## Scenario

Connie is a recent graduate of nursing school, working on a certification in animal-assisted therapy. The Center for Human-Animal Interaction at her university has instituted a new program, having made arrangements with several community organizations to work with student volunteers. The center is implementing a digital badge system, designed to recognize not only what students study but what they accomplish in the community. The icons or images of the digital badges will appear in students' e-portfolios. There they offer faculty, peers, community organizers, and potential employers a snapshot of interests and suggest the depth and focus of a student's expertise.

Connie is doing an internship on Wednesday afternoons at the local Autism and Communication Center (ACC). She and five other student volunteers will set up and oversee field trips this quarter for six children, grades K–5. They will also work with the students to assess the effectiveness of the animal-assisted therapy, completing a related research project. In addition to the three course hours credited for this effort, the interns will receive a university-sponsored badge for child-animal interaction. Connie also works Thursday afternoons at a local riding stable, and she arranges with her employer to set up a field trip for the students from the ACC to introduce them to the horses. On the day of the field trip, Connie saddles the horses and ponies. Some kids "ride" with an adult leading the horse, while others "visit" selected animals, including Connie's experienced therapy horse, Raindance.

By term's end, Connie has earned badges for Child-Animal Interaction, Community Volunteer, and Community Project Management. A badge she received for placing third in a national dressage competition can also be displayed with those granted by her university. The badges from the university include links to web pages that describe each badge, list the requirements for it, and note the date she earned it. Through a simple online interface, Connie can manage her collection of badges, indicating which ones can be seen on personal and professional networks and in her e-portfolio.

## 1 What is it?

Badges are digital tokens that appear as icons or logos on a web page or other online venue. Awarded by institutions, organizations, groups, or individuals, **badges signify accomplishments such as completion of a project, mastery of a skill, or marks of experience.** Proponents suggest that these credentials herald a fundamental change in the way society recognizes learning and achievement—shifting from a traditional books-and-lecture pedagogy to a model with multiple knowledge streams, including new media, collaboration, interest-based learning, and project-based learning. As records of achievement, badges can recognize the completion of projects within a traditional college program or acknowledge experience gained through community efforts, online learning venues, or work-related projects.

## 2 How does it work?

Details vary from one grantor to the next, but one path for badges is provided by the Mozilla Open Badge Infrastructure (OBI) specification. Using this model, **a learner fulfills the issuer-specific criteria to earn the badge by attending classes, passing an exam or review, or completing other activities.** A grantor verifies that the specifications have been met and awards the badge, maintaining a record of it with attendant metadata. This metadata includes the issuer's name, the recipient's e-mail address, a link to the criteria, and a short description of the badge. It may also specify other details, such as the issue date, the expiration date, or a link to the evidence that supports the granting of the badge. The earner pushes the badge into a "backpack," a portfolio-style server account, where this award is stored alongside badges from other grantors. This badge repository might be the Mozilla-hosted Badge Backpack, or it might be a backpack hosted by any provider using the OBI specifications. Badge recipients using the Mozilla Badge Backpack can choose to keep their awards private or display some or all of them on selected websites, social media tools, platforms, or networks.

## 3 Who's doing it?

**Numerous groups, organizations, community projects, and web entities currently issue badges.** The Khan Academy, for example, offers a lengthy web page of them, such as an "Atomic Clockwork" badge, which requires a student to watch videos or hone a skill for each of 30 consecutive days. On the web at large, badges often provide participants with an opportunity to prove themselves, as with the Google News program. This initiative offers the chance to earn badges for reading a specified number of articles in a given content area. Readers can then raise the badge level (bronze, silver, gold, etc.) through still more reading.

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Badges in higher education have gained currency among early adopters. One such effort is the award-winning badge system developed at the University of California, Davis. In the interdisciplinary major of sustainable agriculture and food systems, students can complement their coursework with badges for workshops, projects, and internships. Badges also play a part in edX, an online learning effort sponsored jointly by MIT and Harvard University. Both institutions will offer online courses free via edX with "certificates" (badges) available for a modest fee to those who complete the coursework. This open-source platform will be made available to colleges and universities that want to host it. Institutions of higher education interested in a turnkey badge system can turn to companies like BadgeStack, which offers a standards-based custom badge structure that can interoperate with an LMS and is compliant with the Mozilla Open Badge standard. Mozilla is also putting together a platform for badge creation and issuance called Open Badger, with beta release expected later this year. Meanwhile, the Digital Media and Learning Competition recognized several innovative badge programs this year in multiple categories.

## 4 Why is it significant?

**Badges represent a different approach to credentials, one that places the focus on individual students and their learning accomplishments.** Individuals can control their badges by choosing where to earn them and—depending on the privacy specifications of the backpack—determining who can see them. Often these badges reflect educational experiences beyond the classroom, calling attention to study abroad, student government, or community service. A collection of badges can function as a distributed portfolio that may eventually be accessible from a variety of social media sites, such as LinkedIn, Facebook, and Google Plus. When badges serve as part of a résumé or portfolio, they tell prospective employers a more detailed story about the projects and activities that define a student's learning, including both the hard and soft skills that were acquired.

## 5 What are the downsides?

**Many details remain for badges to be broadly accepted** as legitimate indicators of education, skill, or experience, and it is too early to say whether employers will come to view them as trusted credentials. Acceptance depends, at least in part, on the level of quality control for these awards. While the OBI may improve this situation by making it easier for viewers to find out what compliant badges represent, the nature of an open system means that ultimately those granting badges are the ones who determine and verify their value. Given that many badges are awarded for such activities as completing a game sequence, some people may be inclined to discount badges as a whole. Because the performance of many activities is not directly observed, it can be difficult to prove that the badge was awarded to the person who completed the specified assessment. The reputation and the accreditation of colleges and universities give value to the degrees they confer and the records they hold in trust. By contrast, it can be difficult to establish the value of a badge awarded by an unknown or unaccredited source. Moreover, the rate at which online entities appear, disappear, and are purchased by others creates a fragile structure upon which to build trust.

## 6 Where is it going?

As badge systems become more broadly adopted, a host of issuers and endorsers will emerge. **Ongoing work will be done to validate badge**s to ensure those who earned, issued, and endorsed them are who they claim to be. If badges are headed toward employer buy-in, people might one day be hired based in part on the badges they have earned. In the near term, badges offer talking points for a job interview, opening a friendly dialogue between a manager and an interviewee and allowing the latter to speak about accomplishments and interests that might not otherwise arise in conversation.

## 7 What are the implications for teaching and learning?

Badges could represent an opportunity for higher education to rethink what is of value and recognize achievements that could be codified but currently are not. As an adjunct to institutionally supported learning, badges might provide a new avenue for continuing education. They support lifelong learning, not just through traditional academic or formalized learning pathways but also the kind of knowledge that comes from personal initiative and investigation. If badges are able to widely establish themselves as trusted credentials, they could help people plot their own path to learning, pursuing projects and experiences they feel are worthwhile. Badges have sparked lively conversation in the academic community. Some suggest they could disrupt the monopoly of credentialing that has been the province of higher education, while others insist that institutions will embrace badges to augment the traditional curriculum and add depth to the student portfolio. Whatever the future holds for these awards, it is clear **badges offer an opportunity to reevaluate credentials, expanding their role by making otherwise hidden accomplishments visible.**