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.
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...
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.