THE PRACTICALITY OF DIGITAL BADGES

By John C. Foster

In the November 2013 issue of *Techniques*, the article "The Promise of Digital Badges"[1] explored the history of the badging movement and its connections to education. The landscape of badges is definitely changing, and over the last several months educators and the media seem to be polarizing, generally taking either a supportive or a non-supportive view of badges. The article on the following pages expands on the ideas put forth in the November article and provides more information on the motivational aspects of the implementation of an open, or digital, badge system. It will also cover the preliminary results of an experiment focusing on the receptivity of badges in career and technical education (CTE).

More Focus

Last year's article outlined the history of the badge movement and its connections to a variety of educational initiatives (e.g., massive open online courses (MOOCs), summer internships, extracurricular activities). Also mentioned in the article was the Chicago Summer of Learning, which is an interactive learning project and one of the most visible displays of badges. This kind of interactive learning with

a career emphasis has gained mayoral support in a number of locations. During the summer of 2014, several large cities, including Dallas, Washington, D.C., and Los Angeles, held their own "summers of learning."

These recent programs have put more of a spotlight on CTE, as well as on the terms being used for badges i.e., the electronic representation of skills. There are those who feel that the term "badges" may need to be changed because it is too simplistic. Others are advocating for the term "micro credentials" as a possible substitute. Some major financial supporters are also entering the digital badge arena, and the sheer number of badge issuers has grown significantly.[2]

Many states are also expressing interest in the use of badges within their educational systems. Each of these factors clearly indicates an increased focus on the potential of badges for education and particularly for the CTE teacher. A close connection can be made between badges and CTE: Badges display specific competencies, and CTE measures the learning of competencies. Badges and CTE just make sense.

The many benefits of badges that were outlined in the November article remain true today. One valuable benefit is the

ability for a student to display a badge on his or her resume, post the badge to a social media profile (e.g., LinkedIn) or link the badge to any other online media. Posting a badge allows the competencies learned by students to be more transparent to anyone viewing the badge. Another benefit is that badges provide an easy way for a student to distinguish him or herself from others in the job application process and/or those on a higher education path. In addition to these obvious benefits, the original article also highlighted the benefits of having a credible mechanism to connect the learner to the badge issuer. Based on some of the research being done on gaming, early discussions suggested that badges could be used to not only document competency, but could also be used as a potential student motivation strategy.

The Badge Ecosphere or "Badgeosphere"

Understanding the badge ecosphere is helpful because it demonstrates the relationship among the parties involved, and it can also assist in understanding the practical implications for CTE. As its name implies, the badgeosphere can be thought of as a circle which starts at

Figure 1. The Badge Ecosphere

the top with those organizations offering up the standards upon which the badge is based (Figure 1). In the CTE world, these organizations can be industry associations, charitable organizations, CTSOs, state policy providers, higher education institutions and secondary schools.

Moving clockwise around the circle, the next group is the badge issuers. Badge issuers have the technical capability to issue a badge to those who are interested in receiving one. This group can be made up of the same organizations that provide standards, but that is not true in all cases. Currently, these issuers need to possess some technical expertise, but as badging becomes more prevalent, this should shift, allowing more entities to become badge issuers.

The third group in the ecosystem is the CTE student or learner. This individual makes a decision on whether to use a badge and how it will be used. Learners have the ability to control what a viewer can see. This ability remains one of the biggest ben-

efits of a badge; the learner is in complete control of who sees his or her work!

The fourth stop on the clockwise journey is the badge host organization or displayer. Badge hosts include organizations such as Monster.com, Mozilla's backpack site and LinkedIn. These groups provide opportunities for learners to display their skills and knowledge to anyone having access to that portion of the site.

The last group in the ecosystem is the badge viewer. Viewers can be employers, postsecondary recruiters, parents and/or friends. Viewers are the people who are interested in finding out what competencies the earners (or learners) have as part of their portfolios.

Here's a quick example of how the badgeosphere might work in CTE. The American Culinary Federation (ACF) develops standards for chefs nationwide, so it would be considered a standards provider. ACF has made a decision to offer a digital badge that is issued based on meeting a

benchmark on an assessment. The ACF uses a third-party assessment provider (NOCTI) for assessment delivery; therefore, NOCTI is considered the badge issuer. Jeremy, a budding chef in the secondary CTE program at XYZ regional career and technical education center, is very interested in acquiring the digital badge sponsored by ACF. Jeremy is considered to be the learner or earner of the badge. Jeremy, having taken the ACF assessment and meeting the cut score, has qualified for a digital badge. Jeremy has decided to post his badge on both LinkedIn (badge host) and on his personal resume. A major hotel chain (viewer) is looking to hire 15 new chefs who are ACF-certified. The HR department notices Jeremy's digital badge posted on his LinkedIn profile. The viewer is able to quickly validate Jeremy's competencies, see his contact information and reach out to him to see if he is interested in an interview for a position within the organization.

Will Badges Really Motivate?

Up to this point, this article has focused on the practicality of digital badges. It's now time to take a closer look at the preliminary results of a badge pilot test. During the spring of 2014, NOCTI worked with five states in a research project focused on the receptivity of digital badges in the secondary CTE space. The states represented were California, Minnesota, Missouri, Pennsylvania and Virginia.[3] The NOCTI Skill-Badge™ beta project encompassed roughly 3,200 students in a variety of technical programs. Students were given the opportunity to take a technical skill industry-based credential and were challenged to meet a cut score determined by the National College Credit Recommendation Service (NCCRS). If students met the established benchmark, they not only received a recommendation for college credit at over 1,500 colleges nationwide, but they also had the opportunity to receive a digital badge to document their achievement.

The data from the SkillBadge beta project was collected from four different sources. First, statistical data was collected, which included the number of students who qualified for a badge, the number of students who registered for access to their

badges and the number of students who accessed their badges through the NOCTI SkillBadge Locker.™ In addition to this information, surveys were circulated to individual students, their teachers and administrators at the participating schools. These survey questions were research-focused and were based on the Motivated Strategies for Learning Questionnaire[4] published by the National Center for Research to Improve Postsecondary Teaching and Learning.

Preliminary survey results showed that of the 3,200 students across the five states, approximately 34 percent met the passing score to qualify for a college credit recommendation badge based on their technical skill competencies. Of those students who responded to the survey, 75 percent indicated that this technical assessment held more interest for them than other assessments they were required to take because there was an opportunity to earn a digital badge. The motivational ability of a badge, in general, was underscored by 74 percent of the respondents, indicating they wanted to acquire a digital badge because it signified they did better on a technical skill assessment than the majority of their peers. It could be surmised that part of the reason students wanted to do their best was because of the visibility that this badge would have.

Of the students who had accessed their badges from the NOCTI SkillBadge Locker, 92.7 percent of them shared the badge with colleges and universities for potential advanced placement opportunities. In addition, 39 percent of those same students posted their badges to employment sites like Monster.com. Lastly, 14.6 percent of those students posted their badge to social media sites. Of all students responding to the survey, regardless of whether they earned a badge, 70 percent believed that it was either "somewhat true" or "very true" that having a digital badge demonstrating educational accomplishment made a difference to both potential colleges and employers.

In another question that allowed respondents to select only one answer (instead of "all that apply"), students were asked to complete this statement: "The best thing about earning a digital badge related to education is … ." Thirty-seven percent of students gave reasons that related to their own internal motivation, 30.4 percent mentioned educational goals, 23.9 percent mentioned career goals and the remainder did not give a clear response that could be categorized.

One of the most interesting findings in the data was regarding what motivated students to earn a badge. A large portion, 82.4 percent, reported that they wanted to earn the badge for themselves, 78.4 percent wanted to show their achievements to an employer and 60.8 percent wanted to show these achievements to their teacher. The linkage between a CTE student and his or her teacher generally underscores the special relationship between the two groups, and would benefit from some follow-up research.

Badge Opportunities for the CTE Community

The SkillBadge beta project described earlier was conducted by NOCTI and NCCRS. Although these examples are specific to one member organization of the CTE community, it is anticipated that other organizations will follow with

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their own badging systems in the very near future. NOCTI has been exploring collaborations with other organizations to benefit CTE. Based on these preliminary results, NOCTI will be moving forward and offering badges to all customers meeting the NCCRS guidelines during the 2014–15 school year. NOCTI has been working closely with several industry associations, as well as other major credentialing bodies, to deliver a variety of badges to the CTE community.

Currently, in order to be a badge issuer an organization must have some technical expertise. As badges become more widely recognized, it is believed that badge development, at least from a technical aspect, will require less technical programming. There are several major companies that are working to roll out subscription systems allowing entities to develop a badging system. As badges grow, it is anticipated that these types of entities will expand as well.

An important part of these non-linear learning credentials is that they are based on quality standards and have the validity that the CTE employment community requires. In some ways, the discussion about digital badging parallels that of industry association certificates in terms of being based on solid quality standards, recognition by employers and signaling power to those who view them. Without this transparent validity based on recognized standards reflective of CTE community needs, badges will hold little meaning. Tech

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ENDNOTES

1. Foster, J.C. (2013, November). The promise of digital badges. *Techniques, 88*(8), 30–34.

2. A list of organizations that have identified themselves as badge issuers can be viewed at www.openbadges.org/participate-users.

3. An interview with two of the states that participated in the pilot test can be accessed on *Education Talk Radio* at: www.blogtalkradio. com/edutalk/2014/06/24/digital-badging-and-its-role-in-career-and-technical-ed.

4. National Center for Research to Improve Postsecondary Teaching and Learning. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ)*. Ann Arbor, MI: Pintrich, Paul R.; And Others. You can also view the questionnaire here: www.indiana. edu/~p540alex/MSLQ.pdf.

EXPLORE MORE

There are a number of resources available for digital badges. To view answers to basic questions as well as the full history, please refer to http://openbadges.org/faq/. Answers to questions from a legal perspective can be found at: http://openbadges.org/legal_faq.

Join us at ACTE's CareerTech VISION 2014 in Nashville, Tennessee, for sessions in six exciting and informative tracks, including Classroom Tools and Strategies, Safe and Effective Learning Environments, Innovation in Business/Education Partnerships and more!