Leveraging the Portfolio for Integrative Learning

A Faculty Guide to Classroom Practices for Transforming Student Learning

Candyce Reynolds and Judith Patton

Foreword by Terry Rhodes
Chapter 1

ePortfolios as a Tool for Integrative Learning

Judy's story: I started using portfolios in Freshman Inquiry, a yearlong first-year course in 1995. This interdisciplinary themed course, Embracing Einstein's Universe: Language, Culture, and Relativity, was part of the general education program. While I thought the portfolio was a good idea, I became a real convert at the end of the first year. The students over and over again talked about how important the end-of-the-year portfolio was to their understanding of that whole year's experience. In the final reflection section of the Freshman Inquiry ePortfolio, one student put it like this:

To say this course has been eye-opening would be a gross understatement. I can honestly say that I have come a long way in my thinking about the way I live my life, even how I form my own identity. I have realized that I personally have a responsibility to myself, my community and to the planet to ensure the actions I take are responsible and ethical. Our society faces big problems to which there is no single solution. It is my hope that as I come to understand myself and my world more throughout the course of my academic career, I may be a part of the solution and not the problem. Either we will achieve the miraculous and solve all our problems, or we will ultimately destroy ourselves. I remain an optimist.

Another wrote,

The readings from class about how we develop our personal identities in relation to what we learn about our world and ourselves through the people around us gave me a new and more forgiving lens through which to view my behavior and experiences, and it helped me understand where my own attitudes came from. It also showed me that while true, I am very much a product of my environment, I have a hand in creating the environment and therefore also in creating the identity and experiences of others—that is a huge responsibility.

I could see that collecting all the students' work in the ePortfolios, asking students to make connections between the various activities and assignments in class with their lives, and ending the course with a completed ePortfolio made their learning real and significant. We had been working on the portfolio all
Key Concepts

year, but the process of putting together that final portfolio brought all the experiences—the readings, discussions, assignments, community-based learning work—together. Those final reflections about their learning over the year were stunning. One student said, "Creating the ePortfolio was the single most important assignment I have ever done in all of my education. I can see and talk about what I have learned and see how all the experiences come together to make a greater whole." The students talked about the ways the various experiences connected, not only one assignment to another but to their lives and to a growing understanding of who they were as learners and as people in the world. They understood that they needed to know more and that they had big decisions to make in their lives they were not yet able to make. These types of experiences were the beginning of our journey to ePortfolios.

Just open your e-mail, or jump into any chat about learning and technology or careers and you will see conversations about ePortfolios, which are becoming a promising practice for helping students and others learn.

According to Lorenzo and Ittleson (2005),

> E-Portfolios are a valuable learning and assessment tool. An e-portfolio is a digitized collection of artifacts, including demonstrations, resources, and accomplishments that represent an individual, group, or institution. This collection can be comprised of text-based, graphic, or multimedia elements archived on a CD-Rom or DVD. . . . E-portfolios encourage reflection. (p. 2)

The following are what Garrison (Garrison & Ring, 2013) identifies as components of what she calls a “true ePortfolio”:

- It is digital (meaning it can be found online).
- It contains evidence of the author’s experiences and accomplishments.
- It contains reflection.

The uses for an ePortfolio are varied, for example, advising, career planning, undergraduate learning and assessment, faculty promotion and tenure, and institutional. An ePortfolio provides a digital representation of one's work. The focus of this book is on helping you understand and facilitate the creation of student integrative learning ePortfolios that are designed to advance student learning and, at the same time, can be used for student and program assessment. In this chapter, we explore a bit of the history of ePortfolios, including their roots in paper-based portfolios; define what ePortfolios are and how they have been used in the academy; introduce the concept of integrative learning ePortfolios; and then present a variety of examples to help you visualize using ePortfolios in your own classroom. Finally, we explore ways learning theory helps us understand the success of ePortfolios and how they can inform the practices discussed throughout the book.
FROM HARD-COPY PORTFOLIOS TO ePORTFOLIOS

Student portfolios are nothing new and in fact have been used in a variety of disciplines to help students make meaning and to assess their work. These hard-copy portfolios typically contain a collection of artifacts that represent a student's work. Students are asked to collect their best work and to sometimes reflect on this work. The fields of writing, visual arts, architecture, and graphic design have long used the portfolio, assembled in file folders or notebooks, to function as a sample and a showcase of a student's work. Students of writing often include required essays about the work they created and the progress they see or do not see in their writing. Student portfolios in these and other fields have proven to be an excellent way to help students demonstrate their proficiency to their professors and to outside entities and can even support their entry into the job market. A sample of one's work as a graphic designer, for example, is a much more concrete representation of ability than a line on a résumé.

In the mid-1990s several universities began a change process that furthered portfolio development on campuses beyond the writing and arts fields. Seeking to address criticisms from external constituents, as well as from inside academia, institutional leaders realized they needed to demonstrate the real value of the education they were offering to their students. Portfolios became a central way to demonstrate student learning and foster the expansion of a learner-centered environment. The movement included more active teaching strategies to increase and deepen learning and more assessment of learning to address the accountability challenge. At the time, portfolios seemed an effective way to satisfy many goals of the new programs.

In response to increasing accountability pressures and the move to a more student-centered program, students began to demonstrate their learning through hard-copy portfolios before making the transition to ePortfolios. Such was the case at PSU's University Studies program and also at Alverno College. In programs that went from hard copy to digital, those who experienced the transition learned important lessons. As students began using digital media, the experience of creating and using the portfolio changed.

In our program's move to ePortfolios, we found that ePortfolios facilitated the connection between our students' course work and the world and broke down students' misconception that a final exam means the content and experience of a course is done, and that one course is just that, a course, completed.

Through the process of creating an ePortfolio, we found that students developed a variety of learning habits and skills we did not see when they were creating hard-copy portfolios. Labissiere and Reynolds (2004) outline the added benefits:

An ePortfolio requires the development of several skill sets, each of which enhances the student's ability to engage more deeply with what has already been learned. For example, hyperlinking, which is the primary activity of building a website, forces students to make new connections with what has previously been learned. Such hyperlinking practices, we argue, encourage metacognitive skills development. (pp. 2–3)
### Key Concepts

#### Table 1.1
**Differences in Hard-Copy Versus ePortfolios**

<table>
<thead>
<tr>
<th>Hard-Copy Portfolio</th>
<th>ePortfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work done by an individual</td>
<td>Work done by individual but can be a</td>
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<tr>
<td></td>
<td>collaborative effort</td>
</tr>
<tr>
<td>Limited audience—generally</td>
<td>Students control who can see but can be</td>
</tr>
<tr>
<td>instructor/artificial</td>
<td>used in multiple ways for multiple audiences</td>
</tr>
<tr>
<td>Difficult to keep and store over time</td>
<td>Online storage</td>
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<tr>
<td></td>
<td>Hyperlinking—critical thinking exercise in</td>
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<tr>
<td></td>
<td>and of itself</td>
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<tr>
<td>Viewed usually from beginning to end, one</td>
<td>Reader creates own journey using links and</td>
</tr>
<tr>
<td>page at a time</td>
<td>navigation system</td>
</tr>
<tr>
<td></td>
<td>Emphasis on what students can do</td>
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<tr>
<td>May include student reflection on work,</td>
<td>Creates opportunity for student reflection and</td>
</tr>
<tr>
<td>rarely over more than one course</td>
<td>integrating learning</td>
</tr>
<tr>
<td>Primarily written work</td>
<td>Students can demonstrate learning in</td>
</tr>
<tr>
<td></td>
<td>multiple modes—visual, oral, written, video</td>
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In addition, Labissiere and Reynolds (2004) cite several advantages of the use of an ePortfolio over a hard-copy portfolio, especially by contributing to creating opportunity for more deep learning. Their findings are shown in Table 1.1.

ePortfolios have several advantages over hard-copy portfolios. Not only do they save faculty members from carrying large, bulky notebooks across campus, they also have the potential to deepen student learning and transform the educational experience of students, faculty, and staff. If we help students in the process of developing their ePortfolios, they will have a concrete and visible way to capture their work over time, to scaffold their learning, and to connect their student experience from one assignment to another and one course to another, across programs and years.

### THE EPORTFOLIO

As with any other online site, an ePortfolio allows readers to navigate, clicking on the areas they want to view. As readers move around the site, they might find definitions of the course’s learning outcomes, links to work chosen to demonstrate progress or mastery, and reflective essays about how and why the work relates to the outcome.

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Building an cess; collect, select which means the he habit of savin progress or best ing or sharing th.

Students can ePortfolio is for:

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- store the
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- reflect on that outc
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It is likely, e throughout the showcase ePortfe ever, these portl to build on for more ePortfoli
You might also find ePortfolios with students' self-identified learning goals, sites that seem to be linked to particular courses, and others that might be directed at demonstrating one's learning to gain credit for prior learning. There is really no set architecture for an ePortfolio. The structure depends on the purpose and audience.

If you Google “student ePortfolios,” you will find a variety of examples from different higher education institutions. In some, the work and reflection may appear inessential or lacking depth. These ePortfolios generally come from institutions where students create their own ePortfolios with little or no guidance from faculty or from the institution itself. Some institutions have ePortfolio labs staffed by student mentors that exist outside the curriculum and can be used for the students' own purposes or for the institution and in some cases for assessment.

Building an ePortfolio typically means that students employ the following process: collect, select, reflect, share or publish, get feedback. Students keep their work, which means that faculty, advisers, and staff should encourage students to develop the habit of saving their materials. Students can then select pieces that represent their progress or best work and then reflect on the samples they have chosen. In publishing or sharing their ePortfolios, students engage in a conversation about their work.

Students can follow this process in a number of ways. For example, if the ePortfolio is for a single course, students could:

- save all their work from the beginning of the class,
- store the work in digital spaces,
- select specific work samples to demonstrate learning in specific learning outcomes,
- reflect on why they chose that work and how it demonstrates their learning in that outcome, and
- relate their learning across and beyond their academic experiences.

Of course, students can handle the ePortfolio process in several ways. Many students build their own portfolios with little or no institutional incentive or support. Perhaps they are interested in forging a digital identity or are interested in creating a space to share their work with family, friends, and colleagues. Most often, students first become involved in the ePortfolio process through some kind of institutional impetus, in other words as an assignment in a class, as a request from an academic adviser, or as a graduation requirement. Whatever the reason for starting an ePortfolio, students can benefit from the process of collect, select, reflect, and publish.

It is likely, and it is hoped, that students will be asked to build several ePortfolios throughout their years at an institution. Each of these portfolios can be seen as a showcase ePortfolio, designed for a particular purpose in a course or program. However, these portfolios can also be working or process ePortfolios that students continue to build on for different purposes and audiences. Once students have created one or more ePortfolios (especially if they are asked to throughout courses and programs
and even their entire undergraduate or graduate years), they can build any number of showcase ePortfolios for any number of audiences.

In summary, ePortfolios are digital representations of students’ work and accomplishments along with their reflections on their learning. The ePortfolio has the potential to enhance student learning through the process of collect, select, reflect, and share. In turn, the ePortfolio can provide authentic artifacts that aid in assessing student learning for student, program, and institutional purposes. ePortfolios can be self-initiated or directed and supported by institutional entities, such as faculty, staff, and university administrators. Finally, ePortfolios should not be seen as merely a snapshot of a student’s work in time. ePortfolios have the potential to provide students with the opportunity to continue to document and reflect on their work throughout their educational experience and beyond. Students can create showcase ePortfolios for specific and multiple audiences and receive feedback.

**INTEGRATIVE LEARNING EPORTFOLIOS**

The beauty and the downfall of ePortfolios are that they are basically quite simple. One can actually create an ePortfolio in a manner of minutes, whether it is self-initiated or assigned. However, this brief interaction with one’s work and web-based software will not likely lead to a deep or enlightening learning experience. As we began to create our own ePortfolio process at PSU and interacted with others using ePortfolios, we began to understand the diversity and differences in the depth of ePortfolios. Some institutions primarily focus on providing a digital repository of student work with little or no original content being added to the ePortfolio. At the other end of the continuum, other institutions require students to use the ePortfolio as a tool for helping students form their identities and for making connections between and beyond their course work. ePortfolios, of course, exist for different purposes and have different goals; their visual look and ways faculty and staff at institutions of higher education help students build them will be completely different. The types of ePortfolios are shown in Table 1.2.

As you can see, each point on the continuum makes sense if we consider the purpose and goals of a particular ePortfolio. For example, if your only goal is to provide a means for assessment of student work, an ePortfolio focused on content makes sense. If you are interested in helping students think about how and what they learned, a focus on content and the process of learning makes sense. Our focus, however, has been on creating integrative learning ePortfolios. As we discuss in Chapter 2, integrative learning has increasingly become an element in higher education. We explore integrative learning more in Chapter 2, but as you move to the right of Table 1.2, you can gain a sense of how much more complex the process becomes. Again, this book is designed to help you think through the process for creating integrative learning ePortfolios.

<table>
<thead>
<tr>
<th>Table 1.2</th>
<th>Types of ePortfolios</th>
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<tbody>
<tr>
<td><strong>Content Focused</strong></td>
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<td>Artifacts/ demonstrations of learning</td>
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We thought it would be like. In this section, we present each of which is clearly separate before being the introduction to the ePortfolio in our course o of and audiences for these ePortfolios are clearly not e. Links are provid

The University Studies F Figure 1.1, but the genera
Table 1.2
Types of ePortfolios

<table>
<thead>
<tr>
<th>Content Focused</th>
<th>Content and Process of Learning Focused</th>
<th>Content, Process, and Connections in Learning Focused</th>
<th>Integrative Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artifacts/ demonstrations of learning</td>
<td>Artifacts/ demonstrations of learning</td>
<td>Artifacts/ demonstrations of learning</td>
<td>Artifacts/ demonstrations of learning</td>
</tr>
<tr>
<td>Reflections on the artifacts</td>
<td>Reflections on the artifacts</td>
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<tr>
<td>Connections made between content in the ePortfolio</td>
<td>Connections made between content in the ePortfolio</td>
<td>Connections made between content in the ePortfolio</td>
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</table>

ePortfolios range from a simple electronic file cabinet to a rich sample of student work accompanied by student and faculty reflections on learning. In the creation of integrative learning ePortfolios, students can make sense of their work, their learning progress, and engage in self-evaluation, goal setting, and planning for the future. A substantive ePortfolio deepens learning and transforms the educational experience of students, faculty, and staff.

EXAMPLES OF EPORTFOLIOS

We thought it would be helpful to give you a few examples of what ePortfolios can look like. In this section, we present some examples of ePortfolios from a variety of institutions, each of which is clearly related to an institution’s unique characteristics. None of these should be seen as the right way to think about building the architecture for an ePortfolio in your course or program but as inspiration for what is possible. The purposes of and audiences for these ePortfolios are different and we describe this briefly later. These examples are clearly not exhaustive of the wide variety of ePortfolios that exist in the academy. Links are provided if you want to learn more about these ePortfolio projects.

Portland State University

The University Studies Freshman Inquiry (Finq) template used at PSU is shown in Figure 1.1, but the general format is common. The main focus of the Finq ePortfolios
is enhanced student learning, but the institution also uses those ePortfolios to assess the general education learning goals at the end of each year.

Introductory material is contained on the first page of an ePortfolio. This information can be in the form of a short essay we sometimes call a learner autobiography. This section gives the student a place to construct a personal portrait as a learner or as a professional. This activity at the entry level provides students who have not typically identified as college students, such as first-generation college students, a way to claim that identity and create a place for themselves at the university. The ePortfolio is organized by the general education goals for PSU, and these are listed in the navigation area on the left side of the screen. Readers can click on each goal to navigate to another page that includes the student’s definition of the goal and a short reflection on why a specific work was chosen to represent that goal. The work sample, which demonstrates the student’s level of competency, is linked to the goal page. The PSU ePortfolios also include reflections on learning that students write at the end of each term and a final reflection overview at the end of the year. The Freshman Inquiry ePortfolio is created in the first-year courses required by the university (e.g., see Figure 1.2). They are yearlong courses that include peer mentor sessions in small computer labs, thus allowing students an intentional experience with technology and substantial use of it in the curriculum. This template follows a common ePortfolio assignment that was created and adopted by the faculty who teach the Freshman Inquiry courses. PSU typically uses Google Sites, a free web application, to create ePortfolios, but students are allowed to use other software to create their ePortfolios.

To view several student ePortfolios from PSU’s University Studies program, go to https://sites.google.com/a/pdx.edu/eportresources/Home/ePortfolio-Showcase.
those ePortfolios to assess. This information is collected through biographical data, which is often used to evaluate student progress. In this example, the ePortfolio is used to showcase the work of Alex Steele, who is a Freshman at Portland State University. Steele's ePortfolio is titled "FRING: Sustainability" and includes a variety of student work, such as essays, projects, and presentations. The portfolio provides evidence of student learning and is an example of how ePortfolios can be used to assess student progress.

Alex Steele's FRING: Sustainability

**Home**

My name is Alex Steele, and I am a Freshman at Portland State University. I am majoring in political science and minoring in economics. My hobbies include playing music, reading, and writing. For my Freshman seminar, I chose the theme of sustainability, which I found to be an interesting topic.

This portfolio displays all the assignments I have completed and will continue to complete throughout the year. This portfolio is designed to showcase the work I have completed and to provide evidence of my progress.

**Communication**

The following assignment is a research paper on sustainability. I have included all the drafts and revisions I have made throughout the process.

**Social Responsibility and Ethics**

I have included all the assignments related to social responsibility and ethics. This includes a research paper on corporate social responsibility and a case study on ethical dilemmas.

**Innovative Idea for Critical Thinking:**

I have included a presentation on critical thinking and how it can be applied to sustainability. I have also included a research paper on critical thinking and its role in decision-making.

**Final Reflection:**

I have included a reflection on my experience throughout the year, which includes my thoughts on sustainability and my future plans.

**Figure 1.2**

**Freshman Inquiry ePortfolio Example**

**Figure 1.3**

**Master's Program Culminating ePortfolio**

**nm/ Heather McCamby's Learning Portfolio**

Heather McCamby


hmacamby@gmail.com / twitter: @hmacamby

Whether by accident, by design, or by my insistence, thank you for visiting my ePortfolio. This site was constructed in partial fulfillment of my master's comprehensive exam. This portfolio includes narrative and artifacts related to the learning outcomes of the Postsecondary, Adult, and Continuing Education program at Portland State University. You will also learn more about my comprehensive project and a little about me as a person. Enjoy!

Several departments at PSU use ePortfolios. Candyce Reynolds's program in postsecondary adult and continuing education uses ePortfolios as the culminating project. The ePortfolio is centered on the learning outcomes of the program and provides evidence of student learning. It also asks students to develop and display their guiding principles of practice. Figure 1.3 is an example of a student's ePortfolio. See
Figure 1.4  
Leadership ePortfolio Example

Sarah's Portfolio
Welcome to my ePortfolio!  
It is my hope that the pages of this portfolio give you a glimpse into who I am and who I hope to be in the future.

- Sarah Kurten  
- skurten@pdx.edu  
- 503.725.4068  
- Leadership Fellows, Teamwork Cohort  
- Advisor & Training Coordinator, Student Activities and Leadership Programs (SALP)  
- MS, Education Leadership & Policy (Spring 2013), BA, Cultural Anthropology

Philosophy Statement

"When you walk in purpose, you collide with destiny." - Bertice Berry

From the moment those words grazed my ears, I knew that my life would never be the same. They came to me on a ePortfolio on a day I was struggling with confusion and lack of direction. In the venue that heard...

https://sites.google.com/a/pdx.edu/pace-comp-sc-portfolio for more information about the development process for ePortfolios in this program.

Also at PSU, student leaders participating in a leadership development program create an ePortfolio to help them articulate and demonstrate their understanding of the program's learning outcomes. Student leaders participate in a seminar and are expected to create ePortfolios. In the yearlong seminars, students meet several times a term, focusing on developing their philosophy page in the fall term. In the winter term, the focus is on developing pages on the learning outcomes of civility and diversity. In the spring term, students focus on a cohort-chosen learning outcome. In the example in Figure 1.4, the student focused on teamwork and also included her résumé and work samples.

LaGuardia Community College

LaGuardia ePortfolios include the following pages: Welcome, About Me, Classes and Projects, Educational Goals, Résumé, Links, and Contact Information. LaGuardia defines ePortfolios as

- An opportunity to effectively represent yourself and your education  
- A place to collect and save coursework  
- A chance to showcase accomplishments and school work to family and friends  
- A tool for creating digital resumes to send to employers  
- A web portal for accessing your work, track your academic growth and plan your career  
- A portal that helps connect educational goals with personal experience

LaGuardia uses Digital Learning Solutions to assist with the ePortfolios. ePortfolio is a record of your school, college, and other online services purchased from www.digicad.org.

At Clemson University, the ePortfolio is an electronic resource for students to document their four year school. It is a chance to reflect on where you are and where you want to go. It is a record of your school and other online services that can be purchased from www.digicad.org.

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Figure 1.5  
Clemson University Gra...
ePortfolios as a Tool for Integrative Learning

- An electronic resource you can use to apply for transfer and financial aid at a four-year school
- A chance to reflect on your education, to make connections between where you are and where you want to be, and,
- A record of your skills, achievements and learning. (www.eportfolio.lagcc.cuny.edu/students/default.htm)

LaGuardia uses Digication, a web-based ePortfolio application available on Google campuses (i.e., campuses that have contracted with Google to provide e-mail and other online services via the Google Apps for Education suite) or for direct purchase from www.digication.com.

Clemson University

At Clemson University, undergraduate students are required to create an ePortfolio for graduation, such as the one shown in Figure 1.5.

All undergraduates at Clemson University are expected to create and submit a digital portfolio as evidence of academic and experiential mastery of Clemson's core competencies. Students collect work from their classes and elsewhere, connecting (tagging) it to the competencies (Mathematical Literacy; Natural Science; Science and Technology in Society; Social Sciences; Cross-Cultural Awareness; Arts and Humanities; and the distributed competencies Ethical Judgment and Critical Thinking) throughout their undergraduate experience. The ePortfolio program was implemented in 2006 by Clemson University. The ePortfolio is a graduation requirement for ALL students; there are no exceptions. (Clemson University, n.d.a)

Figure 1.5
Clemson University Graduation ePortfolio Example
Key Concepts

Clemson's definition of the ePortfolio includes information about what students should include:

An ePortfolio is a collection of a student's work in electronic format. You should include a welcome/introduction to your ePortfolio. This is the first virtual impression that people will have of you, so make it a great one! You may even want to include a video welcome where you explain the organization of your ePortfolio and direct the viewer through the site. Your ePortfolio may contain all or some of the following:

1. Supporting files of various formats (text, pictures, video, etc.)
2. Evaluations, analysis and recommendations
3. Evidence of General Education competencies
4. Writing samples (which might include several drafts to show development and improvement)
5. Projects prepared for class or extracurricular activities
6. Evidence of creativity and performance
7. Evidence of extracurricular activities, including examples of leadership
   (Clemson University, n.d.b)

University of Michigan

At the University of Michigan, ePortfolios are used across the campus, from the business school to the chemistry department, from student affairs to the medical school. Called MPortfolios, they are defined as follows:

MPortfolio is:

- a process that enables students to reflect on and identify connections between their experiences inside and outside of the classroom;
- a pedagogy that foregrounds substantial meaning-making and fosters intentional learning;
- a product that illustrates a learner's development, knowledge, skills, and strengths; and
- a team of people from around the University of Michigan campuses who are dedicated to integrative learning, information literacy, and student development.

Students, staff, and faculty from many schools, colleges, and programs throughout the University of Michigan campuses are involved with MPortfolio, making up a strong community of learners and facilitators. Anyone at the University of Michigan can become involved with MPortfolio.

The MPortfolio has many forms, one of which is the integrative knowledge ePortfolio. Developed by Melissa Peet and her colleagues in the School of Social Work, this type of ePortfolio enhances student learning; reveals the many ways in which Michigan students, faculty, and staff contribute to the public good; and encourages students inside and out.

The Integrative components:

- Valuing Learning from all areas of their experiences, and demonstrating their learning.
- Documenting Learning to recognize "a-ha" moments and show knowledge and experience and making.
- Supporting Assessment of students by recognizing how those processes contribute to the learning process, July 18, 21

The showcase page as follows:

The portfolios present a range of courses. Knowledge Portfolios leadership and lifelong learning:

- Who am I becoming?
- What am I learning?
- What knowledge do I have?
- What can I do?
- How will I make a difference?

The portfolio process collaboratively. Students:

- Connect knowledge courses
- Reflect on learning
- Develop the knowledge and leadership
- Connect learning in the future (M. Peet, ePortfolio).
and encourages students to create powerful connections between their experiences inside and outside of the classroom.

The Integrative Knowledge ePortfolio incorporates the following unique components:

- Valuing Learning From All Aspects of Life: Help students identify learning from all areas of their life, bridge their college experiences to other life experiences, and demonstrate how their underlying values and beliefs connect to their learning.
- Documenting Learning Beyond Graduation: Develop students’ abilities to recognize “a-ha” moments in their lives and encourage them to document their knowledge, skills, and contributions beyond graduation.
- Understanding What We Know, Value, and Believe: Retrieving, reflecting, integrating, and documenting knowledge that has been gained through experience and connecting that knowledge to values, beliefs, and decision making.
- Supporting Assessment and Accountability: Students reflect on their learning, recognize how that learning relates to competencies, and demonstrate how those competencies inform their practice. (M. Peet, personal communication, July 18, 2011)

The showcase page and what students include in their ePortfolios are described as follows:

The portfolios presented here reflect the experiences of UM undergraduates from a range of educational levels, backgrounds and disciplines. The Integrative Knowledge Portfolio Process encourages students to ask questions essential for leadership and lifelong learning:

- Who am I becoming?
- What am I learning?
- What knowledge, skills and strengths am I developing?
- What can I do?
- How will I make a difference?

The portfolio process helps students approach problems strategically and collaboratively. Students learn to:

- Connect knowledge gained from real-life experiences and from academic courses
- Reflect on learning that has occurred both within and beyond the classroom
- Develop the knowledge, skills and awareness needed for professional competence and leadership
- Connect learning with personal values, a sense of purpose and goals for the future (M. Peet, personal communication, July 18, 2011)
Key Concepts

Virginia Tech

Virginia Tech (2014) supports the development of ePortfolios across its departments and programs through its ePortfolio Initiatives:

Electronic Portfolio Initiatives at Virginia Tech facilitates the use of electronic portfolios throughout the university. The ePortfolio project is an effort at improving education, learning assessment, and student engagement by using collaborative online tools that take advantage of the latest technology. ePortfolios offer ways to showcase individual skills, student learning, and professional development. The ePortfolio project is being coordinated by a team in Learning Technologies. (para. 1)

For more information about the initiative, see https://atel.tos.vt.edu. The school provides a gallery of example ePortfolios that are used for learning, assessment, professional development, and cocurricular engagement.

Georgia Institute of Technology

One project that originated at Virginia Tech is a National Science Foundation grant aimed at helping engineering doctoral students at multiple institutions participate in an ePortfolio process that helps them move into the professoriate (the Portfolio to Professoriate program), with an emphasis on fostering reflective practice.

Graduate engineering students at four universities around the country will create and maintain a portfolio focused on academic areas skills and experience such as teaching and research. Whether they are going into a teaching career or not, keeping a portfolio will provide numerous benefits to all participants, including a few valuable advantages when entering the job market. (Portfolio to Professoriate, n.d.)

Figure 1.6 is an example of one such ePortfolio by a Georgia Institute of Technology student. Note that the ePortfolio is organized using the same categories that those in the professoriate are judged on: teaching, research, and service.

Figure 1.6
Portfolio to Professoriate ePortfolio Example

Welcome to Mary Katherine’s E-Portfolio!

I am currently a Ph.D. student in Environmental Engineering at the Georgia Institute of Technology. Although my technical training is in Chemical and Environmental Engineering, with emphasis on environmental biochemistry, I have become passionate about engineering education research. After graduating, I hope to enter academia as a faculty member where I can blend my interests in technical research, educational research, and teaching excellence. I have included individual and collective efforts in this portfolio to display my dedication to teaching, research, service, and lifelong learning. Please note that all textual content run with any queries.

ePortfolios are being used professional, often for the the job market.

Wende Garrison, an e Association for Authentic provide a support group but did not maintain their shops and online forums in Figure 1.7 is a great ex sional but also personal di ePortfolios have the p and provide employers w either used their student employment tell us that they feel better prepared going through the ePortfo example of this. He conti from the university, high

Figure 1.7
Lifelong Learning ePortfolio

Mary Katherine Watson

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I am currently a Ph.D. student in Environmental Engineering at the Georgia Institute of Technology. Although my technical training is in Chemical and Environmental Engineering, with emphasis on environmental biochemistry, I have become passionate about engineering education research. After graduating, I hope to enter academia as a faculty member where I can blend my interests in technical research, educational research, and teaching excellence. I have included individual and collective efforts in this portfolio to display my dedication to teaching, research, service, and lifelong learning. Please note that all textual content run with any queries.

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ePortfolios are being used as people make the transition from the role of student to professional, often for the purpose of documenting lifelong learning and entry into the job market.

Wende Garrison, an ePortfolio maven, started the Out of Practice group at the Association for Authentic, Experiential and Evidence-Based Learning conference to provide a support group for faculty and staff who advocated for student ePortfolios but did not maintain their own. Dozens of professionals have participated in workshops and online forums since the group’s inception in 2010. Her portfolio (shown in Figure 1.7) is a great example of a lifelong learning ePortfolio and projects a professional but also personal digital identity to the world.

ePortfolios have the potential to be used as a vehicle for obtaining employment and provide employers with a dynamic view of an applicant. Students who have either used their student ePortfolios or continued to develop new ePortfolios to seek employment tell us that even if a potential employer never looks at the ePortfolio, they feel better prepared to represent their work in cover letters and interviews by going through the ePortfolio process. Our former student Slade Sapor is a good example of this. He continued to adapt and re-create ePortfolios after he graduated from the university, highlighting his work as a field biologist in Alaska and creating

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**Figure 1.7**

Lifelong Learning ePortfolio Example
a portfolio of his photos for sale. Last year he developed an ePortfolio after graduating with an MS in education to use in seeking employment as a high school biology teacher. His ePortfolio, which helped him land his dream job, contains his résumé, teaching philosophy, and a diverse set of resources and work samples (see Figure 1.8). He plans to continue to develop and expand his ePortfolio and put much of the work it contains to use in his new classroom.

These different ePortfolios show us that each institution has developed a process and template that fits the student experience it wishes to provide. We cannot stress enough how vital it is for each specific environment and task to include and be able to do or platform is made. When of its design and creation is

**Figure 1.8**
**Employment ePortfolio Example**

**Mr. Sapora’s Portfolio**

Contents:
- Intro / Philosophy of Teaching Statement
- Resume
- Work Samples / Original Resources
- Additional Information

**Mr. Sapora’s Online Portfolio**

Intro / Philosophy of Teaching Statement
Click here to go to view my Philosophy of Teaching Statement.

RESUME
Click here or on the icon to your right to download a PDF version of my resume.

![Teaching_Russo_Sapora_0028.jpg](image)

BACKGROUN ANI

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ePortfolios as a Tool for Integrative Learning

ePortfolios are crucial for determining the uses of ePortfolios for its specific environment and taking time to ask faculty, staff, and students what they want to include and be able to do with the ePortfolio before any decision about software or platforms is made. When ePortfolios are part of a planned curriculum, a process of its design and creation is an integral part of its use, and the benefits of this process are many.

BACKGROUND AND LEARNING CONTEXT FOR EPORTFOLIOS

The most convincing reasons for using learning ePortfolios come from research on learning, on how the brain works, and on motivation. The concept of transformational learning comes from the work of Jack Mezirow. In an overview article of the theory, E.W. Taylor (2007) explains:

Mezirow does not see transformative learning as an “add-on” educational practice or technique. He sees it as the very essence of adult education, such that the goal of adult education is “to help the individual become a more autonomous thinker by learning to negotiate his or her own values, meanings, and purposes rather than uncritically acting on those of others” (Mezirow 1997, p. 11). Significant learning involves the transformation of meaning through an ongoing process of critical reflection, discourse, and acting on one’s beliefs. (Taylor, 2007, p. 12)

In higher education, we lament that while we strive to produce graduates who are self-directed learners and autonomous thinkers, we often fall short in these efforts. Ryan and Deci’s (2000) research finds that when we do something because it is inherently enjoyable or interesting or intrinsically motivating, we produce higher quality learning. Environments in which students experience a sense of competence, autonomy, and relatedness especially nurture good learning and foster intrinsic motivation. Students experience competence when challenged and given prompt feedback.

Students experience autonomy when they feel supported to explore, take initiative and develop and implement solutions for their problems. Students experience relatedness when they perceive others listening and responding to them. When these three needs are met, students are more intrinsically motivated and actively engaged in their learning. (Ryan & Deci, 2000, Findings section, para. 1)

Research on learning and the brain (e.g., Bransford, Brown, & Cocking, 1999; Halpern & Hake, 2000; Tagg, 2004; Zull, 2002) supports the idea that we need to teach for one goal: long-term learning with the ability to apply that learning. To achieve that goal, faculty must know where students are in their understanding of the content area, and students need to understand how learning actually happens. In constructing learning experiences, students need to be asked to retrieve information
many times in differing situations and contexts and also to learn and then re-represent information in different formats, such as listening and writing, then re-represent that in a visual or spatial manner, and vice versa. Faculty need to design their courses around the concept of less is more. If we want students to understand and be able to use material, we need to spend more time on significant concepts and cover less material. Chickering and Gamson (1987) said students “must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves” (p. 4). Halpern and Hakel (2000) state it this way:

What learners do determines what and how much is learned, how well it will be remembered, and the conditions under which it will be recalled. Our most important role as teachers is to direct learning activities in ways that maximize long-term retention and transfer. What professors do in their classes matters far less than what they ask students to do. (p. 41)

ePortfolios, then, as a pedagogical tool, offer rich opportunities to engage students by leveraging the practices we know promote deep learning. Using ePortfolios in our work with students asks them to save their work over time, mine that work by looking for and evaluating their own progress, connect their learning from assignment to assignment and course to course, reflect upon and record what they have learned and how they have learned it, and set goals for the future. Most important, ePortfolios are a living document, a discussion, if you will, between the student and teacher, student and colleagues, student and the world. Students can create an ePortfolio in groups, sharing ideas, talents, and critiques, and determining standards based on real peer work and evidence in work of excellence in diverse fields. Part Two of this book further explores the pedagogical practices involved in using ePortfolios in your classroom or program.