

**ePortfolios, Badges, and the Whole Digital Self:  
How Evidence-Based Learning Pedagogies and Technologies  
Can Support Integrative Learning and Identity Development**

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**Abstract:** Extensive research on student development and learning theory shows that the value of a college experience can be challenging to measure since its impact is not strictly academic but holistic (e.g., Evans, Forney, & Guido-DiBrito, 1998). ePortfolio programs have been successfully implemented at many campuses as one way for students to collect, reflect, select, and project evidence of their learning across academic and co-curricular dimensions. This article will explore several other promising models for implementing emerging evidence-based, digital technologies and pedagogies that can be used with ePortfolios to strategically inspire a holistic, digital sense of self in students.

**Keywords:** ePortfolios, digital badges, integrative learning, identity development

### ePortfolios, Badges, and the Whole Digital Self:

#### How Evidence-Based Learning Pedagogies and Technologies Can Support Integrative Learning and Identity Development

The Association of American Colleges and Universities (AAC&U) stated, “One of the great challenges in higher education is to foster students’ abilities to integrate their learning across contexts and over time” (Huber & Hutchings, 2005, p. 1). Almost a decade later, institutions across the country continue to discover innovative, effective implementation strategies for integrating learning across dimensions of context and time. The AAC&U Integrative and Applied Learning VALUE Rubric provides the following definition to frame our conversation:

“Integrative learning is an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus” (Rhodes, 2010, para. 1).

The Liberal Education and America’s Promise (LEAP) initiative (Kuh, 2008) identifies several high-impact teaching and learning practices proven to have a significant, positive impact on integrative learning and development. Among them, LEAP lists first-year seminars and experiences, common intellectual experiences, learning communities, writing intensive courses, collaborative assignments and projects, undergraduate research, diversity/global learning, service learning or community-based learning, internships, and capstone courses or projects. This report provides examples of pedagogical models that have a positive impact on students’ abilities to learn deeply and across dimensions –general, personal, and practical. Additionally, this framework shows us that learning happens across academic and co-curricular domains, as well as across the lifespan, which is important when considering ways to structure programs, resources, and curricula to facilitate meaningful, integrative learning.

Research over the past several years shows that ePortfolios can also be a powerful catalyst for fostering integrative learning and holistic identity development. Additionally, research by the Inter/National Coalition for Electronic Portfolio Research suggests that artifacts within an ePortfolio and how students engage in what Yancey (2009) calls a “multiple-mapping” process of connecting a singular ePortfolio artifact across multiple contexts may contribute significantly to integrative learning (p. 5). As Instructional Designers at Dartmouth College, we explore pedagogical innovation not only with ePortfolios but with a wide range of digital tools that can be used to create or map ePortfolio artifacts. In this article, we review several emerging technologies and pedagogies that can support the development of integrative, evidence-based learning documentation within or beyond an ePortfolio.

## **Student Identity Development**

### **Theory and Practice: The College Experience**

A robust body of literature on student and identity development tells us that colleges can be places of profound, holistic identity development with opportunities for intentional integration of intellectual, social, emotional, and professional identities (Torres, Jones, & Renn, 2009). The lived student experience, however, is often segmented into majors/minors, co-curricular affiliations, intellectual and social engagements. On a university organization chart, it is not uncommon to find distinct academic and co-curricular reporting lines, and within each division, countless subdivisions of departments, programs, centers, and initiatives. Students, like all people, move fluidly between aspects of their selves and experience all of their respective roles, responsibilities, passions, and identities as a singular self. Understanding the impact of the college experience is challenging, in large part because the lived college experience is holistic but the structure is segmented into disciplines, departments, and social/intellectual divides. This segmentation creates barriers to students developing their own integrated sense of self and makes knowing what actually happens to students during the college experience difficult.

Another challenge is that students exist in both the physical and digital worlds, and often see these two versions of themselves as separate and distinct. For the purposes of exploring learning technologies that can help integrate student identity and experience using ePortfolios, we frame the problem in this way: Students do not create separate identities for their

academic/student selves, their social selves, their personal and professional selves; those of us who design the organization charts – college administrators and instructors – are the ones drawing the lines. We create the boxes – majors, minors, academic vs. co-curricular, on vs. off campus – and invite students in, instead of allowing students to create their own boxes, or better yet, teach them to thrive without boxes at all. ePortfolios offer a potential strategy for addressing these challenges in that they constitute a digital space for students to collect, select, reflect, and project work across academic, co-curricular, personal, and professional dimensions. ePortfolios also allow students the opportunity to critically reflect on their digital identity and explore how well their digital self aligns with their values, beliefs, interests, and passions.

### **Self-Authorship, Partnerships and Student Identity Development**

As research on student and identity development has exploded over the past decade, there are now several theories and ways of understanding the college student experience from cognitive, psycho-social, and intellectual perspectives. The theory of self-authorship and the Learning Partnerships Model (LPM) are of particular relevance for scholar-practitioners seeking to create integrative, high-impact learning opportunities for students. Magolda (2004) defines self-authorship as “...the capacity to internally define a coherent belief system and identity that coordinates engagement in mutual relations with the larger world” (p. xxii). This theory addresses the developmental stages at which college age individuals are able to engage in self-authorship, including the following phases: 1) following formulas based on external authority figures without any critical questioning, 2) coming to a crossroads and beginning to experience dissonance associated with following, 3) becoming the author of one’s own life, critically questioning one’s relationships, and starting to develop an internal sense of self, and finally 4) developing internal foundations and becoming grounded in a strong sense of identity, mutually beneficial relationships, and basing decisions on an internal belief and value system. This research is of particular importance to the pedagogy of integrative learning because it provides a framework for understanding how college students move through the process of formulating a sense of identity and taking ownership of one’s own life. In 2011, Magolda expanded her LPM model, suggesting pedagogical strategies for developing self-authorship in students. The three core principles identified in the LPM are: 1) validating learners as knowers, 2) situating learning in the learner’s own experience, and 3) defining learning as mutually constructing meaning. Each

of these principles relates to integrative learning and holistic identity development in that the goal is for students and faculty to collaboratively construct knowledge while empowering students to chart their own growing identity across academic, co-curricular, and personal dimensions. Magolda's (2011) research is especially relevant to the practice of instructional design because it helps us understand how to structure programs, resources, and curricula in a way that supports meaningful opportunities for self-authorship and integrative learning.

### **Integrative Learning at Dartmouth College**

Integrative learning and identity development are of special importance at Dartmouth. As a primarily residential undergraduate college with an 8:1 student to faculty ratio, a flexible year-round academic calendar, and a strong commitment to experiential learning and liberal education, Dartmouth has prioritized integrative learning. In fact, three of the top five strategic priorities at Dartmouth are experiential learning, leading in the use of learning technologies, and growing the faculty in clusters (Academic Vision, 2013, para. 3).

In 2012, the Dartmouth Faculty Strategic Planning Advisory Committee formed an experimental working group to explore learning in the 21<sup>st</sup> century. According to their report, the working group's goal was:

“...to discuss how to deliver an integrated education in the context of Dartmouth's historic commitment to liberal education; models that extend beyond an academic structure reliant on departments and disciplines, majors and minors; and the demand placed upon colleges and universities to produce graduates who are skilled in integrative thinking...and to bring a practical and team-oriented approach to addressing this complex world's challenges and problems (Experimental Dartmouth, 2012, para. 1).

As just one example of this commitment to integrative learning in action, a recent public relations piece on living and learning communities at Dartmouth focused on East Wheelock Hall, “...a residential option in which students who are committed to the principle of fostering a community where students, faculty, staff, and deans interact socially, intellectually, and culturally can return. The cluster offers a space where undergraduate advising, academics, creative interactions, and socializing are thoroughly integrated” (Platt, 2014, para. 17).

Dartmouth is currently exploring options for developing a series of similar “living and learning neighborhoods” where students would have the opportunity to actively cultivate an integrated sense of self in community with other students, faculty, and staff.

In addition to creating integrative co-curricular experiences for students, there is also significant interest at Dartmouth in using ePortfolios and other learning technologies to facilitate integrative learning. In a fall 2014 Latin American, Latino, and Caribbean Studies seminar on the political and ethical issues of international development in the context of Nicaragua, professor Douglas J. Moody is piloting WordPress ePortfolios as a pedagogical strategy for students to integrate academic learning from course readings and discussions with the lived experience of international service immersion and co-curricular engagement with the Tucker Foundation, Dartmouth’s center for service and social justice. In spring 2014, professor Michael Evans, a Neukom Fellow and interdisciplinary instructor at Dartmouth, launched the first course to use digital badges as an academic teaching and learning tool. The Educational Technologies team at Dartmouth has been charged with actively supporting this type of digital innovation. A team of five full-time instructional designers partners with faculty in Arts and Sciences to explore and implement a range of strategies for promoting technology-enhanced learning, including migrating learning management systems to a more student-centered system, partnering with edX to offer a series of massive online open courses (MOOCs), and redesigning large-enrollment gateway courses to promote student engagement. In the next section, we will discuss some of the specific pedagogical strategies and technologies we are exploring at Dartmouth to support the academic vision of integrative learning and describe promising models applied at other institutions that we believe have the potential to support integrative learning and identity development.

### **Application**

Based on research on student and identity development and research on ePortfolios as a dynamic, evidence-based pedagogy, it seems that ePortfolios may be a promising strategy for fostering self-authorship and integrative learning. However, in application, the integrative, institution-wide implementation of ePortfolios across academic and co-curricular domains is rare. In a 2011 ePortfolio usage survey of Association of American Universities institutions, the Center for Instructional Development and Distance Education at the University of Pittsburgh

(Pitt) found that 84% of schools who responded used ePortfolios at the program level and that no schools had implemented ePortfolio use at the institution level (Mayowski, p. 3). One of the challenges the Pitt research revealed was that the catalyst for ePortfolio implementation was often faculty. Individual faculty were the drivers of ePortfolio use at a majority of the institutions (63%) and had a greater interest in growing ePortfolio use than students, at 56% versus 32% (p. 5). This has also been true at Dartmouth, where faculty and instructional designers approach ePortfolios on a course-by-course basis as one option in a range of digital learning tools that can foster integrative learning. This framing of ePortfolios as faculty-driven vs. student-centered presents challenges for fostering authentic, integrative, holistic learning. However, this approach also promotes authentic faculty engagement, innovation, and ownership. By offering ePortfolios as an option in a range of digital learning strategies, faculty are empowered to think creatively about course learning outcomes and the potential tools, activities, and assessments that can support them.

We have identified a range of digital tools beyond ePortfolios that offer multiple possibilities for students to express experiences and showcase work. Digital resumes, information graphics, personal websites, and social media can all contribute to the formation of one's creative self. What is missing, however, are the links and context between these digital cells to provide a holistic view of evidence and context of learning. Cambridge (2012) points out that this is essential for students to develop long-term success: to learn independently, understand one's strengths, allow for effective collaboration, and link values for both charting careers and fulfilling responsibilities as a community member and global citizen. As Cambridge remarks, it is the connections that are important, and so we should focus on technologies that are connective and collaborative rather than mere depositories of content.

Digital badging offers a platform on which to communicate achievement criteria, link to examples and evidence, and put the keys in the hands of the creator. Bixler and Layng (2012) explain digital badges in their white paper on badges in higher education, "A digital badge is a clickable graphic that contains an online record of an achievement, the work required for the achievement, and information about the organization, individual, or other entity who issued the badge" (2012, para. 7). The concept of issuing a physical badge as the recognition of a skill is not new. The analogy of police officers, scouts, and military personnel provides an example of how badges can be used as a physical representation of a skill or ability. Digital badges,

however, offer a visual representation and the addition of links to criteria and evidence as proof of accomplishment. Whereas the embroidered campfire scout badge sewn to a sash relied entirely on troop guidelines and a scout leader issuing the badge for certification, a digital campfire badge might link to a video of smoldering twigs sparking to flames, actually demonstrating the skill in practice.

The University of California-Davis piloted digital badging in its sustainable agriculture program. In an online commentary piece for the *Chronicle of Higher Education*, Carey (2012) describes how a student or graduate of the program can present a digital badge folio to prospective employers who can see evidence backing the “systems thinking” badge and writes about the UC Davis badge project:

Students will be able to customize learning goals within the larger curricular framework, integrate continuing peer and faculty feedback about their progress toward achieving those goals, and tailor the way badges and the metadata within them are displayed to the outside world. Students won't just earn badges—they'll build them, in an act of continuous learning (Carey, 2012, para. 8).

In a recent Dartmouth College course on Science and Religion in American Media, instructor Michael Evans used badges to communicate learning outcomes as “progress badges” and “achievement badges” for his students. Evans states the goal for using badges in a recent interview published in *Inside Higher Ed*: “The main objective was to communicate student competency beyond the grade or transcript. Badges retain the validity of a grade or endorsement, but are flexible enough for students to communicate to future employers, to grad school admissions committees, or to their friends and colleagues” (Kim, 2014, para. 6). Evans created scaffolding through learning outcomes and issued minor badges for progress and major badges for achievement of mastery. Evans decided to use badges in his course to allow his students to track their progress towards achieving the learning outcomes for the course, communicate these to professors of more advanced courses in media literacy, and provide evidence of learning to media ecology scholars at other institutions.



Evans utilized instructional design services to articulate specific, measurable descriptions and criteria for the process of earning digital badges in the course. The following is a description for one of the major badges issued in the course, the Digital Media Analysis (DMA) badge:



**Figure 1: Digital Media Analysis Badge**

“This badge certifies competence in digital media analysis, including acquiring and converting digital media, creating thematic media collections, annotating media resources, embedding digital media in textual compositions, and collaboratively editing multimedia compositions.”

This badge initiative also included a progressive learning component, as minor badges for specific skills could lead to major badges in broader competencies. As an example of this approach, the criteria to achieve the DMA badge included several “progress badges” as smaller steps to achieve the overall achievement badge.

Criteria to earn this badge included requirements to: 1) Complete hands-on training in acquiring, converting, collecting, organizing, and annotating digital media using the Mediathread media analysis platform, 2) Complete supervised individual annotation and composition exercise using Mediathread, 3) Complete unsupervised collaborative editing and thematic analysis exercise using Mediathread, or 4) Evaluate Mediathread digital media analysis platform.

At the end of the course students were asked how badges related to their learning in the course through an anonymous survey. One student responded, “Badges are a really interesting idea for showcasing digital scholarship, definitely useful in this class and could be useful in others.” (M. Evans, personal communication, June 3, 2014). Evans also noted while several students accepted their badges and displayed them on public web profiles, many students did not click through to accept their badges. One of the challenges to address for badging to be an effective learning tool is to communicate to the badge earners that the tools to share their learning is placed in the hands of the badge holder, but where and when to share that information is up to the individual.

Digital badging at Dartmouth has also reached across to the quad to the Center for Professional Development (CPD), demonstrating how digital initiatives can not only have potential for students to integrate their own learning but for campuses to collaborate across disciplines, departments, and even academic/co-curricular divisions. CPD provides professional development training in a “Summer Challenge” for rising juniors during the summer term. At the conclusion of the 2014 program, students who completed the Summer Challenge were issued a digital badge for demonstrating “...a willingness to learn and commitment to taking charge of their own professional development.” (Dartmouth Summer Challenge, 2014, para. 1). This badge represents how badges have the potential to allow students to form an integrated identity and create an evidence-based profile of engagement in both curricular and co-curricular learning activities.

One of the challenges of digital badges is that links to evidence are only as good as long as the evidence persists. A blog post or digital game used as evidence of digital scholarship may lead to a broken link if sustainability and archiving are not built into the process. Digital badges can be a path to connect the criteria, evidence, and creator of learning, but if any of the digital elements disappear, then a badge loses the evidence to back the accomplishment.

As an example of a space where digital badges and ePortfolios could be used together to create synergy of digital, evidence-based learning pedagogies, the University of Mary Washington and Emory University have both piloted a project to provide personal web space to all students within an incoming class (UMW) or within the first-year writing program (Emory). The project titled a “Domain of One’s Own” allows students to register a domain name and set up a “personal cyberinfrastructure.” According to the American Council of Learned Societies (2006), “Cyberinfrastructure is something more specific than the network itself, but it is something more general than a tool or a resource developed for a particular project, a range of projects, or, even more broadly, for a particular discipline” (Unsworth et al., p. 8). In these models, students can choose what type of content, code, and functionality will run on their webspace and make changes during and after their college careers. For example, a student could host both academic and co-curricular projects, provide written context for and reflection on examples included in the space, and also link to digital badges that provide evidence and

certification from the issuer on specific skills, abilities, and experiences. Essentially, providing a highly adaptable, student-owned webspace could provide an opportunity for a student to develop an integrated, holistic ePortfolio that includes a range of digital evidence. Jim Groom leads the University of Mary Washington Domain of One's Own project and explained the concept in a recent talk: "The key here is the crafting of an identity with a purpose, the conscious consideration and creation of one's own professional/academic identity online: a domain of one's own" (Domain of One's Own, Emory University, para. 2). This also shifts the focus from faculty-initiated ePortfolio projects, which as discussed earlier is the prevailing model for ePortfolio implementation, to a student-centered approach that offers the opportunity for self-authorship, integrated learning, and holistic identity development.

### **Conclusion & Recommendations**

Implementing digital badging and personal cyberinfrastructure models has the potential to provide a broader, more student-centered approach to facilitating integrative learning than ePortfolios alone. While ePortfolios can be a powerful tool for student learning, assessment, and professional development, that potential may be enhanced by intentionally incorporating a range of digital learning elements. Not all faculty are motivated by the same pedagogical strategies, and not all students are motivated by the same learning opportunities – digital or analog. By blending the models we discussed, it may be possible to provide better opportunities for students to self-author and integrate their own learning while also creating space for academic and co-curricular collaboration to happen. Utilizing a range of digital, evidence-based pedagogies to inspire a learning-centered, outcomes-based, integrative culture in higher education across academic and co-curricular dimensions should be further explored.

Based on what we know of integrative learning and student cognitive and identity development theory, success in establishing any technology-enhanced learning initiative will depend on a number of factors, including but not limited to: 1) student investment in the process, 2) institutional support for integrative learning 3) granular control, persistence, portability, and revision of the artifact or learning object remaining in the hands of the individual 4) contextualization of evidence and 5) a student's personal learning plan. These considerations should be equally high priority as choosing a technology solution or contracting with an ePortfolio solution, if not higher. In order to fully maximize the potential of ePortfolios as

pedagogy, we need to re-think the way we structure ePortfolio programs in a way that actively fosters integrative, holistic, student-centered learning across academic and co-curricular domains. We should also consider ways to incorporate the full range of evidence-based learning pedagogy, like digital badging and personal domains into our ePortfolio programs, to help students better integrate and self-author their learning and identity development.

## References

Bixler, B. & Layng, K. (2013). "Digital badges in higher education: An overview." Retrieved from: <http://tinyurl.com/PSUDBWhitePaper>

Carey, K. (2012). "A future full of badges." *Inside Higher Ed: The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/A-Future-Full-of-Badges/131455/>

*Dartmouth Summer Challenge*. (2014). "Badges graphic, title, description, and criteria." Retrieved from <https://credly.com/credit/12202210>

*Digital Media Analysis*. (2014). "Badges graphic, title, description, and criteria." Retrieved from <https://credly.com/credit/124022>

*Domain of One's Own, Emory University*. (2014). Retrieved from [https://web.archive.org/web/20140826111936/http://english.emory.edu/writing\\_program/domain/index.html](https://web.archive.org/web/20140826111936/http://english.emory.edu/writing_program/domain/index.html)

Hanlon, P. (2013). *Academic Vision*. Retrieved from <http://www.dartmouth.edu/~president/academicvision.html>

Kim, J. (2014). "A course badging case study." *Inside Higher Ed: The Chronicle of Higher Education*. Retrieved from <https://www.insidehighered.com/blogs/technology-and-learning/course-badging-case-study>

Platt, B. (2014). *East Wheelock's 'intentional community' ethic is spreading*. Retrieved from <http://now.dartmouth.edu/2014/05/east-wheelocks-intentional-community-ethic-is-spreading/>

Evans, N. J., Forney, D. S., & Guido-DiBrito, F. (1998). *Student development in college: Theory, research, and practice*. San Francisco: Jossey-Bass.

*Experimental Dartmouth*. (2012). Retrieved from

[http://strategicplanning.dartmouth.edu/images/uploads/Experimental%20Dartmouth%20WG%20Outline%203\\_12\\_12.pdf](http://strategicplanning.dartmouth.edu/images/uploads/Experimental%20Dartmouth%20WG%20Outline%203_12_12.pdf)

Huber, M.T. & Hutchings, P. (2005). *Integrative learning: Mapping the terrain*. Washington, DC: Association of American Colleges and Universities.

Kuh, George D. (2008). "High impact educational practices: What they are, who has access to them, and why they matter." Washington, D.C.: American Association of Colleges and Universities.

Magolda, M. B., & King P. M. (2004). *Learning partnerships: Theory and models of practice to educate for self-authorship*. Sterling, VA: Stylus.

Magolda, M. B., Torres, V., Pizzolato, J., & Jones, S. (2011). "Self-authorship: Exploring holistic development across cultures." Program presented at the meeting of the American College Personnel Association, Baltimore, MD.

Mayowski, Colleen, and Cynthia Golden. (2012). "Identifying e-portfolio practices at AAU universities" (Research Bulletin). Louisville, CO: *EDUCAUSE Center for Applied Research*. Retrieved from <http://www.educause.edu/ecar>.

Rhodes, T., ed. (2010). *Assessing outcomes and improving achievement: Tips and tools for using rubrics*. Washington, DC: Association of American Colleges and Universities.

Torres, V., Jones, S. R., & Renn, K. A. (2009). "Identity development theories in student affairs: Origins, current status, and new approaches." *Journal of College Student Development*, 50, 577-596.

Unsworth, J., Courant, P., Fraser, S., Goodchild, M., Hedstrom, M., Henry, C., ... Zuckerman, B. (2006). *Our cultural commonwealth: The Report of the American Council of Learned*

*Societies Commission on Cyberinfrastructure for Humanities and Social Sciences.*  
Retrieved from <http://www.acls.org/cyberinfrastructure/cyber.htm>

Yancey, K.B., (2009). "Portfolios, circulation, ecology, and the development of literacy."  
In Dànielle Nicole DeVoss, Heidi A. McKee, & Dickie Selfe (Eds.), *Technological ecologies and sustainability*. Computers and Composition Digital Press.

#### Additional Resources for Classroom Use

**7 Things You Should Know About Badges. (2012). EDUCAUSE Learning Initiative.**

**Retrieved from:** <http://net.educause.edu/ir/library/pdf/eli7085.pdf>

The EDUCAUSE Learning Initiative's guide to describing a digital badge, how badging works, and how it relates to learning and tracking accomplishments.

**Badges in higher ed group. HASTAC. Retrieved from:**

**<http://www.hastac.org/groups/badges-higher-ed>**

The Humanities, Arts, Science, and Technology Alliance and Collaboratory (HASTAC) web group offers a space for anyone interested in exploring the role of digital badges in higher education to initiate a forums, share resources, and ask the big (and little) questions about the implications of implementations of badge systems within and across institutions of higher education.

**Davidson, D. (2011). Counseling and college student affairs teaching tip: Self-authorship and the learning partnerships model. Retrieved from**

**[http://orgs.bloomu.edu/tale/documents/TT\\_2\\_SelfAuthorship.pdf](http://orgs.bloomu.edu/tale/documents/TT_2_SelfAuthorship.pdf)**

A teaching guide that provides an overview of research informed pedagogy for incorporating self-authorship and the Learning Partnerships Model into teaching strategies. The guide describes the four phases of self-authorship and questions to consider in applying the model to course-level learning.

***Mozilla Backpack.*** Retrieved from: <https://backpack.openbadges.org/backpack/login>

Mozilla's Open Badges project provides a personal web account where badge earners can collect, organize, and share their digital badges. The Backpack also allows learners to send badges from one issuer to multiple social media sites.

**Normoyle, J. (2012).** "*System of badges for sustainable agriculture & food systems major at UC Davis.*" Retrieved from <http://asi.ucdavis.edu/about/advisory-board/ignite-talk-powerpoints/Experiential%20Education%20Ignite%20Talk.pdf>

In this slide deck, Normoyle lays out the badge constellation built for the sustainable agriculture and food systems program at UC Davis. The graphical index illustrates the relationship between badge categories and individual competencies across an academic program.