Implementing EPortfolio Tools Within Curricula: A Guide for Faculty

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Abstract

EPortfolios can showcase students' learning progression, achievements, and abilities through the purposeful collection of their work. The implementation of ePortfolios within curricula can also demonstrate institutional accountability and serve as primary evidence for accreditation. The authors explore the current available ePortfolio platforms that are utilized in academic settings. They developed a set of evaluation matrices to review current ePortfolio platforms, consisting of (a) learning activities/goals, (b) competency tracking, (c) collaboration ability, (d) access, (e) user-friendliness, (f) customization, and (g) retrospection/concept mapping. Although no ePortfolio platform satisfies all these criteria completely, each possesses individual advantages that make it uniquely useful in particular academic situations. The authors provide a rubric to guide faculty or administrators when choosing an ePortfolio platform, which considers the platform's purpose and how it will be integrated into existing curricula.

Keywords: EPortfolio, curriculum, assessment, evaluation

Overview

The implementation of electronic portfolios (ePortfolios) in academic settings continues to expand, because of the advancement in web technologies and their ability to capture knowledge, skills, and behaviors attained by learners. An ePortfolio helps learners document their mastery of practical skill sets; develop personal, professional, and social responsibility; and integrate and reflect upon years of experiences—all professional attributes that are valued by communities and businesses, according to the Association of American Colleges & Universities (AAC&U) (Miller & Morgaine, 2009). An ePortfolio provides a comprehensive space for learners to continuously document and reflect upon progress toward defined goals, in order to develop and shape professional competencies by the end of their education. Within an ePortfolio, an *artifact,* or tangible work product, evidences a competency. A reflective statement on the learner's experiences, summarizing the connection between the artifact and the competency, often accompanies these artifacts.

EPortfolios provide different advantages to various users, because they can be engineered to serve a variety of educational needs within a single academic program. In a survey of 43 colleges worldwide, Chatham-Carpenter, Seawel, and Raschig (2010) found that approximately three quarters (74.7%) of those institutions used ePortfolios to help students reflect on their learning. Chatham-Carpenter et al. also found that students used ePortfolios beyond the

learning process. Institutions encouraged use to showcase career-related skills for potential employers (69.8%); as a tool at the programmatic level, to help review and assess curricula (58.1%); and to demonstrate professional standards (53.5%).

Although ePortfolios may be integrated into an educational program for a variety of reasons, implementing and planning for their successful integration always involves many decisions. A guide to the thought process behind this planning was laid out by Poklop and Peagler (2010) in their "ePortfolio Planning Framework", which outlines the effects of inputs, such as curriculum and assessment goals, and desired results, or outputs, on the design and integration of ePortfolios. Our goal in this paper is to provide assistance in ePortfolio planning, specifically regarding inputs and curriculum integration, to determine which features an ePortfolio platform must possess to support one's overarching purpose (Figure 1). Given Poklop and Peagler's framework, it makes sense to incorporate backward design, by first identifying the desired outcomes of the ePortfolio content and then revisiting the goals and learning activities, to discern what features an ePortfolio platform must possess to support those outcomes (Wiggins & McTighe, 2005).

Because of the variety of uses for ePortfolios, the number of available platforms is growing, and their abilities for utilization in the academic setting continue to evolve. We explored the capabilities and purposes of current ePortfolio tools and can offer guidance in choosing the appropriate ePortfolio platform for integration into a curriculum, based on individualized program goals. Additionally, we provide a real-life example of an academic program that utilizes ePortfolios both for learning and competency tracking. We apply our results to a recommendation for an appropriate platform for this case study.

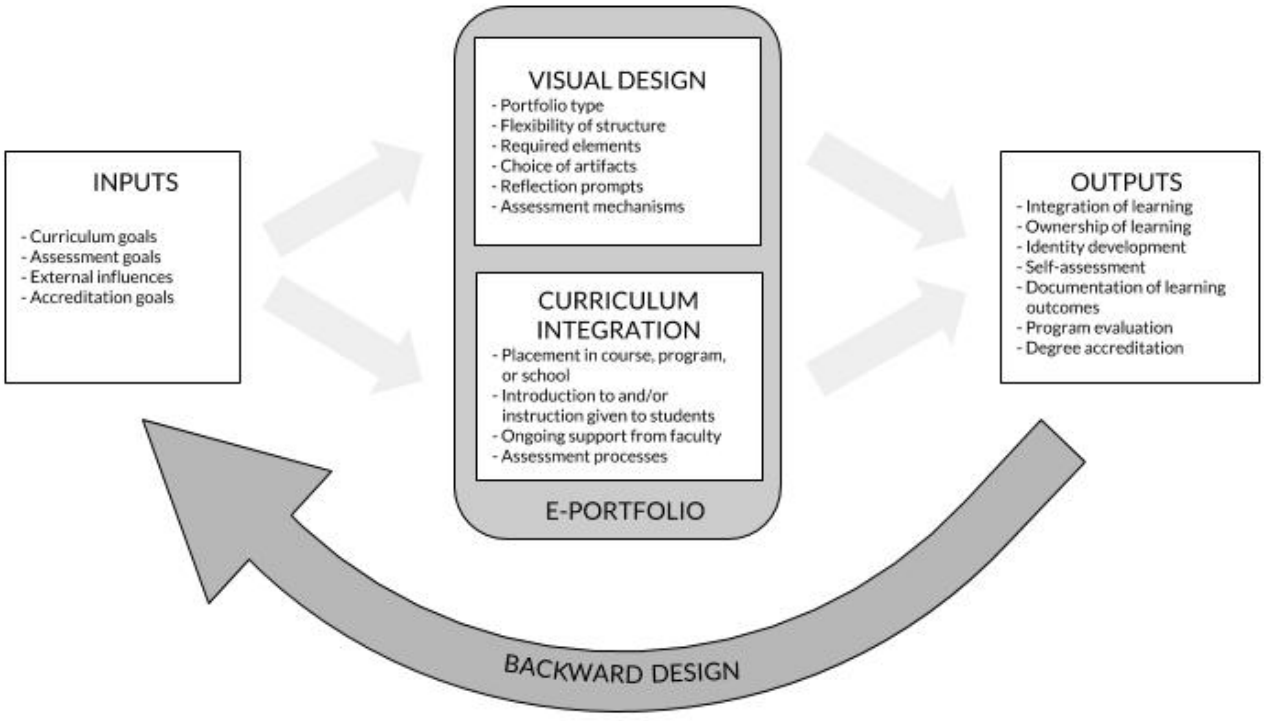

Figure 1. Adaptation of Poklop and Peagler's "ePortfolio Planning Framework" diagram, with the incorporation of backward design (Poklop & Peagler, 2010). Reprinted with permission.

Why Do Educators Use EPortfolios?

Micro Level

Incorporating an ePortfolio into a learning environment has been deemed a "high-impact practice" in education (Eynon & Gambino, 2017). The learners who build the ePortfolio content reap lifelong skills, applicable to their careers beyond formal education (Zubizarreta, 2008). Rather than capturing a mere snapshot of a student's progress, the ePortfolio provides continuous feedback and captures skills gained over time (Shulman, 1998; Wuetherick & Dickinson, 2015). In fact, at least one curriculum has been developed in which students dedicated multiple years of their training to building a comprehensive ePortfolio (Carson, Hannum, & Dehne, 2018). Throughout the literature, students who generate ePortfolios are shown to engage in professional development and reflect positive attitudes toward their professional fields (Cambridge, Cambridge, & KB, 2009; Eynon, 2009; Oakley, Pegrum, & Johnston, 2014; Ring & Foti, 2006). Despite many reported benefits for the learner, instructors report their own need for better skills at integrating such platforms into their courses and more training on how to appropriately utilize the technology (Dahlstrom, 2015).

AAC&U's most recent Liberal Education and America's Promise (LEAP) Challenge implores colleges and universities to make "signature work" an overarching goal for all students (Batson, Watson, Chen, & Rhodes, 2017), defined as work that is integrative, is driven by the student, and addresses problems and questions that are important to society. Signature work often engages students in situational learning experiences such as simulations, research, and internships. EPortfolios offer a way to document and assess these learning experiences. The combination of reflection on and documentation of applied experiences, as well as the ability to share this process with collaborators or mentors, facilitates deeper learning (Peet et al., 2011). The longer-term engagement required to develop an ePortfolio results in a learning experience focused on self-improvement: The learner specifically reflects upon not only "What did I learn?" but also "Why did I learn?" and "How did I learn?" Thus, faculty and administrators can integrate ePortfolios into curricula to serve as both formative (long-term, ongoing) feedback and summative (final product) assessment of student development.

Accreditation and Institutional Accountability (Macro Level)

Beyond serving as a useful learning tool for students and an assessment function within the classroom, ePortfolios are also valuable for assessing competency at the programmatic and accreditation level. Just as they offer a chance to assess the accrual of competencies by students, they may also evaluate the program or curriculum (or both) through which students gain those competencies (Matthews-DeNatale, Blevins-Bohanan, Rothwell, & Wehlburg, 2017). In other words, the student-generated content within the ePortfolios serves as primary evidence for accreditation processes. Continuous assessment of educational programs helps ensure that the program goals and initiatives remain relevant to current societal needs, especially in terms of their professional applications (Cummings & Maddux, 2010; Hill & Irvine, 2003).

National accrediting agencies and agencies focused on specific areas of study, such as the Council on Education for Public Health (CEPH), are increasingly seeking evidence that higher-education institutions are setting and meeting standards that focus on assessment, institutional effectiveness, and accountability, by making a portfolio a requirement for accreditation (CEPH, 2016). The assimilation of ePortfolios as an accreditation requirement provides valid evidence to meet an accrediting body's rigorous standards for capturing, storing, and presenting a measure of student achievements (Reese & Levy, 2009).

In addition, when students complete academic programs that are overseen by an accrediting body, they are expected to one day be professionals who will make an impact on society (C. Schneider, 2015). Implementing ePortfolios within a curriculum supports institutional accountability to entities such as communities, populations, or employers that rely on the competence of the trained professionals exiting

their respective education programs. Thus, an ePortfolio can provide great value to employers, as evidence of a proficient employee (Ferns & Comfort, 2014; Hallam & Creagh, 2010). After interviewing employers who reviewed ePortfolios from engineering students, Weber (2018) reported that an ePortfolio provided to an employer offers several advantages; for example, "it can help a candidate stand out from competitors" and "is an easy means to review the skills possessed by that individual to infer them as a correct fit for the job" (pp. 57-71).

Evaluation of EPortfolios for Various Uses

Given the variety of motivations for utilizing ePortfolios in an academic setting, the usefulness of a given platform is determined by the primary objectives outlined by the user (e.g., faculty, program administrator, accrediting body), the features of the ePortfolio platform, and how well those objectives and features align (Light, Chen, & Ittelson, 2009). Despite their easy accessibility, innovative nature, and seemingly endless potential, implementing ePortfolios in academic settings presents many challenges, including operating costs, compliance, and adaptability to the needs of the users (Chatham-Carpenter et al., 2010; Housego & Parker, 2009).

A faculty instructor in a school of public health who consistently uses ePortfolios within his/her professional-development course and a master's-level research assistant from a school of information reviewed ePortfolio literature that describes its use as a platform for faculty to assess student competencies and that reports the features of the ePortfolio that best facilitate these assessment processes (Ardiansyah, Triana, & Sulhairi, 2017; Hill & Irvine, 2003; McWhorter, Delello, Roberts, Raisor, & Fowler, 2013; San Jose, 2017). The faculty instructor and research assistant then finalized criteria for evaluating 17 commonly reported ePortfolio tools in academia. The criteria consisted of (a) learning activities/goals, (b) competency tracking, (c) collaboration, (d) access, (e) user-friendliness, (f) customization, and (g) retrospection/concept mapping. Tables 1 and 2 outline the key findings of the ePortfolio tool analyses. A point system was used to rank each of the tools based on the availability of certain features associated with each criterion. For example, each tool is assessed for four features related to "user-friendliness." Each feature is worth one point, with a total of four possible points in this category for each tool. Using a point scale such as this allows one to assess in greater detail each of the seven criteria for choosing an ePortfolio tool.

Each of the tools analyzed were found to have different features, with no two possessing exactly the same set. Depending on its features, a given ePortfolio tool can be categorized as one or more of the following:

- ePortfolio Management System—designed and developed specifically for ePortfolio systems used by institutions
- Learning Management System (LMS)—provides ePortfolios options within the existing platform
- Integrated System or Content Management System (CMS)—provides "indirect" ePortfolio functions
- External System—cannot be classified into the other three types, often takes the form of website builders, not necessarily intended for ePortfolio creation

Tools presented in Table 1 are intended for K–12 and higher-education settings and are explicit ePortfolio management systems. Tools presented in Table 2 are intended for K–12 and higher-education settings but exist as a feature within an LMS or are website builders and are designed for out-of-classroom (external) purposes. They usually do not have specific assessment functions built in. Please refer to the case study, following the Conclusion of this paper, to see how these point systems are applied to a real-life scenario, utilizing the data from Table 1.

Table 1

Rubric for ePortfolio Platforms: Evaluation of 10 Commonly Used EPortfolio Management Systems Designed Specifically for Use in Education

Evaluation Criteria	Seelio (UM) by KeyPath	iWebfolio	RCampus	Angel ePortfolio	FolioTek	PebblePad	Digication	Chalk and Wire (UM)	Folio Spaces	Watermark
Clear learning activities Max points possible: 2	Ability to publish detailed expectations of activities and assignments (1 point) Ability to create lists of artifacts and competencies (1 point)									
Points earned:	2	1	2	1	2	2	2	2	1	2
Competency tracking Max points possible: 3	Ability to identify/define competencies (1 point) Ability to identify progress in completion of competency (1 point) Ability to identify mastery/completion of competency (1 point)									
Points earned:	2	1	1	0	2	2	2	2	1	3
Collaboration Max points possible: 3	Ability for instructors to provide constructive feedback on artifacts (1 point) Ability for instructors to provide constructive feedback on competency completion (1 point) Ability for students to communicate with peers and engage in constructive critiques (1 point)									
Points earned:	3	2	2	2	2	3	3	3	2	3
Access Max points possible: 2	Ability for students to access ePortfolios after completion of degree, certificate, course, etc. (1 point) Ability for students to access ePortfolios **free of charge** after completion of degree, certificate, course, etc. (1 point)									
Points earned:	2	1	2	0	1	1	1	1	2	2
User-Friendly Max points possible: 4	Easy to obtain/ download the tool (not including cost) (1 point) Easy to integrate the tool into practice in the classroom (1 point) Easy to navigate the tool for students and instructors (1 point) Easy to customize to preferences/ needs of students, course, school, etc. (1 point)									
Points earned:	4	2	4	2	4	4	4	4	1	4
Customization Max points possible: 3	Ability to be customized—content based (1 point) Ability to be customized—aesthetically (1 point) Ability to transition as needs of students, coursework, or school change (e.g., students transition from school to work) (1 point)									
Points earned:	3	3	3	1	2	3	3	2	1	3
Retrospection or concept mapping Max points possible: 3	Ability to reflect (by student) on learning progress (1 point) Ability to connect learning goals and artifacts (1 point) Ability to identify students' strengths and weaknesses (1 point)									
Points earned:	3	1	1	1	2	3	1	2	1	3
Total points earned:	**19**	**11**	**15**	**7**	**15**	**18**	**16**	**16**	**9**	**20**

Table 2

Rubric for LMS, CMS, or External Systems: Evaluation of 3 Learning Management or Content Management Systems and 4 External Systems or Website Builders Commonly Used by Educational Institutions

Evaluation Criteria	Blackboard Portfolio	Mahara	Canvas	Wix	Weebly	WordPress	Squarespace
Clear learning activities Max points possible: 2	Ability to publish detailed expectations of activities and assignments (1 point) Ability to create lists of artifacts and competencies (1 point)						
Points earned:	2	2	2	1	1	1	1
Competency tracking Max points possible: 3	Ability to identify/define competencies (1 point) Ability to identify progress in completion of competency (1 point) Ability to identify mastery/completion of competency (1 point)						
Points earned:	1	3	2	1	1	1	1
Collaboration Max points possible: 3	Ability for instructors to provide constructive feedback on artifacts (1 point) Ability for instructors to provide constructive feedback on competency completion (1 point) Ability for students to communicate with peers and engage in constructive critiques (1 point)						
Points earned:	2	3	2	0	0	1	1
Access Max points possible: 2	Ability for students to access ePortfolios after completion of degree, certificate, course, etc. (1 point) Ability for students to access ePortfolios **free of charge** after completion of degree, certificate, course, etc. (1 point)						
Points earned:	0	2	0	2	2	2	1
User-Friendly Max points possible: 4	Easy to obtain/ download the tool (not including cost) (1 point) Easy to integrate the tool into practice in the classroom (1 point) Easy to navigate the tool for students and instructors (1 point) Easy to customize to preferences/needs of students, course, school, etc. (1 point)						
Points earned:	2	2	2	2	2	2	2
Customization Max points possible: 3	Ability to be customized—content based (1 point) Ability to be customized—aesthetically (1 point) Ability to transition as needs of students, coursework, or school change (e.g., students transition from school to work) (1 point)						
Points earned:	1	3	1	3	3	3	3
Retrospection or concept mapping Max points possible: 3	Ability to reflect (by student) on learning progress (1 point) Ability to connect learning goals and artifacts (1 point) Ability to identify students' strengths and weaknesses (1 point)						
Points earned:	1	2	1	2	1	1	1
Total points earned:	**9**	**17**	**10**	**11**	**9**	**10**	**9**

Current Gaps in ePortfolio Tool Designs and Other Topics

Summary of Gaps

After evaluating the tools, we identified gaps in current ePortfolio features within the platforms as well as analyzing how the ePortfolio products are being used. Major weaknesses in current ePortfolio tools include the absence of the following:

- learning analytic dashboards (for use by both instructors and learners)
- consistent student self-evaluation and competence tracking
- dynamic student self-reflection platforms
- curriculum mapping tools
- exhibition features for public viewing beyond the classroom

The absence of these features in several ePortfolio tools is problematic, because they embody some of the main theoretical objectives of ePortfolios—i.e., self-evaluation, competence tracking, and reflection. Learning analytic dashboards, competency tracking, and reflection platforms can facilitate communication between students, instructors, and peers, which is also an important aspect of ePortfolios.

Showcasing EPortfolios Beyond the Classroom—An Advantage for a Digital Generation

The effort that a student puts into building an ePortfolio emphasizes professional growth and reflection; thus it seems natural that an ePortfolio would be a source of insight for a potential employer. We live in an increasingly digital world, and recent trends have suggested that paper resumes and tangible portfolios are gradually becoming less popular tools for job and graduate- school applications (Leahy & Filiatrault, 2017). However, there is limited evidence that employers perceive electronic portfolios as beneficial when hiring. EPortfolios could be useful tools for both employers and job applicants because they can present a range of skills, with associated artifacts, as evidence of professional ability. For employers, they offer more reliable and valid evidence by which to assess job candidates. For applicants, they necessitate self-assessment and thus serve as preparation for successful discussions with potential employers about the applicants' abilities and skills (Hill & Irvine, 2003).

However, in a recent study, Leahy and Filiatrault (2017) found that although students are often comfortable creating and disseminating ePortfolios, employers may not have as much experience with or willingness to review ePortfolios as a source of information about applicants. The Leahy and Filiatrault study indicated that recruiters with fewer than two years of experience were significantly more likely to visit ePortfolio links in applications than were recruiters with three or more years of experience. Overall, recruiters were found to have moderately favorable perceptions of ePortfolios in the job-application process. However, Leahy and Filiatrault were unable to determine to what extent ePortfolios influenced hiring decisions. Due to the novelty of ePortfolio use outside the realm of education, very few studies have been conducted on employers' perceptions of ePortfolios and their use in employment.

Case Study: EPortfolio Use in Masters of Public Health Programs

Accredited Master of Public Health (MPH) programs are now required to include the creation of an ePortfolio in their curricula, both to assess a given student's ability to work as a public-health practitioner and to evaluate the effectiveness of the curriculum itself. New accreditation standards require programs to prove that their students meet five competencies through experiential public-health work and by showcasing the mastery of these competencies with two artifacts (CEPH, 2016). Many fields of study beyond public health often pursue authentic, experiential learning opportunities outside the traditional classroom, including internships, research, study abroad, and service learning. These experiences align with the AAC&Us LEAP Challenge to increase the amount of "signature work" of college students (C. G. Schneider, 2015). Assessment strategies for extra- or cocurricular experiences align well with ePortfolios, because these platforms have the ability to track competency, showcase progress and work, and allow for communication between students and faculty.

A professional-development course in an accredited MPH program at the University of Michigan utilizes ePortfolios as a learning tool and as a competency tracker for accreditation purposes. The desired result is that, by graduation, students have developed an ePortfolio with at least two artifacts, supported by reflective statements (Figure 1) to demonstrate achievement of at least five competencies (Poklop & Peagler, 2010; Wiggins & McTighe, 2005). The specific goals of incorporating an ePortfolio into this professional-development course include the following:

- that students continuously reflect on their learning experiences,
- that the school have evidence of competency attainment for CEPH, and
- that students have documentation of their training during postgraduation hiring or when applying to other higher-education programs such as doctoral studies or medical school.

These goals require that faculty and students maintain access to the platform following a student's graduation. We have compiled a table that aligns the specific needs of this particular MPH course with the features of current ePortfolio platforms. The needs of the course presented in this case study were applied to the specific features assessed in the rubric (Tables 1 and 2). Table 3 provides the rubric score required for each category that encompasses the specific features of importance for MPH programs. These scores can be compared to the rubric scores displayed in Tables 1 and 2 of analyzed ePortfolio tools to determine which platform would best meet the goals of ePortfolio use in this setting.

Table 3
Features of EPortfolio Tools of Particular Interest to Master's in Public Health Programs

Feature category	Needs of MPH program	Specific features of importance to look for (translated from needs)	Required rubric score
Clear learning activities & goals	Identification and outlining of five competencies, to be represented by two artifacts, or work products	• Publish detailed explanations of assignments and activities • Express transparent expectations • Create lists of competencies, goals, and artifacts	2
Competency tracking	Identification and tracking of individual student progress in the classroom and during experiential learning endeavors (internships, research, etc.) Identification of gaps in competencies, to direct the development of curriculum and inform faculty on the needs of their particular student body Identification of mastery of competencies for use in future (job applications, reviews, or other higher-education applications)	• Identify and define competencies • Identify progress on competency completion (student and instructor) • Identify mastery of competency (for future employer)	3

Collaboration	Collaboration between students and instructors and among students Constructive feedback on artifacts and competency progress	• Provide feedback on artifacts • Provide feedback on competency development, progress, and mastery • Enable collaborative communication between peers	3
Access	Continued use of the portfolio by students to facilitate their professional development beyond the classroom Continued access after graduation to tool's interface Low or no cost after graduation	• Transition the tool to postgraduation needs • Offer inexpensive or free access	1
User-Friendly for faculty and students	Straightforward navigation and easy integration into current tools	• Integrate the tool easily into curriculum • Navigate the tool easily by students and instructors	2
Customization	Customizable for students, to create individualized portfolios dependent on their interests (e.g., epidemiology vs. nutritional sciences)	• Customize the tool aesthetically	1
Retrospection & concept mapping	Option for active reflection throughout the process of creating work products and competency acquisition	• Reflect on learning process and progress (by student)	1

As reflected in Table 3, we concluded that of the 17 commonly utilized ePortfolio tools that we analyzed, two meet the minimum expectations of this MPH program—Watermark and Mahara. These two ePortfolio tools have slightly different features and did not receive the same assessment total scores, but both do meet the need for clear learning goals and competency tracking, which are important in this particular context. Using this assessment rubric can help narrow the search for ePortfolio tool options as academic programs attempt to identify and integrate ePortfolios in the future.

Conclusion

With so many ePortfolio platforms in existence and a variety of options embedded within each, it can be difficult to discern which platform will meet the requirements of different users. Based on the goals of a program and its accrediting body, ePortfolio tools can be managed, integrated, and modified to meet evaluation and assessment demands. EPortfolios have repeatedly been shown to facilitate students' professional development and provide faculty and administrators with a means of assessing their students and program standards. Our IDEA paper can guide faculty members and administrators in differentiating various ePortfolio platforms and help them select the appropriate tool that aligns with their individualized learning or assessment needs. The rubrics we have presented here are applicable across fields of study and can be adapted by faculty and administrators, as well as students, to determine which ePortfolio platform will best support their needs.

References

Ardiansyah, D., Triana, Y., & Sulhairi, S. (2017). The application of electronic portfolio assessment (APE) in teaching. Retrieved from http://eprints.uad.ac.id/7183/1/THE%20APPLICATION%20OF%20ELECTRONIC%20%20PORTOFOLIO%20ASSESMENT.pdf

Batson, T., Watson, C. E., Chen, H. L., & Rhodes, T. L. (2017). Introduction. In *Field guide to eportfolio* (p. 1). Washington D.C.: Association of American Colleges and Universities.

Cambridge, D., Cambridge, B., & KB, Y. (2009). *Electronic portfolios 2.0: Emergent findings about implementation and impact*. San Francisco: Stylus Publishing.

Carson, A., Hannum, G., & Dehne, C. (2018). Manhattanville College's Atlas Program: Designing a road map to success in college and beyond. *International Journal of ePortfolio*, *8*(1), 73-86.

Council on Education for Public Health. (2016). *Accreditation criteria*. Silver Spring, MD: CEPH.

Chatham-Carpenter, A., Seawel, L., & Raschig, J. (2010). Avoiding the pitfalls: Current practices and recommendations for eportfolios in higher education. *Journal of Educational Technology Systems*, *38*(4), 437–456. https://doi.org/10.2190/ET.38.4.e

Cummings, R., & Maddux, C. D. (2010). The use of e-portfolios as a component of assessment and accreditation in higher education. In *The e-portfolio paradigm: Informing, educating, assessing and managing with e-portfolios*, 207–223. Santa Rosa, CA: Informing Science Press.

Dahlstrom, E. & Bichsel, J. (2014). *ECAR study of students and information technology*. Research Report. Louisville, CO: ECAR. Retrieved from http://www.educause.edu/ecar

Eynon, B. (2009). *Making connections: The LaGuardia eportfolio*. Sterling, VA: Stylus Publishing.

Eynon, B., & Gambino, L. (2017). *High-impact eportfolio practice: A catalyst for student, faculty and institutional learning*. Sterling, VA: Stylus Publishing.

Ferns, S., & Comfort, J. (2014). Eportfolios as evidence of standards and outcomes in work-integrated learning. *Asia-Pacific Journal of Cooperative Education*, *15*(3), 269–280.

Hallam, G., & Creagh, T. (2010). EPortfolio use by university students in Australia: A review of the Australian ePortfolio Project. *Higher Education Research & Development*, *29*(2), 179–193. https://doi.org/10.1080/07294360903510582

Hill, D. M., & Irvine, G. (2003). Accreditation, competence and digital portfolio assessment. *On the Horizon*, *11*(4), 6–9.

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Housego, S., & Parker, N. (2009). Positioning eportfolios in an integrated curriculum. *Education + Training*, *51*(5/6), 408–421. https://doi.org/10.1108/00400910910987219

Leahy, R. L., & Filiatrault, A. (2017). Employers' perceptions of the benefits of employment electronic portfolios. *International Journal*, *7*(2), 217–223.

Light, T., Chen, H., & Ittelson, J. (2009). *Documenting learning with eportfolios: A guide for college instructors*. San Francisco: John Wiley & Sons.

Matthews-DeNatale, G., Blevins-Bohanan, S. J., Rothwell, C. G., & Wehlburg, C. M. (2017). Redesigning learning: Eportfolios in support of reflective growth within individuals and organizations. In *Field guide to eportfolio* (p. 14). Washington D.C.: Association of American Colleges and Universities.

McWhorter, R., Delello, J., Roberts, P., Raisor, C., & Fowler, D. (2013). *A cross-case analysis of the use of web-based eportfolios in higher education*. *Information Technology Education, 12, 253-286*. https://doi.org/10.28945/1900

Miller, R., & Morgaine, W. (2009). The benefits of e-portfolios for students and faculty in their own words. *Peer Review*, *11*(1), 8-12.

Oakley, G., Pegrum, M., & Johnston, S. (2014). Introducing e-portfolios to pre-service teachers as tools for reflection and growth: lessons learnt. *Asia-Pacific Journal of Teacher Education*, *42*(1), 36–50. https://doi.org/10.1080/1359866X.2013.854860

Peet, M., Lonn, S., Gurin, P., Boyer, K. P., Matney, M., Marra, T., et al. (2011). Fostering integrative knowledge through eportfolios. *International Journal of ePortfolio*, *1*(1), 11–31.

Translating faculty visions into eportfolio designs Poklop, L., & Peagler, C. in an address delivered to The Association for Authentic, Experiential and Evidence-Based Learning World Summit (2010). Boston, MA.

Reese, M., & Levy, R. (2009). Assessing the future: Eportfolio trends, uses, and options in higher education. *Educause Research Bulletin*, *4*, 2-9.

Ring, G., & Foti, S. (2006). Using eportfolios to facilitate professional development among pre-service teachers. In *Handbook of Research on ePortfolios, 340-357*. Hershey, PA: IGI Global.

San Jose, D. L. (2017). Evaluating, comparing, and best practice in electronic portfolio system use. *Journal of Educational Technology Systems*, *45*(4), 476–498.

Schneider, C. (201). Policy Priorities for Accreditation Put Quality College Learning at Risk*: Liberal Education*. 101(1).

Schneider, C. G. (2015). The LEAP Challenge: Transforming for students, essential for liberal education. *Liberal Education*, *101*, n1–2.

Shulman, L. (1998). *Teacher portfolios: A theoretical activity*. New York: Teachers College Press.

Weber, K. (2018). Employer perceptions of an engineering student's electronic portfolio. *International Journal of ePortfolio*, *8*(1), 57-71.

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design*. Alexandria, VA: Association for Supervision and Curriculum Development.

Wuetherick, B., & Dickinson, J. (2015). Why eportfolios? Student perceptions of eportfolio use in continuing education learning environments. *International Journal of ePortfolio*, *5*(1), 39-53.

Zubizarreta, J. (2008). *The learning portfolio: A powerful idea for significant learning* (44). Manhattan, KS: The IDEA Center.

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Author's Note

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