

## What is a Digital Badge?

~Series: The potential of digital badges from the perspective of instructional design (2) ~

Kei Amano

Graduate School of Management, GLOBIS University the Chief Research Officer  
22 September 2024

When you hear the term "digital badge," what comes to mind? If you're an avid video game player, you might think of the badges awarded for completing certain activities within a game. Or, you might imagine the point badges you can collect on a smartphone app when you visit a restaurant. As pointed out in the first part of this series, these types of badges are often thought of as "rewards," used as tools to motivate people to take action in situations where they might not otherwise do so. This perception is tied to the idea of using badges as extrinsic motivators. Contrary to this view, Kyle Peck, a former president of AECT and a faculty member at The Pennsylvania State University, which is a hub for instructional systems research, has proposed a new way to utilize digital badges in education. Through collaborative research with organizations like NASA, Peck has suggested a use for digital badges that goes beyond merely encouraging extrinsic motivation. Although research and practice surrounding digital badges in the education field began to gain traction around 2012, Peck was one of the pioneers in recognizing their innovative potential in education. In this article, we will explore the possibilities that Peck, as an educational technology researcher, saw in digital badges.

### Peck's Digital Badge Model

Peck (2015) defined digital badges as "clickable graphics that include metadata, revealing information about the individual or organization issuing the badge, the criteria that must be met to earn it, the tools used to assess the evidence, and the evidence of learning itself" (Amano, 2020, p. 25). As shown in Figure 1, although a digital badge is essentially an image, it can store a variety of information related to learning as metadata. Thus, it can serve as a tool to provide detailed evidence of who

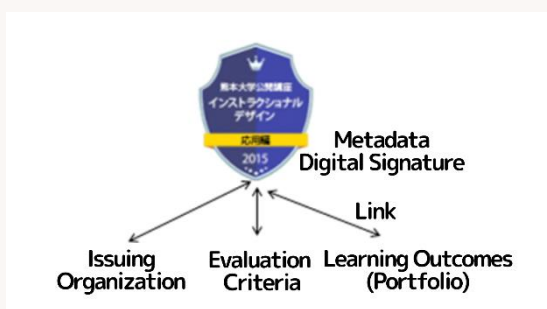


Figure 1: Metadata Associated with Digital Badges 1 / 3

has achieved what and how, validating the attainment of learning objectives.

Traditionally, in educational technology, rather than simply certifying the "completion" of an educational program based on the time a learner has spent, the Mastery Learning approach has been adopted, where "completion" is recognized only after confirming what the learner is able to do and the skills they have acquired. Peck argued that digital badges are not just tools to promote extrinsic motivation but are, in fact, tools that align with this tradition in educational technology. They provide a more reasonable representation of learning outcomes, backed by rich metadata.

### **Differences from Traditional Paper-Based Certificates and Transcripts**

Building on Peck's digital badge model, let's further examine the significance of using digital badges in educational practice. By comparing digital badges with traditional paper-based certificates and transcripts, we can highlight their unique features. Paper-based certificates and transcripts typically indicate that a learner has passed a program or provide information on the level of performance (such as Excellent, Good, Fair). However, without information on the evaluation criteria or details about the learning tasks that led to the certification, it is difficult for those outside the program to understand the true significance of these documents. For example, if a company's hiring manager sees that a student received a "Good" grade in a "Programming Basics" course, can they accurately determine the student's skills or capabilities? Probably not. In contrast, a digital badge can include more detailed information, showcasing what projects or learning tasks the learner undertook and the level at which they can perform those skills. This allows hiring managers to make more informed decisions about the learner's skills and abilities, assigning them to the most suitable roles or projects. Digital badges can also be used not only in job-seeking scenarios but also as proof of skills when applying for higher education programs or pursuing advanced qualifications within a specific industry.

Another advantage of digital badges is that they are easier for learners to manage compared to paper-based certificates. If a learner possesses the digital badge image, they can prove their certified skills without having to request information from the issuing institution. In the case of traditional paper certificates, learners often have to request a reissue from the institution whenever they need proof of their skills, which can be difficult if the institution has ceased operations. Digital badges also come with systems that offer three essential functions: issuing badges as evidence of achieving learning objectives, displaying badges with their associated metadata, and

managing badges earned across different programs. To ensure these functions are interoperable across various systems and institutions, the Open Badge standard has been developed. This standard aims to allow learners to display and manage badges earned from different institutions, like School A and School B, on any system that meets the standard, regardless of where the badges were issued. Originally developed by Mozilla with support from the MacArthur Foundation, the Open Badge initiative was transferred to 1EdTech Consortium Inc. (formerly IMS Global Learning Consortium) in 2017. Open Badges continue to evolve with new versions being released in response to technological advancements. While changes to the Open Badge standard are expected in the future, it is anticipated that this will expand the diverse possibilities for using digital badges in educational contexts.

In this article, we have explored the potential of digital badges in education, based on Peck's model, highlighting their role as more than just tools for promoting extrinsic motivation. In the next installment, we will continue to expand on the discussion about the possibilities for using digital badges in educational settings.

## References

Amano, K. (2020) Development of Supporting Method for Training Design Based on Mastery Learning: Focus on a Use of a Digital Badge  
Doctoral Dissertation, Graduate School of Social and Cultural Sciences, Instructional Systems Program, Kumamoto University, submitted in 2019.

1EdTech Consortium Inc. (n.d.) Open Badges

(<https://www.1edtech.org/standards/open-badges>) retrieved on September 22, 2024

Peck, K. L. (2015). The Future's So Bright I Gotta Wear Shades. *TechTrends*, 59 (1):24-30.