning designs are incremental, and both add complexity while also reducing explicit support. Related to Vygotsky’s (1986) zone of proximal development, scaffolding would be the intervention or support necessary to bridge that gap between what the learner can do alone and what the learner can do with guidance.

In mathematics, for example, students initially practice with the same concepts and formulas demonstrated in a fully worked example. As student skills progresses, the practice extends beyond identical problems to include novel applications of the concepts based on only partially completed examples. Word problems illustrate this technique because students practice a specific calculation such multiplying two numbers and then progress to word problems in which the specific calculation is undefined and must be identified by the student and then calculated.

There is little debate about the need to differentiate among degree programs and appropriately scaffold both individual courses and entire programs; how to design differentiation and scaffolding is a tougher challenge. At the programmatic level, how does the design of each course represent a necessary progression of cognitive rigor, such that students are gaining advancing skills at each level rather than repeating tasks with the same cognitive requirements, thereby reiterating a skill level rather than advancing it?

Scaffolds can be categorized as soft or hard (Saye & Brush, 2002). Soft scaffolds are more dynamic, as they are offered by students and course facilitators. Hard scaffolds are more static because they are planned in advance as part of the course design. Scaffolding can also be categorized as macro or micro (Engin, 2014). Similar to a soft scaffold, micro-scaffolding occurs at the level of interaction with others; macro-scaffolding occurs at the structural level and includes the broader curriculum within a specific educational context. Sequencing, then, can be seen as hard scaffolding, because it is part of the course design, and macro-scaffolding, because it involves the sequence of courses within a curriculum. Strategies for sequencing curriculum, instruction, and training have been considered at two levels (Hammond & Gibbons, 2005; Lim, 2016): macro level sequencing, which refers to the course or curriculum level sequencing, and micro level sequencing, which refers to the sequencing of individual learning activities within a course. These two sequencing levels, illustrated in Figure 1, are consistent with the categories of scaffolding.

In this phase of the case example, a task analysis was completed to identify the knowledge and skills necessary for a student to graduate from the program with an effective ePortfolio. For the purposes of this program, an effective ePortfolio was one which met the definition of Duncan-Pitt and Sutherland (2006) provided in the introduction. A task analysis is the process of analyzing and communicating the kind of learning that the students should know how to perform. Jonassen, Tessmer,
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Figure 1. Graphical representation of sequencing and scaffolding across a degree program

...and Hannum (1999) suggested five functions of the task analysis: inventorying tasks, describing tasks, selecting tasks, sequencing tasks and task components, and analyzing tasks and content level. For more thorough explanations of task analyses and their procedures, consult Dick, Carey, and Carey (2011), Morrison et al. (2006), and Smith and Ragan (2004). The component tasks were then scaffolded throughout the online MSID program, as illustrated in Table 1. To be effective, the scaffolding required a dual focus on both the process of building an ePortfolio as well as the end product of the ePortfolio itself; this dual focus helps to keep learners focus on current objectives while also building a curated demonstration of learning for themselves, their colleagues, and their potential clients or employers (Hanbidge, McMillan, & Scholz, 2018).

This scaffolding has a positive, lasting impact on students because the students are able to articulate the value of an ePortfolio and learn the navigation and organization of a specific platform’s ePortfolio features before ever trying to load an artifact into the ePortfolio. This approach reduces the potential for frustration, prepares students for a positive ePortfolio experience, allows students to focus on the artifacts over the technology challenges, and models for students how to integrate ePortfolio design into their current or future workplace projects. The next phase is to prepare tutorials for both students and faculty.
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Table 1. Scaffolding of ePortfolio-related tasks by course across master’s level degree program

<table>
<thead>
<tr>
<th>Course</th>
<th>Portfolio-Related Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No ePortfolio-related tasks</td>
</tr>
<tr>
<td>2</td>
<td>No ePortfolio-related tasks</td>
</tr>
<tr>
<td>3</td>
<td>From the perspectives of both learners and organizations, students review the value of ePortfolios and their use in demonstrating specific competencies.</td>
</tr>
<tr>
<td>4</td>
<td>Students learn about the technical affordances of the LMS portfolio and customize features to accommodate specific needs of learners and organizations.</td>
</tr>
<tr>
<td>5</td>
<td>Students consider how ePortfolios illustrate assessment for, of, and as learning by correlating some of their own learning artifacts with professional standards and competencies.</td>
</tr>
<tr>
<td>6</td>
<td>Students create a multimedia learning asset and then re-evaluate that asset in Course 7.</td>
</tr>
<tr>
<td>7</td>
<td>Students assemble in their ePortfolios evidence of the effectiveness of learning materials for specific needs, contexts, and learners.</td>
</tr>
<tr>
<td>8</td>
<td>Students demonstrate their proficiency with authoring tools through the development of multimedia learning assets.</td>
</tr>
<tr>
<td>9</td>
<td>Students evaluate the artifacts they have curated in their ePortfolios.</td>
</tr>
<tr>
<td>10</td>
<td>Students curate reflections on the ethical, legal, and political influences most commonly found in the instructional design field.</td>
</tr>
<tr>
<td>11</td>
<td>Students consider how the development of an ePortfolio reflects project management skills.</td>
</tr>
<tr>
<td>12</td>
<td>Students appraise the value of their ePortfolios in comparison with not only the program learning outcomes, but also with professional competencies and standards recognized across the industry.</td>
</tr>
</tbody>
</table>

Tutorials

The second phase of the ePortfolio was the creation of tutorials. These print and video (with transcript) resources combined general information about the ePortfolio features with information specific to items the students would need to curate their artifacts. Figure 2 shows the landing page of the ePortfolio platform used in the context of this chapter.

The authors created an ePortfolio Resources learning artifact that included four distinct tutorial resource folders, one for each process connected with the ePortfolio tool:

- Logging into ePortfolio
- Uploading Artifacts into ePortfolio
- Creating Collections in ePortfolio
- Creating Presentations in ePortfolio
Each folder provided written, step-by-step tutorials, video tutorials, and video transcripts. These resources have a positive, lasting impact on students in several ways. One way is that these resources were shared with other schools across the university and with the university’s external instructional design and educational technology colleagues to be used or modified for other programs. Another way these resources have a lasting, positive impact is by offering the technical training prior to the student’s need to load anything into the ePortfolio; similar to the first phase, this approach reduces frustration and prepares students for a more positive experience in which they can focus on artifacts in future courses. Yet another way these resources have a lasting, positive impact on students is through their “chunking”; the bite-sized tutorials offer a just-in-time approach to performance support when students need a refresher later in their programs, in both text-based and media-based formats.

Tutorials can be developed in many forms, including bulleted or numbered lists of instructions, videos or interactive walk-throughs, static pictures or screenshots of an interface, and more. Especially in a wholly online learning environment, utilizing more than one tutorial type is beneficial for several reasons:
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- Video and written tutorials can accommodate varied learning styles and abilities of their students.
- Video and written tutorials showcase best practices to future educators, trainers, and designers.
- Written transcripts for video tutorials are utilizing ADA-best practices.
- Written transcripts and/or written tutorials may better serve students who are unable or prefer not to watch or listen to videos due to necessary accommodations or lifestyle circumstances such as working, traveling, present in quiet areas, etc.).

Intentionally providing multiple methods for tutorial delivery is highly recommended. Regardless of the output, many educators rely on tutorials to help explain or describe a process which students may need to follow. In the case of learning about and using an online ePortfolio tool, the need for tutorials was identified early in the program planning process in order to reduce confusion around a potentially new process for students and to promote a focus on the learning evidence through the artifacts and reflections.

Providing well-developed, consistently clear tutorials throughout a training program in any organization, including an individual course or entire program within a school, can reinforce for future educators the usefulness and importance of effective practices for creating and using tutorials. For example, Farrugia and Al-Jumeily (2012) suggested four distinct areas to address when considering ePortfolio technology: usefulness, ease-of-use, ease-of-learning, and satisfaction. Providing tutorials that appear professional and free from unnecessary clutter will be appreciated by students who are increasingly eager to add more tools to their educator toolbox (Clark & Mayer, 2016). Additionally, the tutorials serve as examples and provide templates for students to modify and replicate for their own contexts. Indeed, as noted elsewhere, one of the purposes of the holistic approach to ePortfolio integration is to model for students the integration of ePortfolios in the students’ future contexts.

For online learners specifically, many researchers have concluded that the availability of resources, including documentation, is critical to a student’s intention to effectively use technological tools in the classroom (e.g., Sivo, Ku, & Acharya, 2018). It can be surmised that by providing adequate resources and documentation, students are less concerned about technology challenges and might be more willing and able to engage in the important learning processes, including knowledge acquisition, skill development, and disposition development.
Creating Branded, Context-Specific Tutorials

Traditionally, when software is developed and adopted by customers, there are video and/or written tutorials available to showcase features that might need more detailed explanation. A quick Internet search will also produce publicly accessible tutorials from other users of the same software, likely created for the same reasons the authors elected for the ePortfolio Resources collection: the need for branded, context-specific tutorials for their end-users. In this case, the end users are students (primary) and faculty (secondary). One of the challenges in using pre-existing tutorials is that often the software (in this case, an ePortfolio platform) is tailored to each customer, so the interface shown in a pre-existing tutorial is not identical to the interface in the designer’s specific context. In some cases, the differences are subtle, such as color or organizational logo; in many cases, though, the navigation tabs and available options are different, which can be confusing to new users.

Searching for pre-existing tutorials can be very worthwhile, especially when there is an obligation to create a tutorial or set of tutorials for a program or tool never used before. Reviewing available materials from the software developer is a great place to start; in addition to the actual tutorials, there is usually a Frequently Asked Questions (FAQ) database or troubleshooting support system available online. By using these available resources, it becomes easier to fully understand the ePortfolio tool, all of its available features, and any potential shortcuts available for completing tasks.

Tutorial Challenges

Once the program was approved and the course development process began, the authors began reviewing ePortfolio materials from the software developer and other schools. They quickly realized the need for branded, context-specific tutorials for their school, and began requesting more information from partner departments. While initially it was not considered within the scope of either author’s current role to create branded tutorials, it became apparent after several months there was not a designated resource or department available to produce the tutorials needed.

After researching the ePortfolio tool for several weeks and comparing the functionality to the original vision of the program, the authors were able to narrow down requirements for the specific tutorials needed to support students navigating the course material. Initially, the scope of the ePortfolio Resources project included written tutorials only, and so the authors began developing the materials themselves between other projects and responsibilities.

Once the written tutorials were created and reviewed, the authors wanted to create something more interactive and engaging. With the written tutorials in hand, it was very easy to produce a screencast following the steps already captured. During the
screen casting process, however, the authors discovered student information protected by the Family Education Rights and Privacy Act (FERPA) was visible. With a quick review of tools available in the screen casting software, though, the authors were able to adequately blur the protected information and finalize the videos. Another way to work around this challenge is to load pseudonyms and other fictitious data in the system and create a tutorial using the fictitious context.

Hidden Tech Support

In many ways, effective tutorials are great assets to make available to users who may struggle with a new or complex process. While reviewing trends in tech support requests, one might discover a high number of instances related to users unable to understand or complete a task within certain software. A great example would be employees responsible for entering purchase orders into an accounting system, especially if doing so is an uncommon occurrence. Purchase order system tutorials would be a great solution as they can outline all steps in a somewhat uncommon, unfamiliar, or complex process.

As more employees access the tutorial, tech support calls and manager support should reduce. In the case of students in an online course, tutorials can help reduce the load on tech support, faculty members, advisors, etc. As the organization or school becomes used to providing tutorials, it may be determined that all future software rollouts, or introduction of new technology/process will include written and video tutorials linked in a centralized, easy-to-find location.

Course Integration

The third phase is integrating everything into the actual course design. For each course, this integration includes the scaffolding of the knowledge and skills planned for that course level, identifying appropriate places within the courses for the ePortfolio-related tasks, composing instructions, adding relevant tutorials, and including other resources as may be needed. Supporting guidance is also offered in the teaching guide for each course. This course integration phase involves the way in which students will be introduced first to the overall concept of the ePortfolio as well as the different tasks assigned to the students in each course. Scaffolding and tutorials have been included separately in this chapter. Effectively integrating the ePortfolio-related tasks into each course builds on the existing value of the first two phases. A strong integration within each course ensures low frustration for both students and faculty.

From the onset of developing the master’s degree program, the authors and were intentional about providing one set of ePortfolio resources that it would be
accessible to all students. In addition to ensuring consistency for their students, one set of resources is much easier to manage and maintain long-term. It was also necessary to ensure the responsibility for ongoing maintenance of the resources was communicated to all necessary stakeholders. In the event of potential LMS revisions, ePortfolio platform changes, user feedback, or change in academic program requirements, having a single point-of-contact identified as the ePortfolio Resources “owner” would allow information to be collected and acted upon while ensuring the original requirements were still being met.

While many LMSs offer native ePortfolio options, there is value in exploring third-party options in order to identify a resource to meet specific programmatic and student needs. There are many considerations for selecting the right tool, one of which is whether or not students will have access to their ePortfolio after they complete an individual course and/or program. It is important to understand these types of limitations or constraints of the tool, as well as the limitations or constraints of the school’s information technology (IT)-related student policies. The authors worked with their organization’s internal IT department to ensure the native ePortfolio tool within their LMS would allow students to access their ePortfolio outside of the normal LMS login for purposes of sharing their work with others unaffiliated with the university, such as potential future employers, clients, and colleagues.

As mentioned in the section about tutorials, the authors created an ePortfolio Resources learning artifact that included four distinct tutorial resource folders, one for each process connected with the ePortfolio tool: logging into ePortfolio, uploading artifacts to ePortfolio, creating Collections in ePortfolio, and creating Presentations in ePortfolio. Each folder provided written, step-by-step tutorials, video tutorials, and video transcripts. Additional introductory materials were provided to outline the concept of ePortfolios within the context of the student’s degree program and to describe long-term benefits, such as retaining lessons learned, recalling past achievements, integrating peer and professor feedback, and illustrating knowledge, skills, and dispositions). A glossary of terms was also included within the ePortfolio Resources learning artifact.

The authors had previously adopted the process of “chunking” material throughout their years of curriculum development and instructional design experience and felt it would be beneficial for the set of tutorials included within the ePortfolio Resources. Chunking material allows a user/student to learn new content over a series of clearly defined segments, or chunks. When it comes time to recall important information, including detailed steps in a previously “chunked” process, often students need to see only the topic or label within the call-to-action to remember the material they previously learned (Thalmann, Souza, & Oberauer, 2019).

Once the video tutorials were completed, reviewed, and approved, transcripts were generated and all materials were loaded into a Learning Object Repository.
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(LOR). While partnering with the information technology and instructional design and development departments, it was recommended that we use the LOR to “house” everything in order to reduce the chance of having outdated material linked somewhere, particularly in a student-facing context like a course. Similar to an intranet site or asset management system, the LOR allowed the collection of ePortfolio Resources to appear linked across many courses and alternate locations.

Student Engagement

The final phase is when the students engage their individual ePortfolios. The lasting impact to the student is a collection of multimedia artifacts that not only demonstrates the acquired knowledge and skills but also offer an introspective look into the student’s interests and goals through the organization of the ePortfolio and associated reflections. Portfolios are a necessity in the instructional design field, which is the domain of the master’s level course in which this innovation was implemented. The lasting impact to the student is not only in the development of the ePortfolios themselves, but also in the learning that has occurred about ePortfolios and modeling how to design and integrate ePortfolios in current or future organizations at which the learners will work.

Starting at the beginning is the best place for both this section of the chapter as well as for the students themselves. As explained in the previous sections, the ePortfolio tasks were integrated into the program from the third course. In addition, the students practiced navigating the ePortfolio platform prior to the requirement to post a particular artifact. Integrating such practice from early in the program is consistent with the recommendations of Roberts (2016) and Hallum, Harper, McAllister, Hauville, and Creagh (2010), who noted the need to introduce electronic learning platforms, such as ePortfolios, from the beginning of student studies. Starting at the beginning of the program also supports the student’s ability to make connections between ideas and be more aware of their growth and development as a learner, as reported by 70% and 66%, respectively, of Connect to Learning (C2L) students reported (Enyon & Gambino, 2016). If the ePortfolio is introduced later in the program, and especially if done so in the very last course, students are denied the opportunity to make such connections, growth, and development.

Students demonstrated engagement in other ways. In the C2L project, students reported that building their ePortfolios helped them to think more deeply about content (62%) and to synthesize information and experiences in new ways (78%) (Enyon, et al., 2014). Students who built ePortfolios also demonstrated higher grade-point averages, credit accumulation, and retention rates than students who did not create ePortfolios (Hakel & Smith, 2009). In the current case example, there is insufficient
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data to ensure anonymity in publishing student outcomes. Anecdotally, the holistic approach has received positive praise from students and faculty alike.

Even with the extensive preparation, there are some challenges to student engagement. One challenge noted in the section on scaffolding was using the task analysis to identify, place, and design individual ePortfolio assignments within the greater structures of the overall degree program completion sequence as well as the overall ePortfolio preparation and completion needs. This challenge relates to student engagement through another challenge: the portfolio-related tasks were sometimes difficult to integrate into the flow of the course. Especially in the earlier courses in the program, tasks like learning the ePortfolio navigation stood out from other tasks which were focused more acutely on instructional design content. Fortunately, there are ways to connect instructional design with navigation through discussions of user experience design. While technology should not drive pedagogy, technology certainly provides boundaries for what is possible. Nonetheless, some students might see distinct tasks related to ePortfolio preparation as disruptive to the course flow and, thus, disruptive to the student’s engagement, as well.

Another challenge to student engagement was helping students in the initial courses within the program to see the value of the preparatory work, such as exploring the general utility of ePortfolios and the navigation of the specific LMS ePortfolio tool, in particular. A focus on alignment with the learning outcomes at the course, program, and institutional levels as well as alignment with competencies and standards of professional practice in the instructional design field helped to ameliorate this challenge to engagement. The instructional design content of the master’s program was aligned to the competencies and standards of the International Board of Standards for Training, Performance and Instruction (IBSTPI), the Association for Educational Communications and Technology (AECT), and the Association for Training Development (ATD). Such explicit alignment illustrated the authentic nature of the ePortfolio tasks and offered motivation for students to engage wholly in completing the tasks.

A final challenge to student engagement is actually faculty engagement. After all, a well-designed course experience must also be well-facilitated to fully engage learners. The university in this case example uses a standardized curriculum, which means that all students are exposed to the same learning outcomes, content, and assessments. Even within a standardized curriculum, faculty still have the opportunity to “make the magic happen” through their facilitation. To ensure a similar experience consistent with a standardized approach, the design team creates faculty teaching guides. These guides offer additional information about the design thinking, justification of choices, potential student challenges, and suggestions for overcoming those challenges. Clearly, these guides need to consider the ePortfolio tasks as much as the other learning activities and assessments. In addition, the
culminating signature assignment for each course has a standardized rubric for grading and feedback.

**SOLUTIONS AND RECOMMENDATIONS**

Solutions have been offered throughout this chapter to the challenges identified in a holistic approach to the integration of ePortfolios in online degree programs. Perhaps the greatest recommendation is to consider the institutional values and how an ePortfolio project does or does not support these values. At the institution of the case example, the ePortfolio supports several values espoused by many educational institutions.

**Innovation**

Effectively integrating ePortfolios in a way that is supportive of both students and faculty continues to be a challenge, particularly in online education, and this holistic approach offers a solution to this challenge and improves the overall quality of online degree programs.

**Diversity**

The holistic approach to ePortfolio integration exemplifies the value of diversity by recognizing the value of each student’s unique characteristics and experiences. Portfolios support students in presenting their true version of themselves not only in the content of their curated artifacts, but also in the reflections that tell their stories.

**Continuous Improvement**

By scaffolding the ePortfolio throughout the program, students engage in a continuous improvement cycle of their work; they return to previous artifacts to improve upon their work based on additional learning and reflection.

**Outcomes**

Portfolios offer evidence of learning outcomes at the course, program, and institutional level.
Accountability

This holistic approach to ePortfolio integration represents the value of accountability by offering a medium to portray such work.

After examining the alignment between a desired ePortfolio project and institutional values, the next recommendation is to identify how the ePortfolio project aligns with learning outcomes at the institutional, program, and course level and any competencies and standards of relevant professional organizations. As these recommendations suggest, the greatest recommendation in implementing an ePortfolio project is to begin the process early so as to allow sufficient time for a holistic approach that supports the design team as well as the eventual users - students and faculty.

FUTURE RESEARCH DIRECTIONS

The broad concept of portfolios has been the topic of research for quite some time, including the development of the digital or ePortfolio. As the nature of learning and learners themselves continues to change at an unprecedented pace, there are still emerging opportunities to explore how ePortfolios are evolving to meet these changes.

For example, what do potential employers think of the utility in assessing candidates with the different types of ePortfolios? Typically, do employers prefer a portfolio that focuses on an illustration of growth and development, or would employers prefer to see illustrate the end results of developing the knowledge, skills, and dispositions?

Based on the challenges discussed in this chapter and elsewhere in the literature, how might developers of learning management systems - or whatever the LMS develops into - overcome these challenges in their ePortfolio platforms? How might the successes and challenges of ePortfolio platforms outside of an LMS inform improvements of both integrated and independent platforms?

What faculty insight can be gleaned from their experiences with learners and their ePortfolios? Future research might identify more effective scaffolding for faculty development of ePortfolio proficiencies as well as scaffolding for students. How might faculty needs differ based the type of portfolio or specific LMS? How do faculty integrate ePortfolios in their self-designed courses versus such integration within a standardized curriculum? In programs where the ePortfolio was built into a capstone course, what might be the most effective way to revise the program to draw out the ePortfolio tasks throughout the program?

Of course, there are the students themselves. As their learning preferences and enrollment patterns change, how might ePortfolios need to change in terms of their scaffolding, integration, and engagement? How are ePortfolios integrated effectively
into shorter credentials than a full degree program, such as micro-credentials, certificates, and nanodegrees?

While there is much research about portfolios and their digital counterparts, there is still much to learn. And there will always be more to learn as needs change among occupations, employers, and learners.

CONCLUSION

In summary, the innovative instructional method is not the ePortfolio itself, the supporting tutorials, or any one piece of the ePortfolio project. Rather, the true innovation is the project as a whole - taking a holistic look at how ePortfolios fit into the program and how to support the development and evaluation of the ePortfolio for both students and faculty. Such a holistic approach needs to start with extensive planning of how an ePortfolio project aligns with values, learning outcomes, and existing technologies; extensive analyses of specific ePortfolio tasks required; then scaffolding and tutorials to support course integration and student engagement.

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REFERENCES


A Holistic Approach to Integrating ePortfolios as Instructional Methods in Online Programs


A Holistic Approach to Integrating ePortfolios as Instructional Methods in Online Programs


ADDITIONAL READING


KEY TERMS AND DEFINITIONS

**Chunking:** The process of dividing content into brief, focused pieces of text or video often used to provide just-in-time support at the moment of learning need.

**ePortfolio:** Digital version of a portfolio.

**LMS:** Abbreviation for learning management system, which is usually a collection of software used for the delivery of educational and training modules.

**Portfolio:** Collection of artifacts collated by an individual or group, usually including reflections on those artifacts, that serve to illustrate knowledge, skills, dispositions, and growth.

**Scaffolding:** Support provided before or during a learning endeavor to increase acquisition of knowledge, skills, and dispositions.

**Task Analysis:** Analysis of an activity that results in a linear, detailed description of how to perform a task and what knowledge, skills, or dispositions are needed before or during performance of the activity.

**Tutorial:** A video or text document that illustrates the steps necessary to complete a specific task.