ARE WE WHO WE THINK WE ARE? EPORTFOLIOS AS A TOOL FOR CURRICULUM REDESIGN

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ABSTRACT

This paper focuses on the use of ePortfolios to inform redesign and development of academic degree programs. The practice aligns with the Connect to Learning (C2L) design principles of inquiry, reflection, and integration (IRI), which are nested within C2L's "Catalyst for Learning" model for successful ePortfolio implementation [1]. In 2011 Northeastern instituted an ePortfolio requirement for students enrolled in the university's Master of Education program. Systematic review of student ePortfolios as a collection informed planning for a 2012 master's program redesign that began implementation in fall 2013. This redesign includes the articulation of a program vision, program- and concentration-level outcomes, course map with signature assignments designed to evidence outcomes, ePortfolio curricular integration, and shared foundational courses across four concentrations. The program redesign is intended to improve the integration of theory with professional practice, enhance the connection between academic and workplace-based learning, increase value for students in the portfolio development process, create greater outcomes transparency for faculty and students, and support ongoing improvement of the program.

KEYWORDS

Program design, curriculum design, learning design, ePortfolios, formative assessment, signature assignments, learning outcomes

I. BACKGROUND: THE EMERGING EPORTFOLIO LANDSCAPE

The term "ePortfolio" can be difficult to define because its meaning takes many forms. From a logistical standpoint, ePortfolios are online tools designed to support students in gathering and documenting work samples (also known as artifacts or evidence). At first glance, an ePortfolio looks like a website or blog. Yet the ePortfolio also references an approach to learning that aligns with constructivist, experiential, and—more recently—connectivist pedagogy [2, 3].

People who are unfamiliar with the literature on ePortfolios typically perceive of them to be only a showcase, perhaps because the term "portfolio" is associated with an artistic collection of exemplary work. However, ePortfolios, and the portfolio process, can serve a host of goals, and categorization is important to the conceptualization of ePortfolios, but there is no definitive typology [4]. Three prominent "genres" or purposes include the following:

- *Documentation* or *directed portfolios* are often organized around professional standards or program outcomes. The templates for these portfolios are often highly structured, with areas in which students upload files to demonstrate achievement in relationship to a standard or criterion. These ePortfolios often grow out of an intentional process of outcomes mapping and assessment, as evidenced by the ePortfolio implementation framework described in a recent publication by Chen, Penny Light, and Ittelson [5].

- *Integrated learning* or *developmental portfolios* engage students in iterative cycles of creating work, reflecting upon work, revising work in response to metacognition, and integrating revised work within a larger context of professional and/or learning identity formation [6, 7]. These portfolios often involve a process described as "social pedagogy" that usually includes peer feedback, discussion, and group work. Randy Bass and Heidi Elmendorf observe that social pedagogy challenges students to develop "their knowledge in contexts that centrally ask them to think of their audience as someone other than the professor" [8].
- *Showcase portfolios* are most often associated with the culmination of an educational experience, for example within a capstone project or course. Career services and marketing units also often express interest in these types of portfolios because they can help pending graduates prepare for interviews and promote program visibility to prospective students [9].

Given the varied forms that portfolios can take, one might ask if ePortfolios are a technology, a pedagogical method for connected and integrated learning, or a strategy for evidence-based formative and summative assessment of learning outcomes. The answer is yes. Many portfolio programs are designed to advance several of these goals simultaneously. However, Helen Barrett notes that in hybrid-use scenarios there is an inherent tension between the individualization and creative rein that fosters student engagement, and the standardization that facilitates institutional goals for maintaining accreditation and conducting program-level outcomes assessment [10].

Given the complexity of ePortfolios and their manifold uses, there is a pressing need for better research on effective design principles and pedagogical impact [11]. In 2005 Kathleen Blake Yancey, Barbara Cambridge, and Darren Cambridge founded the Inter/National Coalition on Electronic Portfolio Research (NCEPR) consortium. In 2009 Trent Batson and others founded the nonprofit Association for Authentic, Evidence-Based and Experiential Learning (AAEEBL), which hosts a series of annual and regional conferences dedicated to ePortfolio pedagogy and research [12]. And in 2011 Edward Watson of Virginia Tech convened a review board to found the *International Journal of ePortfolio*. These initiatives represent a community of practice dedicated to discerning ePortfolio learning principles, design practices, and impact. They also indicate that the field has reached a tipping point in the recognition and support for ePortfolios within higher education. Within this context, ePortfolios extend the boundaries of the learning landscape beyond the confines of courses, programs, and schools; they are an essential component for supporting learning in a connected, integrated, and digital world.

One project is notably missing in the preceding landscape survey of the ePortfolio field. I set aside discussion of the Connect to Learning Project (C2L), whose framework has most influenced the work of Northeastern's Master of Education program, in order to describe the initiative in depth. C2L launched in 2011 as a three-year project sponsored by the Making Connections National Resource Center at LaGuardia Community College, in partnership with AAEEBL, and with support from the Fund for Innovation in Post Secondary Education (FIPSE). Project leadership included Bret Eynon and Judit Török of LaGuardia Community College, Laura Gambino of Guttman Community College, and Trent Batson of AAEEBL. Randy Bass of Georgetown University and Helen Chen of Stanford University served as the project's research scholars.

C2L is a network of twenty-four institutions dedicated to shared inquiry and research, with the goal of increased understanding and sophistication in ePortfolio practice. It was thoughtfully designed as a learning community in which members serve as online collaborators in negotiating the challenges, opportunities, and promising practices afforded by ePortfolios. C2L required its institutional affiliates to use portfolio methodology in the documentation, analysis, and interpretation of project work. For the duration of the project, each institution kept an ePortfolio of its work. Every two to three months, the membership engaged in a "Jam" a two-week collaborative learning experience similar to an asynchronous online course. During the first week of a Jam, consortium members were given a set of background readings and guiding questions related to an ePortfolio topic (e.g., assessment, faculty development, social pedagogy, scaling up, technology). One or more members from each institution authored the first

draft of a "promising practice" (case study) related to the Jam topic and posted it in its ePortfolio. During the second week of the Jam, C2L members toured their colleagues' portfolios, commented on each other's work, participated in threaded discussions within Moodle, and then returned to their institutional portfolios to revise their promising practices. Each institution emerged from the project with an ePortfolio representing its learning and accomplishments. The Northeastern case study described in this article originated as a "polished practice" authored during a C2L Jam.

In addition to the Jams, institutional members agreed to administer Core Surveys twice a year to students and faculty actively involved with portfolio-based learning, with the aim of gathering quantitative data to discern patterns in effective practice. The Jam write-ups also served as a form of qualitative data, furthering the project's quest for evidence of impact and learning design principles.

Some of these stories told of impressive gains, such as the 19% increase in retention for second-year students at San Francisco University who were actively involved with ePortfolios. Tunxis Community College observed an 18.7% increase in persistence among students who took three active ePortfolio courses as compared to students whose courses did not include an ePortfolio component. Other institutions' stories described the identification of challenges, such as LaGuardia Community College's use of ePortfolios to examine thousands of student work samples in relationship to the AAC&U VALUE Rubrics [13, 14]. This practice allowed LaGuardia to zero in on the need for improvement in students' oral and written communication, which prompted the development of an integrated, cross-disciplinary approach to communication education. These and other case studies will become available on the Catalyst for Learning website, a collection of "field-tested practices and detailed stories that trace the developmental trajectories of successful ePortfolio initiatives." The website is scheduled for release in January 2014 [1].

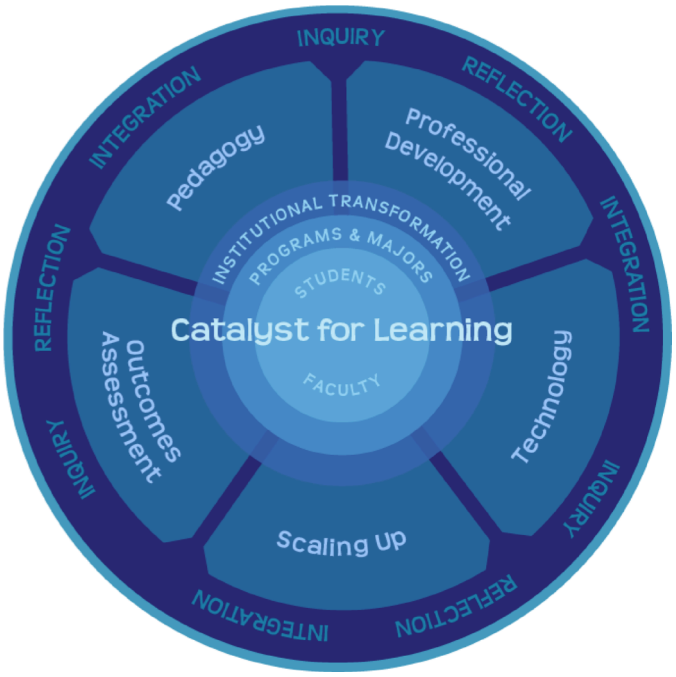

Figure 1. The Catalyst for Learning Framework

It is important to keep in mind that ePortfolios are not a magic bullet; an ePortfolio initiative might not achieve the desired results if a critical component is missing. C2L seeks to understand the ecology in which successful ePortfolio implementations take place. Drawing on the contributions of network membership, the project has articulated a multifaceted description of the coordinated system of support critical to reaping the benefits of ePortfolios on a large scale (see Figure 1). This framework involves professional learning and systems changes in almost every sector of the institution, including faculty professional development, changes in pedagogy, evidence-driven attention to outcomes, strategies for scaling up, as well as a technology infrastructure of policies, tools, and support.

Looking at ePortfolios from this ecological vantage point, it is no wonder that Randy Bass and Brent Eynon describe ePortfolio practice as playing a pivotal role in "changing the landscape of higher education" during an emerging "age of learning." For example, they describe ePortfolios as "living out the tension" between data-driven strategies for verification and accountability, and personalized learning that is greater than the sum of its parts and therefore difficult to measure. God (or the Devil) is in the

details, and the details constitute learning *design*. If student ePortfolios do not provide evidence of what we purport to be achieving, that unquiet truth then tells us we need to go back to the drawing board and redesign our courses, programs, and even our institutions. Within this model, faculty are positioned as the "designers" of learning [15].

What is learning design? At its outermost ring, C2L's Catalyst for Learning framework describes growth as an iterative process of inquiry, reflection, and integration (IRI) (see Figure 1). In the cycle depicted in the Catalyst framework, inquiry, reflection, and integration are described as "core design principles" [1].

What is a design principle? Educators borrowed this term from the field of visual arts because it encompasses elements of design that are otherwise difficult to describe. A principle is a fundamental idea about good practice. According to the C2L website, a design principle is a concept that informs the organization and structure of a learning process [1]. When applied with finesse, these principles improve the quality and outcome of learning. In the case of IRI, each principle is distinct, yet each is synergistic when combined with the others. They can be described as follows:

- **Inquiry:** investigating, asking questions, grappling with ambiguity, cultivating habits of mind
- **Reflection:** analyzing experience, identifying patterns, creating meaning, deepening learning
- **Integration:** making connections, linking learning, applying/transferring knowledge across domains

The science and theory of learning is ripe with cycles, such as Kolb's spiral of experiential learning, and many educators are therefore accustomed to this iterative approach in the design of student learning [16]. What *is* new is the concept of using ePortfolio IRI for *curricular* improvement, *program* growth, and *institutional* development, elevating authentic, evidence-driven, inquiry-based learning into organizational practice. Student ePortfolios provide a window into student self-perception and metacognition; they are an act of self-representation. The IRI process presents an opportunity to view student ePortfolios in aggregate as information, as a reflection of our impact that can be analyzed and interpreted for the purpose of program improvement. The following case study provides an example of IRI program redesign in action.

II. CASE STUDY OF IRI IN ACTION

A. The Context: Background and First Steps

Northeastern University is a private research university located in Boston, Massachusetts. With an enrollment of over 26,000 students, the school is best known for its undergraduate co-op program that integrates academic study with workplace-based experiential learning. It is also home to the College of Professional Study (CPS), in which the Graduate School of Education is located, whose primary focus is adult learners who are already in the workplace. In addition, many of the CPS programs are fully online, including the Master of Education program. CPS is committed to offering its virtual graduate students the same quality of workplace-based experiential learning that is enjoyed by undergraduates.

A key strategy for attaining this goal within the college is the use of ePortfolios because they provide an online learning space that spans courses, can include authentic evidence of learning in a range of formats, and provide opportunities for perceiving macro-level connections between students' academic and professional experience. They allow students to "zoom in" and "zoom out," metaphorically speaking, on their learning experience, placing the specifics of one course within a space that has the capacity to encompass all endeavors within in their program and profession. This is particularly helpful for adult learners juggling the competing demands of work, family, and school, because the ePortfolios provide a space to refocus despite multiple interruptions.

As a microcosm of the college, the Graduate School of Education also has a commitment to engage its students in a theory-with-practice experience that prepares them to help shape the future of learning within the field of education. Students' ePortfolios offer a place in which students can articulate their aspirations and plans for action.

The Graduate School of Education began its work with ePortfolios in 2010, focusing first on its master's-level programs. These programs include a Master of Teaching (MAT) for pre-service licensure in K–12 teaching and a Master of Education program that includes four concentrations: Learning and Instruction (focus on K–12 learning), Higher Education Administration, Special Education, and as of fall 2013 a new concentration in eLearning and Instructional Design (with a focus on adult eLearning).

The MAT program was the first to become involved with ePortfolios, requiring its students to create ePortfolios with a template structured according to licensing standards, with the goal of making it easy for evaluators to assess student competencies. The MAT students have a common focus and a defined need, and therefore a directed portfolio is most appropriate for the task. MAT students only have twelve weeks to create their ePortfolios, simultaneous with their student teaching responsibilities. Even though this initiative has been logistically successful, faculty members observe that students are not going beyond the basic requirements in their ePortfolio use, indicating limited engagement.

In January 2011 the master's program instituted an ePortfolio requirement for all Master of Education students. Unlike MAT students, Master of Education program students work within many sectors: eLearning, higher education administration, educational nonprofits, organizational learning, and K–12. The Master of Education ePortfolio initiative needed to be flexible enough to serve the needs of this more heterogeneous group.

In addition, some faculty expressed a desire for ePortfolios to help students position their program-based learning within the larger context of their developing professional identities, offering a narrative of growth. It was decided that students would create one ePortfolio and use it throughout the program. The faculty also crafted a mission statement to communicate their rationale and aspirations for the initiative to students and part-time faculty:

> By pursuing a Master's degree, you are in a process of—metaphorically speaking—writing the next chapter in the story of your life. Your courses are one part of that process. You construct meaning on your journey, considering how your program informs and shapes personal and professional goals.
>
> Your ePortfolio is designed to help you document this narrative of growth to see how parts relate to the whole. We believe it will help you improve the quality of your learning experience, both during and after your time in the program.

The template that students used in creating their ePortfolios was simple (see figure 2). It included the following sections:

- About Me
- Goals
- My Program

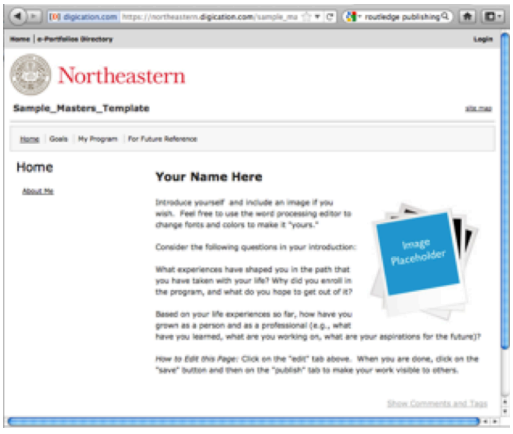

Figure 2. Master of Education ePortfolio Template

The template included open-ended writing prompts, with the goal of providing some structure and focusing students' attention on professional learning while also allowing ample space for self-direction. For example, prompts in the "About Me" and "Goals" sections included:

- Why did you enroll in the program, and what do you hope to get out of it? Based on your experiences so far, how have you grown as a person and as a professional (e.g., what have you learned, what are you working on, what are your aspirations for the future)?
- How have your professional and life goals changed over time? For example, did you always want to be in the profession that you are in now? Is your current job something that you'd like to do for many years into the future?

- What experiences have shaped the path that you have taken thus far in your life? Based on where you are now in your development, where would you like to be three, five, and ten years from now?

Within the "My Program" area students were instructed to create a separate page for each course they took, to upload at least one piece of work from each class, and to write a reflection about their learning. This section of the template also included embedded writing prompts, such as the following:

- Tell the reader what you learned from the course. How did your thinking change? What new skills or capabilities did you gain? If the course influenced and changed your goals, or raised new questions for you, incorporate that into your reflection as well.

In addition to the template and embedded prompts, the program developed a support website for faculty and students that integrated technical tutorials with an orientation to the use of ePortfolios for integrated, reflective learning. Our strategy was to encourage autonomy and intrinsic motivation, within a context of parameters and guidance, and examine the ePortfolios that students created under this system during a summer retreat.

B. Redesign Process, Findings, and Outcomes

1. Inquiry: Who are our students? What is their self-conceptualization?

Institutions, programs, and class cohorts are cultural entities. They are groups of people who, over time, develop a mythos about their identity and accomplishments, a shared narrative that is often unspoken. This narrative includes ingrained beliefs about students: their backgrounds, hopes for the future, and understanding of what they have learned, and how they intend to use that learning in the future. As organizations, how can we make these tacit assumptions visible so that we can reconcile belief and reality, with the goal of growing and improving as programs?

ePortfolios provide a window into student self-perception, making their learning visible in ways that are otherwise difficult to achieve. Because the ePortfolio gathers together work that spans courses and even years of a student's learning, it is greater than the sum of its parts. Viewed as a whole, including the student's self-description and explanation of his or her learning, the ePortfolio is a student-centered construct of identity [17]. When the ePortfolios from an entire program are viewed in aggregate, they depict a community of learners, making it possible for us to spot cultural patterns that are not readily apparent in enrollment statistics.

In summer 2012 the master's faculty held an all-day planning retreat, starting the retreat off with a review and discussion of student ePortfolios. We anticipated that process would help us base program revisions on patterns of need in student academic performance. We had no idea that the process would challenge our fundamental beliefs about who we were as a program.

The master's program ePortfolio requirement had been in effect for about eight months prior to the retreat and had yielded approximately 150 ePortfolios. Prior to the retreat, the ePortfolio Coordinator, who is also a faculty member, reviewed all of the ePortfolios. The other full-time faculty members were each given a subset of 6–8 "active" ePortfolios to review, with the caveat that activity does not always equal quality. ePortfolios were considered to be active if they had been edited or added to within the previous three weeks. Faculty were provided with the following prompts for guided inquiry:

> 1. Looking at each ePortfolio, what can you tell about the person's background, motivation for pursuing further education, goals, and aspirations for the future? How does this compare with your understanding of the profiles of students who enroll in our programs?
>
> 2. Looking at the person's work samples, what appear to be her/his areas of strength and need? For example, what is the person's current capacity for reflection, intellectual curiosity, intrinsic motivation, self-awareness, problem solving, leadership, and ability to create work that is well written and/or well presented? If the person is not well positioned

> to succeed, how do you think that should be addressed?
>
> 3. Given the strengths and challenges that you observe in the ePortfolio, what does the person need to thrive, both in our programs and after graduation? What are your thoughts about helping the person grow as a reflective practitioner and as an agent of change? Comparing that with your understanding of our programs, what do you think we need to emphasize, keep the same, decrease, or add in the curriculum? What other suggestions do you have for program improvement?

2. Reflection: We are not who we think we are.

ePortfolios can serve as a catalyst for discussion and gap analysis. When faculty members examine entire ePortfolios as artifacts of student professional self-identity, they have an opportunity to compare that view with their unarticulated assumptions about program purposes.

The day before the retreat, a faculty member from the Higher Education Administration (HEA) concentration expressed concern that she had not been given a representative sample of ePortfolios. Her ePortfolio collection depicted students who were barely out of college and represented less socioeconomic, racial, and ethnic diversity than she would have expected. This was both surprising and problematic. Northeastern University is an urban school with a long history of commitment to "nontraditional" learners, and the HEA concentration is specifically designed for professionals who have been working in the field of education at least three years. The ePortfolio Coordinator assured the faculty member that the sample was representative of the ePortfolio set.

The day of the retreat, faculty members reported additional surprises during the ePortfolio discussion, observations that could not be gleaned from the demographic data typically gathered about students. As expected, most ePortfolios depicted people who were employed, but they often weren't employed in educational capacities—many were preparing for a transition into education from another profession. When writing about goals in their ePortfolios, some students voiced a desire to "break into the business" of higher education, describing unrealistic pathways up the ladder of success that revealed serious misunderstandings about the institution of higher education—for example, envisioning a move from Enrollment to Academic Dean. In retrospect, this profile should have been expected, because people who are earlier in their careers tend to change jobs more often, particularly those with higher levels of education [18]. The curricular and experiential learning needs of these students differed radically from the needs of more mature education professionals, whose motivation for an advanced degree often includes developing and advancing in leadership within the field. In addition, a high percentage of the students were first-generation college graduates, people who perhaps needed extra guidance in navigating their development as education professionals, in addition to an orientation to education as a field of study.

Other faculty members observed that the ePortfolios examined were "way too personal," not reflecting a professional sense of self or indicating substantive reflection on how they were developing as professionals in the program. The goals that students expressed were sometimes not even connected to a professional future, such as one student whose goal was to own a house with a garden.

Why were most students not representing themselves and their learning within the context of a developing professional identity, in spite of the considerable thought we put into the mission statement and guiding questions?

In a report for the Inter/National Coalition for Electronic Portfolio Research, Laurie Poklop and Chris Gallagher observe that genres of writing "are understood to be dynamic and emergent—evolving over time through social interaction." They theorize that ePortfolios entail evolving genres of writing that challenge students to address new audiences [19]. This conclusion resonates with Bass and Elmendorf's observations about the intersection between ePortfolios and social pedagogy.

Was an ambiguous or heterogeneous sense of audience a factor in how students represented themselves in their ePortfolios? For whom where they writing, and to whom were they presenting their work? To what extent might that audience change over time as they progressed through the program?

Or was the level of metacognition we were expecting too much of a stretch for students' current capacity? We were asking students to create a page for each course that included work samples and reflections, but perhaps that wasn't enough. Did the experience need to be more scaffolded?

Could the results we were seeing be a consequence of "Facebook culture"? Perhaps students did not know how to create reflective, sophisticated professional self-portraits online using words and images.

We speculated that all these factors were at play and that each had significant implications for program redesign.

The ePortfolio review sparked considerable debate. To what extent is it our responsibility to help students reflect upon, develop, and articulate a professional identity? Should the style or "genre" of writing vary according to the type of ePortfolio (e.g., documentation, integrative learning, or showcase)? Were we accountable for what students do (or do not do) with their learning? How could the program be redesigned to meet the needs of established *and* transitioning education professionals?

Consensus emerged that the program should prepare students to represent themselves as professionals, speaking to their strengths and aspirations for the future, and that graduates should be able to perceive and articulate connections within courses, the program, and their professional lives.

But each decision opened up a new Pandora's box of questions. Did we need to reconsider program admittance and/or realign the curriculum to the needs of pre-professional students? Were we missing the mark in achieving integrated program learning outcomes? Was there a problem with the ePortfolio requirement implementation? The consensus was that the problem was a combination of all three issues, and this informed subsequent reformulation of the program.

We rolled up our sleeves and got to work. The first order of business was to co-author a statement about the program's mission and distinctiveness, and the competencies that the program envisions for its graduates. That statement follows:

Mission

The Master of Education program at Northeastern University develops educators with the skills and intellectual acumen to be effective, to question systemic norms, and to anticipate and shape a more equitable, globally connected society.

Distinctiveness

The Master of Education Program

- Effectively melds applied professional practice and scholarship
- Examines the societal impact of technology upon education worldwide
- Explores the learner in context throughout the lifespan
- Instills an understanding of education from a worldwide perspective
- Guides the development of a degree-wide integrative ePortfolio that is retained by the graduate for continuing professional advancement.

Competencies

A graduate of the Masters Program is a

Systems Thinker

- Perceives self as an educator participating within a larger system of education
- Demonstrates strategic awareness
- Looks for patterns and makes connections
- Sees how parts relate to the whole, including the implications of systems and organizational change

Communicator

- Proficient as a writer and as a presenter
- Capacity to work within groups to listen well, speak well, and co-author
- Able to collaborate and communicate in a range of modalities (face-to-face and online)
- Facile with technology, keeps current with emerging technologies and social media

Creative Problem Solver

- Situational awareness and leadership in identifying and defining challenges
- Thinks creatively to generate ideas and be open to alternatives
- Develops and implements plans for addressing problems and effecting change
- Is resilient in less-than-optimal circumstances

Culturally Responsive

- Perceives the professional self as functioning within a global context of education
- Aware of the dynamics of race, class, gender, and the other cultural factors within community dynamics and intercultural communication
- Interest in, and capacity to perceive, multiple perspectives
- Self-aware of cultural perspective and privilege
- Capacity to serve as an agent for social justice

These vision statements served as the guiding star and driver for the master's program redesign.

3. Integration: Re-envisioning the curriculum

Following the summer retreat, faculty continued to expand upon the set of vision statements, articulating program-level outcomes and a course map designed to support students in their development of those skills and abilities.

The redesigned curriculum weaves ePortfolios throughout the program, within the context of a newly formed required course sequence. The goal is to make competencies explicit and transparent, for both teachers and students, and to scaffold student learning through ongoing engagement with ePortfolio development. Students' journeys begin with the creation of a "Learning ePortfolio" in the foundation course, mature through iterative addition and revision throughout the program, and culminate in a capstone experience during which they transform their learning portfolios into "Showcase Portfolios" that depict both the quality of their work and the caliber of their professionalism.

Bass and Eynon observe that ePortfolios have the capacity to record and intensify a "recentered" curriculum in which students and faculty can gain perspective to see the value of learning [15]. In this same vein, the master's redesign transformed the program from a collection of courses into an intentionally designed learning experience. In just under a year the master's was transformed from a "degree with a portfolio requirement" into a portfolio program whose students graduate with a collection of signature work that evidences their capabilities. Features of the new program include co-designed cognitive apprenticeship, orientation to the professional context, integrated opportunities for connected experiential learning, variation nested within continuity, and looking back to look ahead.

a. Co-Designed Cognitive Apprenticeship

The first three to four courses in each concentration have been co-designed by faculty as an integrated suite that takes students through a "cognitive apprenticeship" in the skills, understandings, and capabilities of professionals within the field [20]. They are designed to foster connected learning, in which each course builds upon and complements the next, and the faculty have a clear understanding of how "their" courses intersect with and reinforce other courses in the program.

Each course in the program has a designated "signature assignment" that marries theory and practice, often simulating workplace situations or examining concerns of the profession. In addition to meeting course objectives, the signature assignments align with program competencies and concentration outcomes. Students add signature assignments to their portfolios, often with a written metacognitive reflection on strengths and weaknesses in the work, lessons learned, connections with other professional and program learning, and a self-assessment of progress toward objectives, outcomes, and competencies. For example, Figure 3 depicts the first two courses in the eLearning and Instructional Design concentration, illustrating how the course objectives and signature work function as a set, supporting the development of concentration-level outcomes and program-level competencies.

Because the signature assignments have been identified in advance and mapped to the competencies, students have an opportunity to build and refine their work over time. For example, interviews that students conduct with practitioners in the field during an introductory course can be used as the foundation for case studies, opinion pieces, or co-op projects in subsequent courses.

Even though the ePortfolio template offers significant opportunities for individualization, it also includes embedded program competencies and concentration outcomes to serve as a lens through which students and faculty can examine samples of signature work. Professors have the ability to view signature coursework within the context of their students' entire learning portfolio.

The new ePortfolio template adds a "professional profile" area that provides students with space and prompts for use in describing themselves as professionals, which can be revisited and revised over time to reflect students' developing professional identities.

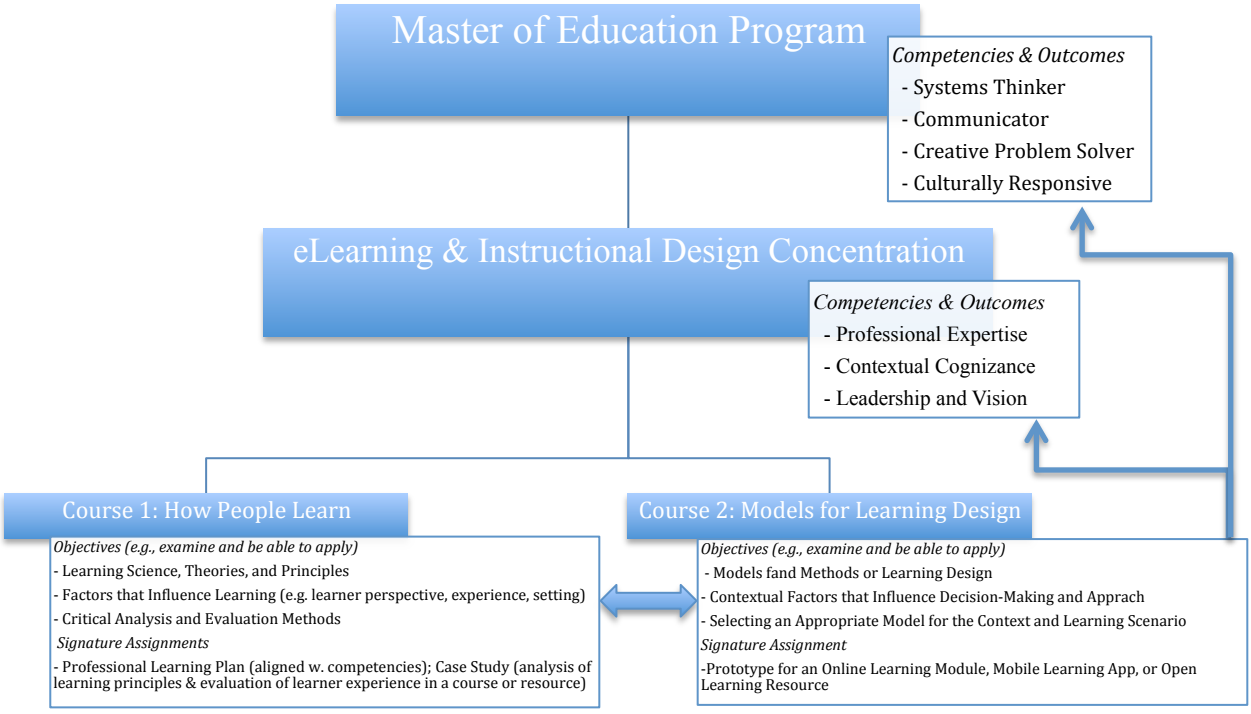

Figure 3. Example of program constructed as a through line.
Assignments provide evidence of learning and progress toward objectives, outcomes, and competencies.

b. Orientation to the Professional Context

A new gateway course entitled "Education as an Advanced Field of Study" carries five credits, instead of four, and includes an orientation to ePortfolio development and its anticipated role in their learning. Students are more likely to make connections between their coursework, developing capability, and

emerging professional identity if they perceive themselves as joining a "field" instead of just joining a "program." The course engenders the perception of education as a complex system, as a community of practice. It orients students to "education" as a profession whose members share common concerns even if they specialize in different pieces of the puzzle. Students investigate the face-to-face and virtual venues where education professionals come together (organizations), processes through which burning issues are identified and controversies are debated, and the print and online publications in which knowledge is shared.

The "text" for the ePortfolio component of this course is a Master of Education ePortfolio website that integrates information about the program's missions, competencies, and curriculum with a multifaceted overview of ePortfolio as tool, process, and product [21]. Students work in their courses every other week during the course. These assignments integrate technology instruction, an orientation to portfolio pedagogy, and exercises designed to support professional learning. For example, in the second week they draft a "positionality statement" about their perspective, values, and motivations for becoming an education professional and put the document in their ePortfolios. They revisit and revise this statement at critical junctures in the course and in the program (e.g., to compile a list of "burning issues" or controversies in the field of education that resonate with their positionality, to create the "professional profile" section of their ePortfolios). This guided work orients them to the "genres" of ePortfolio writing, mentors them in the connection of theory with practice, and demonstrates the value of regularly updating their ePortfolios.

c. Integrated Opportunities for Connected Experiential Learning

In addition to the process of redesigning concentrations, the program elected to develop a new concentration in eLearning and Instructional Design.

At the 2012 Educause Learning Initiative conference, organization president Diana Oblinger proclaimed in her opening remarks that "the next step in next-generation learning is connected learning." This statement resonated with the insights and lessons learned during the master's program's ePortfolio review and curriculum redesign. Oblinger's words served as a call to action that prompted faculty to ask, "If connected learning is the future, what skills and abilities will next-generation learning designers need in order to help shape and create that future?"

In fall 2013 the master's program launched the new concentration, designed from the outset to be an integrated learning experience that marries the art of learning *design* with the evidence-driven inquiry of learning *science* [22]. The curriculum includes an experiential component that integrates program-based and workplace-based learning. At the midpoint of their studies, students take a course entitled "Connecting Theory with Practice." The students use their ePortfolios to examine the work they've done so far in the program to

- review their progress in relationship to program and concentration competencies,
- identify their strengths and opportunities for growth in relationship to the program and concentration competencies,
- document interviews with prospective co-op employers (or conduct an environmental scan within their own places of work), and
- develop a proposal for a piece of significant professional work that addresses a real topic or issue related to the future of eLearning design, placing the practice of eLearning design within its field of study. The employer is also involved in approving the plan.

This guided but flexible structure makes it possible for both transitioning and established professionals in the field to benefit from workplace-based experiential learning. Because this component is entirely online, it is referred to as a "Virtual Co-op" or "Online Experiential Learning."

During the second half of the program, students carry out their plan independently, but they also participate in portfolio-based Jams (hearkening back to the structure of Connect to Learning), documenting their experience within their ePortfolios in response to a shared thematic prompt (e.g.,

connected learning, design as a collaborative profession), viewing peer portfolios, providing feedback, and refining their Jam write-ups into professional thought pieces. This process uses the ePortfolio as a venue for engaging in a dialectic between theory and practice (see Figure 4), an approach to experiential learning that enacts Bass and Eynon's concept of a "recentered" curriculum.

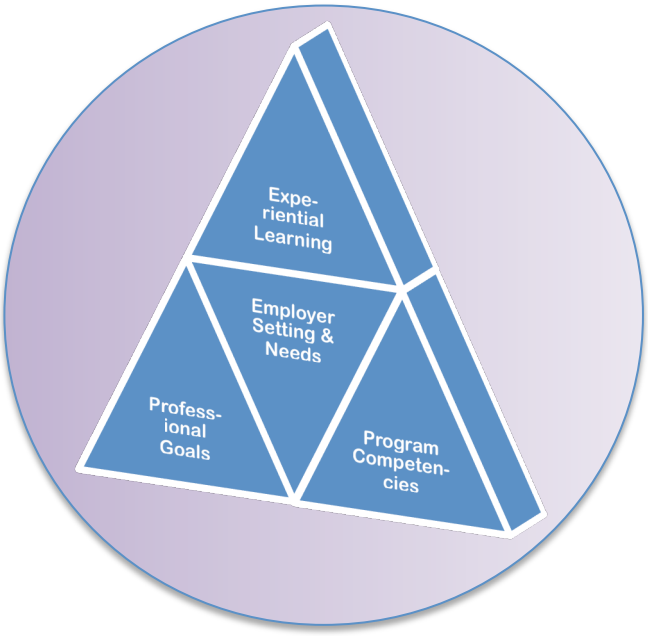

Figure 4. Integrative ePortfolio supports dialectic between theory and practice

During the capstone, students draw on this documentation to create a retrospective of their co-op work and develop a professional portfolio. As a final project, they present their portfolio in a live online setting open to all students in the concentration and the faculty.

d. Variation Nested Within Continuity

Each master's concentration prepares its graduates for a different professional trajectory, and so it makes sense that there would be variation in ePortfolio implementation across the concentrations. To what extent are the students keeping documentation portfolios, integrated learning portfolios, or a mixture of the two? At what points in a concentration's course of study do students reflect upon and improve upon their work? These differences in professional perspectives have been perhaps the greatest challenge, often discussed in heated debate. Some concentrations prefer to have students use their ePortfolios for documentation only during the majority of their studies, waiting until the last capstone course to revise work and develop showcase portfolios. Other concentrations want to have their students keep integrated learning portfolios during the program (documentation plus reflection), revising this work into a showcase portfolio during the capstone.

Regardless of differences, the shared goal is to develop a rigorous and coherent master's-level program that also maintains self-determination within concentrations and among faculty. The primary strategy, as with other aspects of the program redesign, is to make the shared and varying components as explicit as possible among faculty and students. For example, each concentration has its own area within the Master of Education ePortfolio resource site, with total discretion over how the use of ePortfolios within that concentration is described.

e. Looking Back to Look Ahead

Even though faculty members weren't always aware of it at the time, the integrated redesign approach, which touched upon many aspects of the system, is perhaps the most prominent feature of the revised

curriculum. It is reminiscent of Connect to Learning's ecological catalyst model for institutional transformation.

Before the redesign, tacit assumptions about the program goals and aspirations for program graduates were unexamined and unarticulated. Before the redesign, courses were perceived and treated as discrete units, so it is no wonder that students had difficulty perceiving the program as an integrated pathway for professional development and learning. Before the redesign, there were no competencies and outcomes to guide conceptual understanding of the program's purpose. Before the redesign, the ePortfolio and experiential learning components were add-ons, not woven into the fabric of the program. Before the redesign, faculty developed courses individually and did not benefit from the synergy of co-authorship that comes with learning design.

III. NEXT STEPS AND FURTHER INVESTIGATION

The ePortfolios that students created before the redesign are still useful forms of data. They provide a snapshot of students' presentation of self prior to the re-envisioning of the program.

The intent is to use ePortfolios generated under the new system as one source of evidence in an iterative process of outcomes assessment and program improvement, which is scheduled to begin nine months after the redesigned program's launch. The program will use a sampling methodology, similar to the approach taken during the summer retreat, this time using the competencies and outcomes as a guide for review. Portfolios viewed as a whole can serve as qualitative or ethnographic data; the examination of signature work samples in relationship to competency-generated rubrics can provide quantitative data. It is anticipated that, in comparing pre-redesign ePortfolios with those generated under the new system, there will be an increase in professional sophistication, articulated connections between academic and workplace practice, and cognitive connections across the course of study.

ePortfolios will continue to serve as an outward and visible sign of the alignment between student learning and program aspirations, keeping us honest about the impact of our program and shining a flashlight on areas for improvement. The program will continue its waltz of improvement through inquiry, reflection, and integration.

IV. ACKNOWLEDGEMENTS

The author wishes to express appreciation for the Sloan-C Best-in-Track award that led to this publication. She also thanks Bret Eynon. Judit Török, Laura Gambino, and countless others in the Connect to Learning network who have provided feedback and support during the past two years. Thanks go out to Trent Batston, without whose recommendation she would not have become a part of the C2L community. Thank you to Lydia Young and Doug DeNatale, who provided feedback on earlier drafts of this article. Finally, it is with great appreciation that she thanks the Fund for Innovation in Post-Secondary Education for the grant that made this all possible.

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Dr. Gail Matthews-DeNatale serves on the faculty at Northeastern University's Graduate School of Education, where she leads the M.Ed. concentration in eLearning and Instructional Design and specializes in the use of portfolios for online experiential learning. She is a Co-Principal Investigator for the national Connect to Learning: Catalyst for Learning Initiative, funded by the Fund for Innovation in Post-Secondary Education. Prior to Northeastern, she held positions at Simmons College, George Mason University, and the University of South Carolina. She is on the boards of the Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL), Higher Education Teaching and Learning Review, former member of the NERCOMP's Board of Trustees, and has served on the Educause Learning Initiative's Blended and Online Learning focus advisory group. Her successful 2009 grant award from the Alfred P. Sloan Foundation launched the Simmons College Blended Learning Initiative, and her 2013 Sloan-C Conference presentation on ePortfolios as a tool for curriculum redesign received the Best-in-

Track award. Matthews-DeNatale's research interests include digital storytelling, fluency with emerging technology, and authentic formative assessment.

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   - Cornell University: http://eportfoliohelp.cit.cornell.edu/types-of-eportfolios
   - Regis University: http://academic.regis.edu/LAAP/eportfolio/basics_types.htm
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