

## Introduction

Higher education today is more focused than ever on the need to demonstrate how and what students are learning. A recent survey conducted among the membership of the Association of American Colleges and Universities indicates that, currently, 78 percent of colleges and universities have a common set of intended learning outcomes for undergraduates, 72 percent are assessing learning outcomes across the curriculum, and 24 percent are planning for assessment (Peter D. Hart Research Associates 2009). The identification of learning outcomes is an important step in ensuring student success. It encourages the clear articulation of what students are expected to learn, and it leads to consideration of the types of evidence that can best demonstrate whether the expected learning has actually occurred. This step is particularly important in environments where students have diverse learning experiences both inside and outside the classroom, as this diversity can result in a lack of curricular coherence and a fragmented student experience. Clearly articulated outcomes enable the integration of learning as well as foster effectiveness and efficiency in higher education.

There are many different assessment approaches that can be used to gather evidence of student learning and to inform accreditation and accountability efforts. These include common assignments and other embedded assessments, capstone experiences, and commercial tests. Another approach to assessment is represented by the concept of the student portfolio, which draws on longstanding traditions in such disciplines as design, architecture, teacher education, and the arts. As an assessment tool, the student portfolio is unique insofar as it captures evidence of student learning over time—in multiple formats and contexts—documents practice, and includes a student’s own reflection on his or her learning. Portfolios also encourage students to represent and integrate their formal and informal learning experiences.

Since 2003, according to the annual technology survey conducted by the Campus Computing Project, higher education institutions from all sectors—including public and private research universities, four-year colleges, and community colleges—have reported steadily increasing investments in electronic portfolio tools and services (Green 2008; Schaffhauser 2009). Electronic portfolios, or “e-portfolios,” enable educators to connect information literacy, technological fluency, and domain knowledge (Moore et al. 2007; Reese and Levy 2009).

While currently much discussion of e-portfolios is focused on their role in assessment, our main focus here is on how e-portfolios can be used to support student success, intellectual growth, and individual development within higher education and beyond. Although we address institutional assessment needs, we are primarily interested in the role e-portfolios can play in facilitating student responsibility for and ownership of a full “learning career,” the real-life shape of an individual’s learning as it develops inside and outside the classroom.

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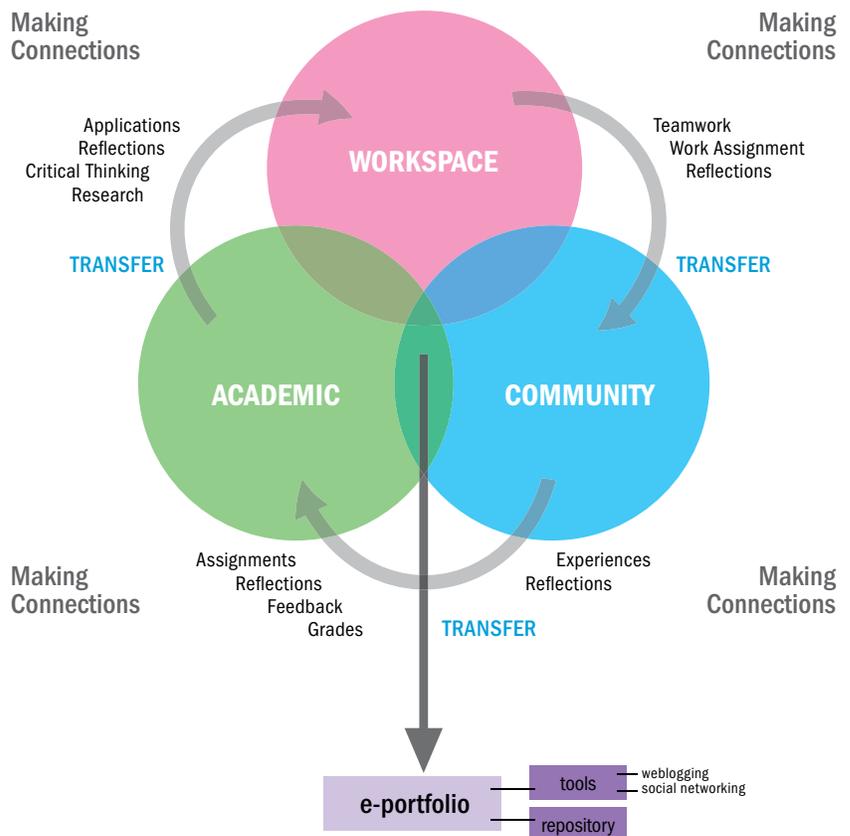
From this perspective, the main advantages of e-portfolios lie in the potential benefits they offer students. These benefits are not limited to the final product—the e-portfolio itself—but also derive from engagement in the process of portfolio creation, from “folio thinking.” “Folio thinking” emphasizes the need for structured opportunities to create portfolios as well as opportunities for reflection on the purposes of creating coherence and making meaning (Chen and Mazow 2002; Chen et al. 2005). E-portfolios offer a framework within which students can personalize their learning experiences (student ownership of the e-portfolio and its contents leads to greater responsibility for learning); develop multimedia capabilities to support student-created media; and create different representations of their learning experiences for different audiences. Moreover, unlike other assessment tools, e-portfolios enable students to represent their own

Figure 1. The learning landscape

## A Conceptual Framework for E-Portfolios

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This learning landscape model allows students to view “learning” beyond the rigid structure of degree outlines and requirements while incorporating and overlapping experiences from a variety of learning contexts through social networking with faculty, mentors, peers, and employers



Adapted from Tosh et al. 2006, 27.

learning as well as their interpretations of what Kathleen Yancey (1998) calls the multiple curricula within higher education: the *delivered* curriculum, which is defined by the faculty and described in the syllabus; the *experienced* curriculum, which is represented by what is actually practiced by the student in the classroom; and the *lived* curriculum, which is based on the individual student's cumulative learning to date. At least potentially, e-portfolios provide insight into the curriculum as students have both *lived* and *experienced* it.

E-portfolios—as both process and product—can promote *deep learning* and *knowledge transfer* by fostering the student's ability to make connections between his or her learning experiences in a variety of classroom, workplace, and community settings. This ability of the student to look across his or her learning as he or she progresses through college is particularly important for integrative learning. Indeed, as Huber and Hutchings (2004, 1) note, “one of the greatest challenges in higher education is to foster students' abilities to integrate their learning across contexts and over time. Learning that helps develop integrative capacities is important because it builds habits of mind that prepare students to make informed judgments in the conduct of personal, professional, and civic life. . . .” In other words, an integrative approach to student learning encourages students to take responsibility for documenting and demonstrating their own abilities over time and within a broader learning landscape that encompasses the various domains that comprise their intellectual lives (see fig. 1). This partnership with students in self-assessment can lead to improved efficiency of student services such as academic and career advising.

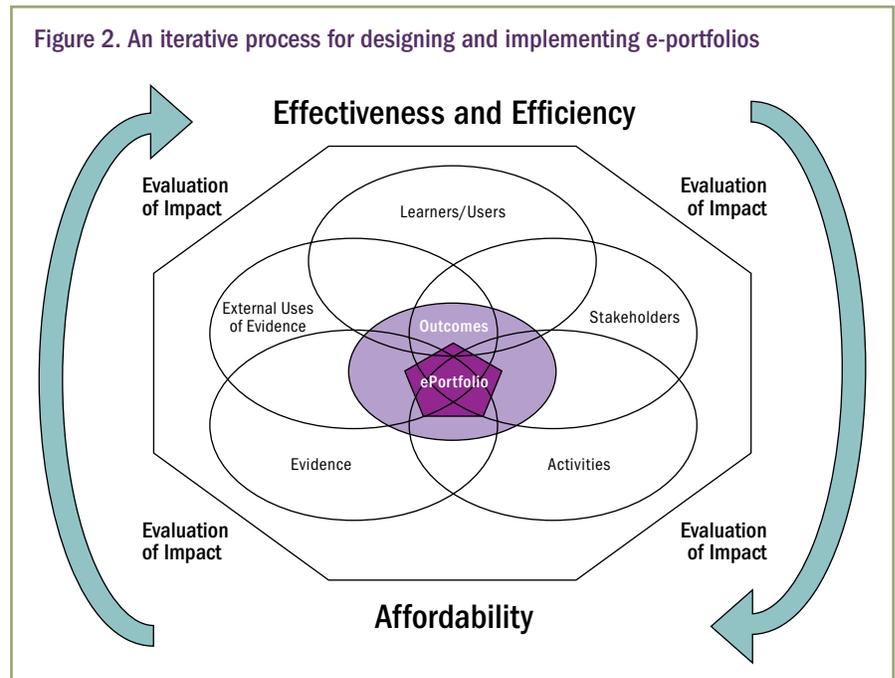
As “containers” of authentic evidence of student work, e-portfolios can serve as a catalyst for conversations among faculty and other stakeholders within departments and programs about common learning outcomes, coherence among courses, and professional development. For faculty, e-portfolios offer insight into the process by which students learn, rather than just an end product. Until now, the primary mode of documentation has been the academic transcript, the official record of a student's education. Severely limited in detail and richness, a transcript is an incomplete record and cannot represent what students actually learn. As a result, transcripts are of limited use to employers in evaluating prospective employees' potential to succeed (Peter D. Hart Research Associates 2008).

The implementation of e-portfolios to support student success requires careful planning, and a successful implementation plan addresses the following eight issues:

1. Defining learning outcomes
2. Understanding your learners
3. Identifying stakeholders
4. Designing learning activities
5. Including multiple forms of evidence
6. Using rubrics to evaluate e-portfolios
7. Anticipating external uses of evidence
8. Evaluating the impact of e-portfolios

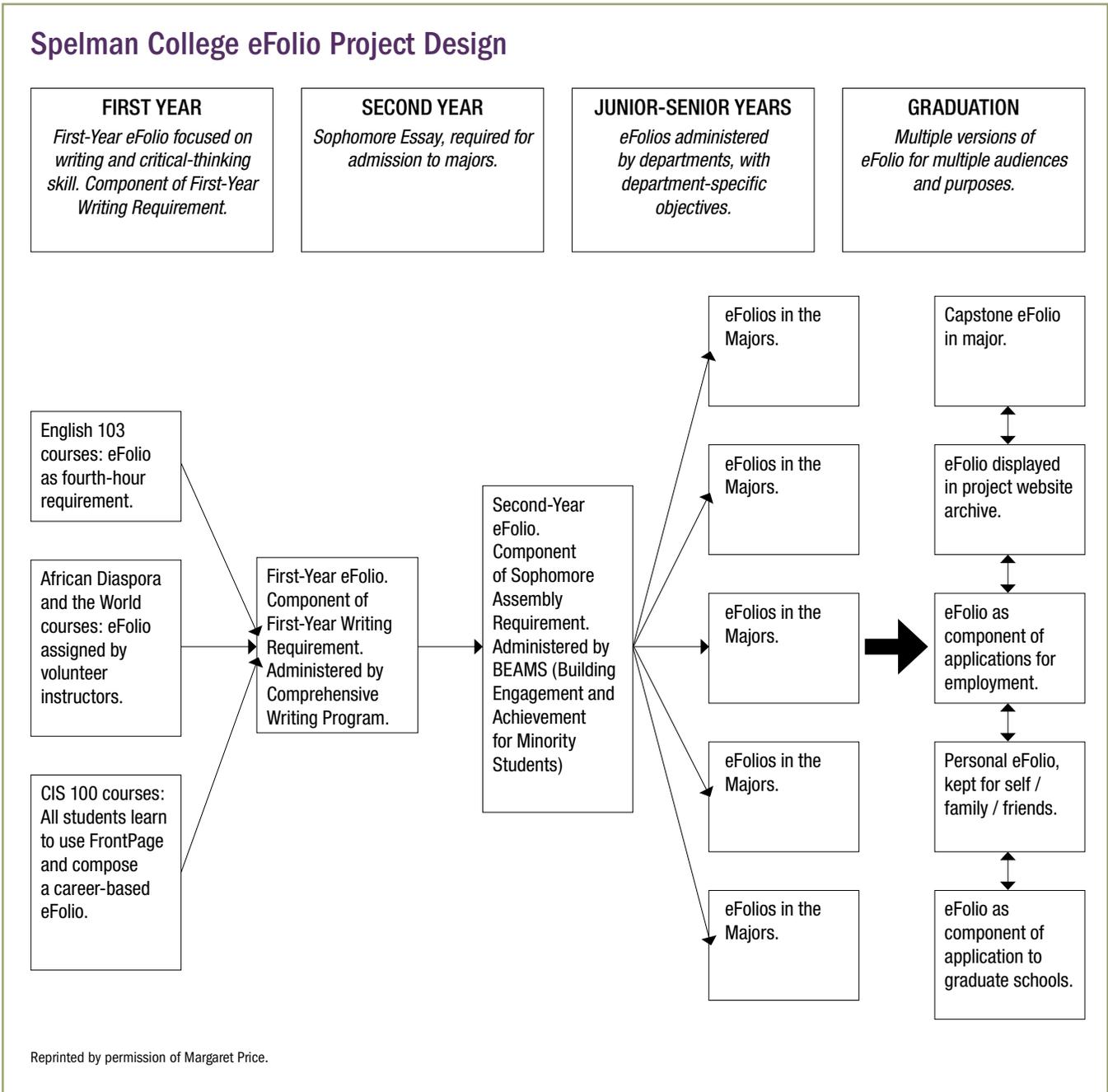
In what follows, each of these issues is explored individually with reference to a series of guiding questions as well as a single, course-level case study that illustrates the implementation process from start to finish. Additional examples of how campuses approach the use of e-portfolios are provided in sidebars. In order to highlight a full range of uses, these examples are drawn from the twelve “leadership campuses” that participated in the Valid Assessment of Learning in Undergraduate Education (VALUE) project of the Association of American Colleges and Universities (AAC&U), which developed national rubrics for essential areas of learning, as well as from a wider international context.

Figure 2 depicts a process for implementing e-portfolios that focuses on evaluating the impact on stakeholders while also assessing the overall achievement of the learning outcomes. The overlapping circles in the figure emphasize the iterative nature of the process: as the implementation project evolves, each of the eight issues identified above is introduced and revisited as appropriate at the individual, course, departmental or program, and institutional levels.



APPENDIX A:

# SpEl.Folio Project Design



APPENDIX C:

# Western Association of Schools and Colleges Rubric



## PORTFOLIOS

### Rubric for Assessing the Use of Portfolios for Assessing Program Learning Outcomes

Criterion	Initial	Emerging	Developed	Highly Developed
Clarification of Students' Task	Instructions to students for portfolio development provide insufficient detail for them to know what faculty expect. Instructions may not identify outcomes to be addressed in the portfolio.	Students receive some written instructions for their portfolios, but they still have problems determining what is required of them and/or why they are compiling a portfolio.	Students receive written instructions that describe faculty expectations in detail and include the purpose of the portfolio, types of evidence to include, role of the reflective essay (if required), and format of the finished product.	Students in the program understand the portfolio requirement and the rationale for it, and they view the portfolio as helping them develop self-assessment skills. Faculty may monitor the developing portfolio to provide formative feedback and/or advise individual students.
Valid Results	It is not clear that valid evidence for each relevant outcome is collected <u>and/or</u> individual reviewers use idiosyncratic criteria to assess student work.	Appropriate evidence is collected for each outcome, and faculty have discussed relevant criteria for assessing each outcome.	Appropriate evidence is collected for each outcome; faculty use explicit criteria, such as agreed-upon rubrics, to assess student attainment of each outcome. Rubrics are usually shared with students.	Assessment criteria, e.g., in the form of rubrics, have been pilot-tested and refined over time; they are shared with students, and student may have helped develop them. Feedback from external reviewers has led to refinements in the assessment process. The department also uses external benchmarking data.
Reliable Results	Those who review student work are not calibrated to apply assessment criteria in the same way, and there are no checks for inter-rater reliability.	Reviewers are calibrated to apply assessment criteria in the same way <u>or</u> faculty routinely check for inter-rater reliability.	Reviewers are calibrated to apply assessment criteria in the same way, and faculty routinely check for inter-rater reliability.	Reviewers are calibrated; faculty routinely find that assessment data have high inter-rater reliability.
Results Are Used	Results for each outcome are collected, but they are not discussed among the faculty.	Results for each outcome are collected and discussed by the faculty, but results have not been used to improve the program.	Results for each outcome are collected, discussed by faculty, and used to improve the program.	Faculty routinely discuss results, plan needed changes, secure necessary resources, and implement changes. They may collaborate with others, such as librarians or Student Affairs professionals, to improve student learning. Students may also participate in discussions and/or receive feedback, either individual or in the aggregate. Follow-up studies confirm that changes have improved learning.
If e-Portfolios Are Used	There is no technical support for students or faculty to learn the software or to deal with problems.	There is informal or minimal formal support for students and faculty.	Formal technical support is readily available and proactively assists in learning the software and solving problems.	Support is readily available, proactive, and effective. Tech support personnel may also participate in refining the overall portfolio process.

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# Spectrum of Assessment

## Where are you on the spectrum?

**Institution-Based Learning** **Community-Based Learning**

### CONTENT

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Intellectual property is protected. Intellectual property is shared.

### LEARNING ACTIVITIES

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The unit of analysis is the course, bounded in time, and brick or virtual (LMS) space. The unit of analysis is the problem; problems are not bound in time or content.

Problems for students to study are (artificially) constrained by the course and disciplinary boundaries. Communities identify authentic problems that are interdisciplinary and reach beyond the definition of the course.

### EXPERTISE

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Students learn from faculty within a specific institution. Learner is the central node; learners include all members of the discourse community (or Community of Practice).

Faculty are the interface between the students and the community of practice. Students are anticipated to join communities of practice; faculty may introduce students to community.

Faculty retain the social and intellectual capital within both the classroom and the community of practice. Learning is social and therefore learning builds social capital in communities of practice.

### ASSESSMENT CRITERIA

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Faculty members create and ratify the assessment criteria. Expert consensus from the community of practice validates the assessment instrument and criteria.

Feedback to the students is communicated by, or along with, a letter grade. Students merit direct and unfiltered feedback from the community using criteria that the community has articulated.

### STUDENT WORK

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Students rarely share their work with, or receive feedback from, public audiences. ePortfolios built over multiple years are learner owned and used to communicate with, and get feedback from, wider communities.

### CREDENTIALING

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The faculty member is responsible for assessing student work. The community of practice holds the responsibility for assessment, which is in the form of constructive feedback rather than an authority's judgment.

Institution is the established credentialing authority. The community of practice is the implicit credentialing authority; the university is the facilitator of that credentialing and of community building.

*Assessment is a community effort. Its principle goal is learning, not classifying or sorting.*



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## APPENDIX E:

# Where to Start Learning about E-portfolios

- **AAC&U's Valid Assessment of Learning in Undergraduate Education (VALUE) Project**  
The VALUE project is designed to define, document, assess, and strengthen student achievement of essential learning outcomes important for all of today's undergraduate students through the development of rubrics.  
Web site: [www.aacu.org/value](http://www.aacu.org/value)
- **EPAC E-portfolio Community of Practice**  
This international community is free to join and has been a leading resource on electronic portfolios since 2002.  
Blog: [www.epaccop.blogspot.com](http://www.epaccop.blogspot.com)  
Wiki: [www.epac.pbworks.com](http://www.epac.pbworks.com)  
Twitter: [twitter.com/epaccop](https://twitter.com/epaccop)
- **Helen Barrett's E-portfolio Resources**  
Dr. Barrett has been a leader in the e-portfolio field since 1991, and her Web site is an excellent starting point for newcomers to the field.  
Web site: [www.electronicportfolios.org](http://www.electronicportfolios.org)
- **The TLT Group's Flashlight Evaluation Handbook on Electronic Portfolios**  
The TLT Group addresses the planning and formative evaluation of e-portfolio initiatives and how instructors can use student feedback to figure out how to get even more value from the use of e-portfolios in their courses.  
Web site: [www.tltgroup.org/flashlight/Handbook/ePortfolio/ePort\\_Strat.htm](http://www.tltgroup.org/flashlight/Handbook/ePortfolio/ePort_Strat.htm)
- **Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL)**  
AAEEBL, established in 2009, is a global academic association of educational institutions working toward new designs in learning and assessment, increasing connections among the portfolio community, and building the new learning enterprise.  
Web site: [www.aaeebl.org](http://www.aaeebl.org)
- **Australian ePortfolio Project (AeP)**  
The Australian ePortfolio Project began in 2008 with a thorough examination of current levels of e-portfolio practice in Australian higher education. Now in its second phase, the AeP aims to enhance the use of e-portfolios in Australian universities to benefit individual students as well as the quality of learning and the value of higher education outcomes.  
Web site: [www.eportfolioppractice.qut.edu.au](http://www.eportfolioppractice.qut.edu.au)
- **European Institute for E-Learning (EifEL)**  
EifEL, a European professional association, is leading a "Europortfolio" consortium that seeks to establish a place for e-portfolio leadership in Europe.  
Web site: [www.eife-l.org](http://www.eife-l.org)
- **The Joint Information Systems Committee (JISC) E-portfolios Overview**  
JISC promotes the innovative use of digital technologies in higher education in the United Kingdom and has supported various projects and created extensive e-portfolio resources.  
Web site: [www.jisc.ac.uk/whatwedo/programmes/elearning/eportfolios.aspx](http://www.jisc.ac.uk/whatwedo/programmes/elearning/eportfolios.aspx)