

Digital Badging and Micro-Credentialing

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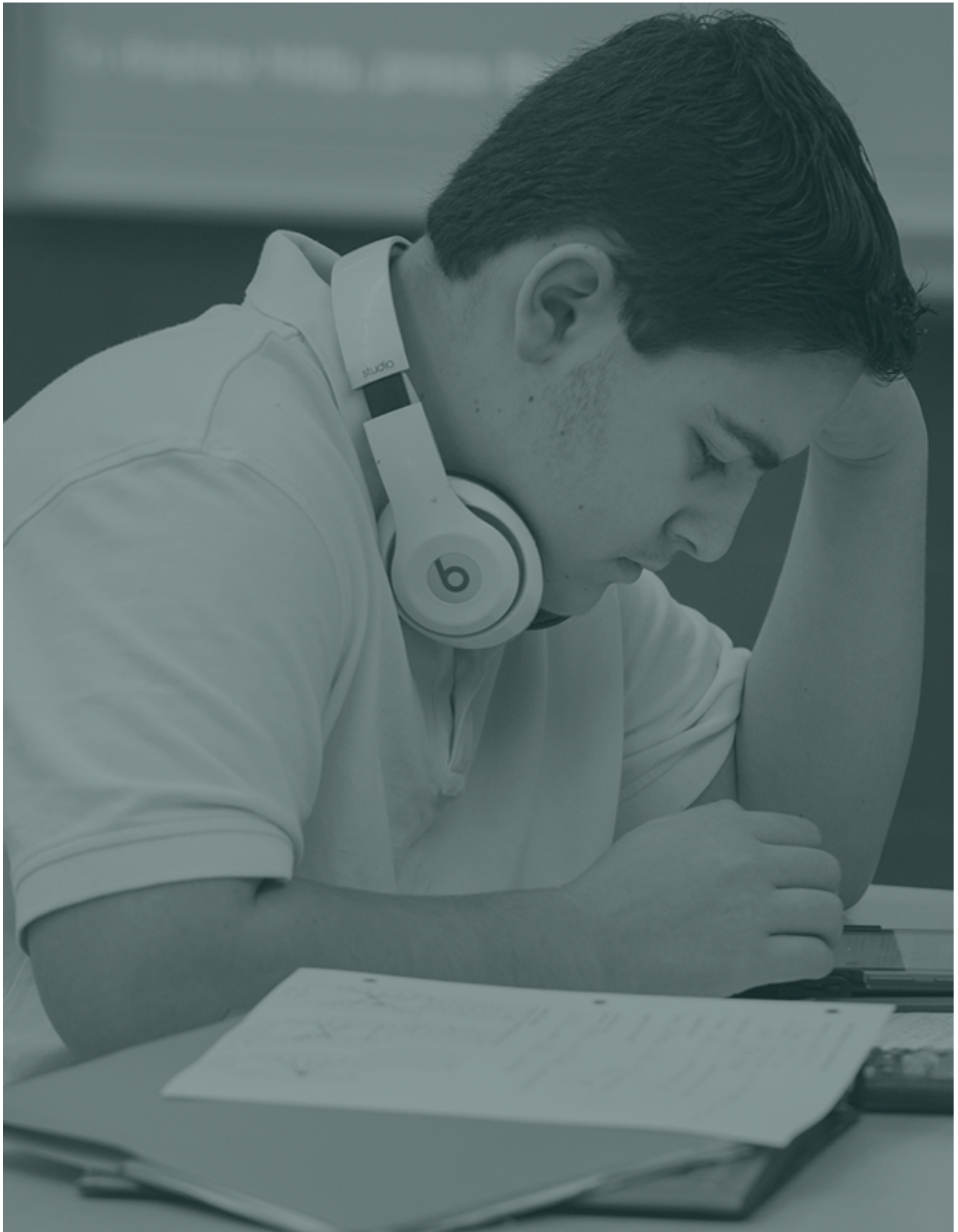




TABLE OF CONTENTS

Introduction 4

What is Digital Badging and Micro-Credentialing?	5
Potential Value of Badging and Micro-Credentialing for PK-12	6
Digital Badging in Education: Background	7

A Closer Look at Robust Examples 9

Educator Professional Development: The Digital Promise Micro-Credentialing Initiative	9
Connected Learning for Students: Cities of Learning and LRNG	11
College and Career Readiness: Aurora Public Schools	11

Scan of PK-12 Activity in New England 13

Maine's Converging Initiatives	13
Massachusetts: Boston After School & Beyond	14
Rhode Island: Providence After School Alliance	15
Rhode Island: Assessment for Learning Project (ALP) Performance	16
Assessment Micro-Credential System	

Current Research 17

Findings from the Field	17
Future Outlook	19
Challenge to the Field	21

Resources 22

Research Interviews	22
Selected Resources	23



INTRODUCTION

Digital badges have been cropping up in different corners of our lives for ten or more years. If you were a gamer immersed in your Xbox 360 experience in 2005 you would have experienced one of the first opportunities to earn badges that symbolized your accomplishments in the game. Jump forward to 2016 and anyone can earn a digital badge. Walk 10,000 steps wearing a FitBit. Take an online course from the Museum of Modern Art in New York City. Enroll in a massive open online course (MOOC), where badges have stepped in where formal credit can't be awarded. Work at big companies like Microsoft, Cisco, Adobe, and IBM and you might earn badges or digitized "micro-credentials" for workplace accomplishments like competing in hackathons, publishing articles, teaching or mentoring, or completing formal credentialing or certification programs.

In PK-12 settings, students can earn badges by mastering math skills and completing other badge-worthy challenges with online curriculum providers like Khan Academy or BuzzMath. Their teacher may issue badges for classroom participation, attendance, or academic performance using digital badging features integrated into the school's learning management system or included in a growing number of products like ClassDojo or ForAllRubrics. Special education students in New York City's District 75 can now earn badges for achievements related to their IEP goals. In Chicago and Pittsburgh, cities involved in a national network of "Cities of Learning," students can search an online platform, tap into a city-wide campus of community-based and online learning opportunities, and come away with badges related to financial literacy, coding, scriptwriting, copyediting, video production, boat repair, athletics, youth leadership, and many other skills.

Badging and micro-credentialing are here. However, it is an open field in a 'wild west' stage. Are badges and micro-credentialing a must-have, something educators can use to drive or accelerate the transformation of the PK-12 education so that it better prepares students for the future in which they will live and innovate? Or are they at best a fun, slightly gimmicky tool with oversized ambition that may have use in some settings, for some learners, but ultimately prove to be a non-starter in the PK-12 environment? Or perhaps they have strong potential but are simply too challenging to implement in a powerful, transformative way, giving PK-12 educators another aspirational technology that can dance on the margins but never at the center of our educational or educator workforce development system?

What does badging really represent for PK-12 educators dedicated to student-centered learning? This paper explores that answer with the help of voices directly involved in badging and micro-credentialing and educators thoughtfully watching it. It reflects on the potential of using badging with students and with educators, as a strategy to transform professional development. The perspectives included here are based on one-on-one interviews with more than 25 badging experts and practitioners, a review of badging literature and research, a scan of national and New England badging and micro-credentialing activity, and discussions with educators involved with and not involved in badging. This line of inquiry and paper were funded

by the Nellie Mae Education Foundation as part of its strategy to identify and support innovative educational practices which can support, and ideally accelerate, student-centered learning and the systemic shifts required to do it well.

It is important to note up front that badging is still a very new and emerging practice, particularly for PK-12 education. The perspectives of people interviewed for this paper were often rooted in widely varying degrees of direct experience or types of exposure. People with experience in one area of badging – for example, with students – often had no experience with badges used to support educator professional development or vice versa. Advocates working with badging are increasingly seasoned and articulate. They make a very compelling case for the value, even the inevitability, of some form of badging or micro-credentialing, particularly when it comes to adult learning and teacher professional development.

Those thoughtfully watching, with less or no direct experience, were typically more on the fence, open to the possibilities but looking for more information and proof points. Opinions in a group could also sometimes run from hot to cool; for example, in a conversation with four staff members from an Ohio school district using micro-credentialing for teacher professional development, two staff members felt it was a very valuable way to represent adult learning, one felt it was a valuable approach but that the “badge” itself isn’t totally necessary, and one worried whether badging’s public face would make it easier for teachers to find other jobs or for other districts to poach their staff (“good teachers are hard to find”). They also described other teachers in the district who “weren’t into it” or who were initially turned off (“we’re not Boy Scouts”) but came around when they began to understand how credentialing could change professional development.

For the most part, the paper presents the value proposition of badging/micro-credentialing from the perspective of those closely involved. At the same time, it highlights emerging lessons learned and issues to address if PK-12 educators are to apply the practice wisely and deeply, at the core of the learning process.

What is Digital Badging and Micro-Credentialing?

Overall, there are an estimated 25,000¹ badge issuers, up from approximately 1,500 only a few years ago. The concept is fairly straightforward, at least at the start of a badging conversation: a digital badge is **an online validation of an achievement, skill, or credential**.

There is the badge image itself – the visual symbol or icon a learner can display to represent mastery or knowledge. As a web-enabled object, however, that is just the surface. Anyone clicking the image can link to verifiable information about who issued the badge, the evidence behind it, and its potential value.

In this sense, badges can be data-rich in a way that traditional transcripts, resumes, degrees, and certificates, even electronic ones, typically are not. Badges also provide a more granular, competency, or skill-based lens than traditional methods for communicating learning or qualifications. A company HR person, a project manager forming a new team, or a college admissions officer can, in theory, drill down into badge information to get a better understanding of the specific skill a prospective employee, team member, or applicant has and how that skill was acquired.

Badges are appearing in such a wide range of settings because they can. The world of badging is open – *very open*. Anyone can issue a badge and anyone can earn one, and badges can be designed for any purpose or accomplishment, however large or small the “grain size.” This openness and flexibility is possible because most badge issuers follow an “open badge”² specification initiated by a technology team at

Play Video:
Digital Badges: Unlocking 10 Million Better Futures (2014),
Badge Alliance

¹Interview with Erin Knight, November 12, 2015.

Mozilla that established technical standards for the information (or metadata) every badge should include. This standard, now shepherded by the [Badge Alliance](#), allows badges to be interoperable – understood by and shared across different technology platforms. If teachers earn one badge issued by NASA and another issued by their school district, they can collect and store them together and share them both out to their badge portfolio and LinkedIn profile.

The open badge infrastructure standard also allows technology developers to put badging tools into the hands of everyone. For example, tech teams have developed free (open source) and open badge ecosystem tools like the [Mozilla Backpack](#) to store badges, [BadgeOS](#) (a WordPress badging system plug-in), and the [Mozilla BadgeKit](#), released as a beta or test tool, which can be used to get a full-blown badging system up and running.

Potential Value of Badging and Micro-Credentialing for PK-12

Given its diverse manifestations and uses so far, badging implementation has a slightly schizophrenic profile. On one end of the spectrum, badges are used as motivational rewards – stickers or stars 2.0 – that can be awarded liberally in everything from apps to classrooms for small daily achievements or accomplishments that may have value only within the earning context. Even a casual hobbyist can run with them.

At the other end, badging can be used to inspire and recognize meaningful credentials and skill-building, whether it's a student building a portfolio of competency-based evidence for graduation or a teacher committed to improving math instruction or student-centered assessment skills.

Potential badging and micro-credentialing benefits:

- It can catalyze personalized learning – for educators and students alike – by providing a transparent and verifiable system to recognize learning wherever and whenever it happens. Teachers and students can break away from seat time and the traditional structures of classrooms and professional development days to take full advantage of the broader ecosystem of learning opportunities available in today's world, including learning experience they design themselves or collaboratively with other students or colleagues.
- It allows learners to gain a much stronger sense of agency – to understand their own skills and skill development goals and the broader range of experiences and paths they can create to achieve them.
- It can strengthen assessment practice by providing an evidence-driven methodology that requires the learning provider and learner to manage the learning experience using clear criteria, evidence, and methods in a very transparent way. In good hands, badging/micro-credentialing can be a valuable tool in an assessment designer's toolkit.
- It provides a method to formally recognize skills that are important to other consumers – for example, colleges and employers – skills that often lie beneath the surface of courses or cut across them and that traditional schooling and professional development methods usually have no formal way to recognize (or even assess).
- It provides a methodology for mapping out a more flexible array of learning pathways and trajectories, including pathways that cut across traditional courses and educational settings, and for packaging skills in creative and meaningful ways.

²The concept of "open badge" has a deeper resonance and ethos than the more generic notion of a "digital badge". Open badges are an "open source" technology (free, co-created and iterated on by the open badges community, built on open source software) that is designed to be technically interoperable, "earner-centric", permanently portable, and transparent. Not all badges fit this profile.

"If the badge is only an indication of an interesting thing I did, then we haven't really done anything."

– David Ruff, Executive Director, Great Schools Partnership

- It serves as a student engagement and ‘human resource management’ tool that can be used to recognize and develop expertise in students and staff – and those pockets of special expertise can then be tapped to benefit the classroom and school community.

From a learner perspective badging and micro-credentialing can also help resolve a communication challenge that traditional credentials have found difficult: two people may have the same diploma or degree but they each may have followed very different pathways as learners and may have very different skill sets.

Digital Badging in Education: Background

While digital badging may bring up images of gaming, social apps, and offline predecessors like Boy Scout and Girl Scout merit badges, military patches, and diving certification badges, the open badge movement has become part of important conversations taking place nationally and internationally about learning and career development in the digital age.

Badging specifically for education hit the spotlight in 2011-2012 when [HASTAC's Digital Media & Learning Competition \(DML4\)](#) supported by the MacArthur Foundation, funded an intriguing array of organizations including the National Aeronautics and Space Administration (NASA), Disney, Smithsonian, National Oceanic and Atmospheric Administration (NOAA), and Penn State University to experiment with what was then still a very new digital technology. Many of the 30 projects focused on connecting students to expertise and learning outside of school – or growing the badging ecosystem. A few projects probed the potential value of badging related to educator professional development; with a final chunk of funds awarded to researchers for five small scale studies of badging.

On a parallel track, with sometimes overlapping players, there has been a growing movement to establish new forms of credentialing as equally valuable alternatives to, or supplements to, traditional degrees. According to the American Council for Education, the quantity of alternative credentials, including digital badges and ‘micro-credentials,’ has grown explosively. For example, less-than-one-year certificates were the fastest growing credential from 2000-2009 and the number of occupational certificates awarded in the U.S. has increased by more 800% in the past 30 years.

This push for better credentialing systems is coming from forces associated with workforce development, professional training, and with higher education. People simply have more choices about where, when and how they learn and employers generally value current skills over a past degree and an employee’s ability to keep his or her skillset up-to-date and relevant in a rapidly evolving workplace. Supporters like EDUCAUSE, the Lumina Foundation, the Gates Foundation, Mozilla and IMS Global, a technology standards organization focused on higher education interoperability, are involved and playing important advocacy and convening roles for various projects.

The American Council on Education’s [Alternative Credit Project](#), funded by the Gates Foundation, for example, convened experts to look at and produce white papers on two interrelated challenges: communicating the value of competencies (can employers or students understand the competencies a credential represents) and identifying “quality dimensions” of healthy, connected credential ecosystems (do people have a way to understand the value of a credential, relationships between credentials, and opportunities they might connect to).

Meanwhile, the [Credentialing Transparency Initiative](#), funded by Lumina, is working to create “greater coherence and transparency in the U.S. credentialing marketplace” by identifying common, universal terms for describing key features of a credential – a

“This is the most learner-centric tool we have.”

– Erin Knight, Badge Labs, Maine State of Learning, and Founding Director of the Badge Alliance

stronger ‘taxonomy’ – and hosting a voluntary Credential Registry, set to launch in 2016, which will allow users to see what various credentials represent (credential name, type, level, competencies, assessments, accreditation, labor market value, etc.). On the technical front, Mozilla, Collective Shift (a MacArthur Foundation spin-off organization) and IMS Global (a member-based consortium of K-20 institutions, technology platform vendors, and training organizations) are supporting further development of the Open Badge standard by working with the Badge Alliance to develop an education-related extension that will augment the metadata within badges. Known as the IMS [Digital Credentialing Initiative](#), this project seeks to reimagine the transcript in competency-based educational systems and ensure improved badge interoperability among higher education institutions. The Lumina-funded [Connecting Credentials](#) work is also relevant to this discussion as it seeks to expand the understanding and use of the term credential (a common language and framework for credentialing). The ultimate aim of this is to link together all credentials so that people can access a truly interconnected credentialing system and progress seamlessly.

PK-12 stakeholders are involved in these postsecondary and workforce conversations – a nascent connection – with most attention directed at teacher professional development and an understanding that the K-12 environment has some unique issues to address when it comes to student badging – namely Children’s Online Privacy Protection Act (COPPA) and the Family Educational Rights and Privacy Act (FERPA), which can affect how and when students display their badges publicly and how systems track and/or share learning analytics related to badging.

³Austin, J., Mellow, G., Rosin, M., and Seltzer, M. (2012) Rethinking Credentials. American Council on Education.



A CLOSER LOOK AT ROBUST EXAMPLES

Educator Professional Development: The Digital Promise Micro-Credentialing Initiative

Digital Promise, a national non-profit initially authorized by Congress to support technology and learning practice and research, has moved energetically into the badging arena. They refer to this effort as “micro-credentials” rather than “digital badges” due to feedback from educators that badging did not seem like something that would be taken seriously in professional learning conversations. Digital Promise hopes micro-credentials, which are displayed in the form of a digital badge, will help fundamentally shift the conversation about teacher professionalism and accelerate the move toward [“next gen” teacher professional development](#).⁴

Teachers are often required to be continuous learners. In a world where a Master’s degree and other ‘macro’ credentials don’t necessarily translate into gains in student achievement and where educators are frustrated with staid, largely ineffective professional development methods, micro-credentialing can support teachers as they create their own personalized, competency-based learning pathways and get recognition for a wide range of valuable, career-significant learning experiences. Equally important is the belief that teachers need to experience the power of personalized, competency-based learning in order to create similar experiences for their students.

Beyond just promoting this idea, Digital Promise has become an important implementer in the PK-12 badging ecosystem, with support from Carnegie, MacArthur, Dell, Hewlett, and other foundations. As part of their strategy, they established a strong framework defining the five components they believe a high quality micro-credential for educators should include and are working with partners to develop a collection of micro-credentials that will have high value to educators (over 140 to date). They recently [collaborated with BloomBoard to launch the platform](#) educators can use to find and apply for micro-credentials and that organizations can use to add new micro-credentials to the collection. The platform, which is constantly expanding to include new micro-credentials from new issuers, functions as a free marketplace for finding and awarding micro-credentials for educators. Each micro-credential bears the Digital Promise and partner brands, a mark of quality akin to the Good Housekeeping seal of

“Educators are continuous learners. They spend their entire careers learning new skills, especially given the kinds of practice and policy changes they experience in the field of education. These days, they have many new ways to learn things – in ways that are personalized and in settings that are equally valid and valuable. This is a conversation about professionalism. It’s about teachers developing a portfolio of everything they are doing related to their professional craft.”

– Jennifer Kabaker, Director, Educator Micro-Credentials, Digital Promise

⁴According to a study commissioned by Digital Promise, [Making Learning Count – Recognizing Educators’ Skills with Micro-credentials](#), 84% of teachers surveyed reported participating in in-service days, with a 20% satisfaction rate; meanwhile, 72% reported participation in informal (non-required) professional development activities including professional networks, conferences, mentorships, and learning using online resources (expert practice videos, tutorials, etc.).

approval, intended to elevate and distinguish the collection of Digital Promise curated micro-credentials in a field where just about anyone can create and issue badges.

In addition to working with districts within its League of Innovative Schools network to implement local micro-credentialing systems, Digital Promise is partnering with expert organizations to create high quality micro-credentials that can be made available through their platform. The Center for Teaching Quality (CTQ) in North Carolina is an example. They have channeled their specific expertise with teacher leadership and distilled it into three new “stacks” or set of micro-credentials that are available through Digital Promise’s platform. This enables CTQ to articulate critical competencies related to their work and leverage a new digitally facilitated mechanism to empower more teacher change agents.

“It’s extremely important to have vanguard organizations and aggregators like Digital Promise who can set the bar on quality because the reality of how teachers and administrators experience professional development often doesn’t match lofty rhetoric – professional development schools of the 1990s and district-based professional learning communities of the 2000s come to mind. So many good reforms and really good ideas haven’t gone to scale or became caricatures of what they were supposed to be because people didn’t get the quality experience.”

– Barnett Berry, Founder and CEO, Center for Teaching Quality

From a both a mission and organizational positioning standpoint, micro-credentialing opens a new distribution channel for CTQ’s expertise, yet does it in a way that doesn’t require the internal capacity build-up and costs that most traditional intermediary support methods require. CTQ’s micro-credentials define the “what.” Teachers who want to earn one of the micro-credentials decide how they want to do it, including where and with whom – and this might involve CTQ or not. This means CTQ and similar expert organizations won’t be working with each and every teacher in the way they typically might have been, as part of on-the-ground professional development workshops and coaching. In many cases, the CTQ may serve only as the micro-credential issuer: they provide the criteria and validate evidence of learning. In other scenarios, CTQ may serve as both issuer and professional development provider. There are also new possibilities; for example, expert and endorsing organizations involved in micro-credentialing can use the new connections they gain with educators to mobilize or deepen professional learning networks aligned to their missions and interests.

Digital Promise is also working directly with districts to launch micro-credentialing strategies. In the Kettle Moraine School District in Wales, Wisconsin, for example, the district has revamped its professional development strategy. Gone for the most part are many of the traditional district professional development days. Instead, teachers can apply to earn micro-credentials by submitting proposals to a district team. The teacher, or teachers working collaboratively, can decide where and how they earn a micro-credential, e.g., via workshop offered by a provider, online course, self-directed research project or classroom-based inquiry, professional learning community, etc., and they must provide evidence that shows how what they learned directly effects classroom practice.

In Kettle Moraine, each micro-credential earns the teacher a \$200-\$300 increase in base salary. Teachers in Kettle Moraine and nearby districts who hear about the salary bump approach seem to like the practice (although there are no formal staff-wide surveys on this yet). Other teachers not using micro-credentials were intrigued, although a few felt tying professional development to salary in this way would never fly in their state or district – that Wisconsin’s current educational and political context make it uniquely possible. Other people interviewed for this paper felt such a direct connection to teacher compensation is not necessary. They believe that other incentives could work equally well, e.g., covering the cost of professional development or micro-credentialing learning experiences, and that we are vastly underestimating the intrinsic motivation educators have to learn, especially when given a chance to step off the traditional one-size fits-all educator professional development track.

Connected Learning for Students: Cities of Learning and LRNG

Another badging pioneer is Chicago's City of Learning initiative which started three years ago as a way to stave off summer learning loss in a city bursting with summer learning opportunities. Within a very short amount of time, Mayor Rahm Emmanuel, MacArthur Foundation representatives and other leaders were able to rally more than 100 organizations and develop a badging system that spans their various activities and offerings. Partners include major Chicago art, cultural and science institutions, colleges, employers, the school district, civic and neighborhood organizations, and others. The Mozilla Foundation helped develop the technology platform students can use to find badging opportunities – some of which can be completed online, virtually, and others onsite at a provider organization. Partners also worked to provide drop-in center time at locations around the city so that students without internet access could take advantage.

In Chicago, the badging system has essentially been an overlay, something retrofitted onto organizational relationships and learning opportunities that existed. This enabled partners to launch a big, citywide badging ecosystem quickly – everyone was at the table and already had an understanding and implicit trust – but the rapid start-up process, with its heavy focus on creating the web-based platform needed to promote, find, and manage badging opportunities may have come at the expense of establishing the value proposition of the endeavor. The initial system included different levels of badges (participation, skill, and achievement) and a wide range of opportunities (sports participation to video production skill development). Now, more than three years into the effort, the coalition is continuing its work to establish the broader value of badging in the community. More thought is going into policies about what gets credit and does not, connections with the school district, how badging data might be used to inform instruction, and the value of badges to employers and postsecondary consumers. It's worth noting that the Chicago effort provided the first precedent of a college, DePaul University, looking at badges as part of admissions. Badging has also been incorporated into the Chicago Public Schools [Parent University](#) where parents can complete digital badge challenges.

Chicago has been a hugely important learning lab for badging and connected learning. Other cities – Pittsburgh, Dallas, Los Angeles, and Washington, D.C. – have since joined to create a national Cities for Learning network. While MacArthur was still the primary funder, local efforts attracted new support from funders like Sprout Fund, JP Morgan Chase, the California Endowment, DC Trust, and others. More importantly, Cities of Learning initiatives seem to have provided an important proof of concept.

In 2015, Connie Yowell, previous director of education for U.S. programs at the MacArthur Foundation, left her position to head up a new venture called Collective Shift whose first initiative “[LRNG](#)” is committed to “[no bells, no walls, no limit on learning](#)” and represents a re-branding and expansion of the Cities of Learning concept to 70 communities by 2018. In addition to positioning itself as the go-to for the connected learning movement, LRNG is also positioning itself as a technology platform provider and aggregator: organizations can use the LRNG platform to create student badging and other learning opportunities, thereby increasing the network of connected learning opportunities available to member communities. National partners include the MacArthur Foundation, John Legend's Show Me Campaign and the National Writing Project.

College And Career Readiness: Aurora Public Schools

In addition to badging and micro-credentialing initiatives organized by these larger intermediaries, a handful of school districts⁵ have started to implement larger scale badging systems for students on their own power. One example is the [Aurora Public](#)

[Schools](#) which has been developing a district-wide college and career readiness badging system for the past three years that is aligned to the [Colorado's Career Cluster model](#), an established statewide framework for postsecondary and workforce readiness and career pathway planning.

“This is a must-have. It documents the skills you need to meet industry expectations. It lets us be more proactive about connecting students to opportunities, and we’re talking with industry about the skills they want to stand behind.”

– Charles Dukes, Director of Postsecondary and Workforce Readiness Programs, Aurora Public Schools, Colorado

The district’s superintendent introduced micro-credentialing as a better, more cost effective and equitable way to support career pathway exploration and 21st century skill development across the district. His analysis of the status quo found that the district’s system of pathways and career tech courses was uneven across schools, required a certain level of staff credentials, materials, and courses, and, most importantly, didn’t serve many students or document the professional competencies employers want.

Working with area employers, the district developed a badging ecosystem that allows students to earn badges in five competency areas: critical thinking, invention, self-direction, collaboration, and information literacy. Employers help validate badges and the criteria it takes to earn them while also providing industry-related learning opportunities for students. Students can earn multiple badges or ‘level up’ in a particular area and their badges can be used as currency in the community for increased advancement or opportunity – in essence, badges unlock opportunities with a community partner or endorser. As an example, students who earned a top level badge in Invention (called a “Summit” badge) were able to participate in a personalized job shadow experience with a web app designer hosted by a badging system community partner. High school students can use their badges to help land a summer internship with employer partners or get bumped to the top of the list. District staff see this as a powerful way to

help students understand the connection between their skills and opportunities.

The district uses Credly, a commercial badging platform, to manage badges using a “closed system” approach to maintain student privacy. As students approach graduation, they will be able to choose whether or not they want to publish their badges as part of their profile, with the idea that colleges and employers might consider them when making admissions or hiring decisions. Badges are not linked to credit and district staff do not see this as a priority and may not for some time. Instead, the more immediate goal is to include badges on student transcripts. This past year, the district also created a full-time district level staff position to coordinate the badging initiative, make sure the system is user-friendly, and to start looking more closely at how students in different grade levels are engaging with badges.

So far, district leaders feel their badging system, working in tandem with individualized plans, allows staff to be more proactive about reaching out to individual students about their interests and connecting them to badging opportunities. It also allows the district and students to have an active and authentic conversation with employers about what skills are needed and where and how in school and in the community students can master them.

Badging work in Colorado is also worth highlighting because activity is happening at multiple educational levels – in a PK-12 district and within the Colorado Community College system – with the same state career cluster framework as the organizing methodology. The connection is largely conceptual (efforts are not yet connected in actual practice) but it’s the clearest glimpse we have so far of how badging could help articulate competency-based learning trajectories from PK-12 to postsecondary and the workplace.

⁵Corona-Norco Unified School District in California is another district badging leader. With its [Passport to Success](#) program, students at all grade levels can earn badges for a wide variety of achievements including “badge assignments” developed by teachers, meeting “A-G” requirements (for competitive college admissions), testing (ACT, SAT, etc.), etc. Students ages 13 and older can post their badges to Facebook and other social media sites.



SCAN OF PK-12 ACTIVITY IN NEW ENGLAND

New England also has an emerging badging and micro-credentialing scene. In fact, the Providence After School Alliance in Providence, Rhode Island, was among the first pilots in the country funded by the MacArthur Foundation, and Maine hit the headlines notably this past year. This section gives a brief overview of prominent PK-12 work in the region. There are likely other pockets of activity, driven by individual teachers, use of Khan Academy and other products, and through smaller scale opportunities offered by providers experimenting with badging (e.g., MIT's [summer learning "app inventor" badge](#)) – and there is certainly movement in the postsecondary and workforce arenas (e.g., Boston University School of Medicine's [Medical Education Badge Program](#)). National organizations like Gear Up are also looking at badging as a staff development strategy which could spark activity in New England.

Maine's Converging Initiatives

Maine is the only state in the country launching state level badging and micro-credentialing initiatives simultaneously on multiple fronts – educator professional development, student learning, and workforce development. The new efforts are just getting off the ground. While connected conceptually and by overlap in people, specific projects appear siloed in practice at this stage. However, the convergence of state-level vision, organizations, thought partners, and experienced badging pioneers gives Maine unique potential to serve as a test-bed for the field.

[Maine State of Learning](#) involves a network of public and private partners working to acknowledge skill development across the state, using badges as “a common language than can help connect industry, school, and adult learning.” This past summer, a coalition of 21 organizations in the Portland area piloted a PK-12 student badging initiative modelled after Chicago's Cities of Learning. The effort is being shepherded by Badge Labs and Erin Knight, one of the country's first badge system designers who helped launch the Chicago system. Maine's partner coalition has focused intently from inception on the question of how to “count” out-of-school learning, not just provide an ecosystem of opportunities. This has brought them to the doorstep of the Great Schools Partnership which, as part of a separate project, has been developing model ‘scoring guides’ that could possibly provide a common framework schools and community organizations can use to validate evidence of learning and recognize it universally across partner organizations. If realized, this could be an important contribution to the field.

Turning to educator professional development: In October 2015, Maine Department of Education's Learning Through Technology Team, which oversees the Maine Learning Through Technology Initiative (MLTI), and the Association of Computer Technology Educators of Maine (ACTEM) announced a new partnership with Digital Promise to develop educator micro-credentials – making Maine the first state to use micro-credentials with educators on a statewide, systemic level. Why? The move is intended to help reframe professional development related to educational technology

“It’s not happening in enough places in a serious enough way yet. A lot of what I saw I put it in the ‘hobbiest’ category until I saw the Digital Promise work. Now we have thrust rockets. In this next 2-3 year stage, we need to switch on the booster rockets.”

**– Mike Muir, Policy Director,
Maine Learning Technology
Initiative, Maine Department
of Education**

so that it is about “more verbs – what teachers do with technology to achieve educational goals– and “fewer nouns” – the specific tools used or the computer teacher⁶.

The decision to do educator micro-credentials was made quickly, over the span of three months, and the timeline is tight. This year Digital Promise will train a design team made up of LTTT staff, teachers, educational technology specialists, and others and will support them as they develop a set of micro-credentials aligned to [12 professional learning domains](#). The micro-credentials will be “Maine branded” and added to Digital Promise’s micro-credentialing platform. Starting in summer 2016, Maine educators will be able to find them and earn them on a voluntary basis. While there was a splash of publicity⁷ surrounding the initial announcement of the Digital Promise partnership, the initiative has a soft launch feel to it.

Looking a little further down the road, Mike Muir, who heads up the effort for the Maine State Department of Education, sees additional micro-credentials and trajectories that could lead to a larger credential and potentially a way to recognize educators and schools that have earned a certain percentage of micro-credentials in the 12 educator competency areas they focus on.

He also believes Maine is at a point to re-think teacher certification and recertification and that micro-credentials may help – but that Maine needs more concrete examples before it heavily promotes micro-credentials. Not enough people outside of early adopters and enthusiasts have any actual experience with them.

Massachusetts: Boston After School & Beyond

Boston After School & Beyond (BASB) [piloted a set of badges](#) in 2015 for grade 4-8 students in six summer learning programs. Their system is tight and well-articulated: students can earn badges related to five different competencies – communication, critical thinking, engagement in learning, perseverance, and teamwork. These skills are based on Next Generation Science standards and the Achieve-Connect-Thrive (ACT) Skills Framework (skills students need in order to be successful in school, college, and career).

The criteria for earning a badge is clearly spelled out. Programs used the Survey of Academic and Youth Outcomes (teacher version or SAYO-T), a tool they had used before, to collect pre and post data on student behaviors. For each competency, students could earn a badge for overall “achievement” and/or a badge for “meaningful” growth. Badge earners received a digital badge as well as a physical badge pin for their backpack. Each summer program was encouraged to create a culture related to the badging effort, e.g., posters, closing ceremonies with families, etc.

For an organization focused at program level quality, the badging system gave BASB an individual-student level view for the first time. It also “changed the stakes” around some key program level practices, e.g., using the SAYO-T (there was more incentive to do so), and opened up more conversations with students about how they were doing with skill development.

Following the pilot, BASB began working with Cityspan, a technology partner, to

⁶ More Verbs, Fewer Nouns: 12 Professional Learning Curriculum Buckets for Teaching and Learning with Tech <http://moreverbs.info/2015/07/08/12-professional-learning-curriculum-buckets/>

⁷ Maine DOE Newsroom (10/19/15) Maine leads the country (again!) in classroom technology and it’s a promise for educators. <http://mainedoenews.net/2015/10/19/maine-leads-the-country-again-in-classroom-technology-and-its-a-promise-for-educators/>

create a more robust “back end” they can use to manage badging citywide (the Providence After School Alliance (PASA) in Rhode Island and Expanded Schools in New York are also partners in this). They are also looking at ways they can work with schools – starting with Orchard Gardens – on sustaining interest in badging throughout the school year and have had a preliminary discussion with the superintendent of the Boston Public Schools (BPS) about building a way to connect to BPS data and reflect badges on student transcripts. BASB has compiled [a badging practice guide](#) based on their work and will be conducting focus groups and interviews with students and educators involved in the summer 2015 pilot to evaluate the work. They are also looking at the possibility of developing additional badges as part of other initiatives, e.g., more content-specific badges (science/STEM) or working with Success Boston, a local college completion initiative, on a college readiness set.

BASB and its partners in other cities, PASA and ExpandEd Schools, are fully aware of the Cities of Learning / LRNG movement. Thus far, however, they are continuing to manage their own badging ecosystems and infrastructure. This will be something to watch going forward: BASB, for example, feels it has good badge management technology in place, but LRNG may be evolving into something that provides more than BASB can build and may open up a larger conversation about connected learning and badging in the city, sooner rather than later.

Other PK-12 badging or educator micro-credentialing activity in Massachusetts, if happening, is under the radar. A quick check-in with state department of education staff and others with a good view of emerging education technologies indicates the same. One person involved in national badging work commented that badging might be slower to take hold in Massachusetts and other states with generally strong student outcomes, where it’s less clear what problem badging solves.

Rhode Island: Providence After School Alliance

Providence is home to one of the country’s first badging projects. PASA was awarded one of the original Digital Media Learning Competition / MacArthur grants to experiment. Funding for the project ended in 2014 but PASA decided to take a “second dive” into badging with support from the Noyce Foundation. PASA has issued STEM badges as part of their middle school AfterZone program, will issue them again during their summer STEM program for 500 youth, and plans to expand badging to all of their middle and high school expanded learning programs in fall 2016.

Alejandro Molina from PASA remains convinced that badging can help young people tell an important story about what they do afterschool and helps “rewire their brain about how they think about their learning pathway.” It provides a visual pathway and trigger. He shares the example of a student who told him, “I completely forgot what I did last summer and I went back and looked at my badges and remembered and it gave me ideas about what to do next.”

At a program level, badging has given them a way to get student skill development data back faster and made the whole process of skill development transparent to the student. “Putting skill development in an Excel spreadsheet doesn’t get kids excited. It’s much more meaningful to see badges and the visual pathway.”

Alejandro is also incredibly articulate about lessons learned from their first badging pilot and implications for their current effort. The most important adjustment has been to focus on establishing the value and culture of badges, not just building the system (value vs. functionality). Offering badges to middle schoolers that “would be great for college” didn’t hook them. Badges need to have more immediate value to

“This was the most direct contact – the most direct impact – we’ve had on students. It also provided another good touch point with our partners. Badging is one more product we can return to them – something meaningful to them and to their students.”

- Ellen Dickenson, Program Director, Boston After School & Beyond

students. He also points out that badges don't work in a vacuum, and you have to factor this in: "You can ask a student, 'What do you value more, badges or a caring adult?' and guess the answer. A better question is, 'What if the badge is given to you by a caring adult?'"

Moving forward, PASA will continue to work with providers on the value proposition and with other community and regional organizations (the school district, higher education) on how badges might be used to inform decision-making. Also, together with Boston After School & Beyond (BASB) and ExpandEd, PASA is building a badging module into their existing Cityspan tracking and data platform in order to link badges and assessment and provide badge storage for youth moving through their system.

Because of PASA's longer term work, student-focused badging in Rhode Island has a strong example to learn from – there is considerable wisdom here about the value, lessons, and implementation dos and don'ts. PASA has also explored important systemic connections, e.g., working with colleges to consider badges during admissions, and connections with the state's overall graduation and portfolio framework.

Rhode Island: Assessment for Learning Project (ALP) Performance Assessment Micro-Credential System

Rhode Island will also serve as the proving ground for one of the New England region's newest PK-12 badging efforts – the development of a micro-credentialing system designed to validate teachers who have honed the specialized skills it takes to design high quality performance-based assessment tasks and serve as leaders who embed the practices in districts. The project, which received a [Next Generation Learning Challenge grant in March 2016](#), is led by the Center for Collaborative Education (CCE), working in collaboration with the Center for Teaching Quality (CTQ), the Rhode Island Department of Education, and 10 high schools that participate in CCE's Scaling Up Proficiency-Based Graduation network.

Scheduled to go live this summer, the new micro-credentialing system will offer stacks, or sets, of micro-credentials in three distinct areas: performance assessment design and validation, integration of social emotional learning and 21st century skills into curriculum, and performance assessment leadership. Laurie Gagnon and Gary Chapin of CCE view the project as a way to "encapsulate seven years of work into a new format and delivery model" – a delivery model that reflects the very same personalized and performance-based learning environment and practices they want for students. "If educators haven't experienced it, how can they help kids do it?" Approximately 50 teachers from the 10 schools will start earning micro-credentials over the summer. CCE and CTQ staff will record their experiences over the year and collect data to examine the value of micro-credentials to educators and whether they offer a better way to shift assessment culture in schools. CTQ will also create a virtual community so teachers can network, share and learn from each other as they attain their micro-credentials and build school-wide performance assessment capacity.



CURRENT RESEARCH

Findings from the Field

Research on the impact of badging and micro-credentialing is in its infancy, especially for PK-12, and is based on very small sample sizes. It is also complicated to conduct and parse because badging takes on very different meanings depending on how and where it is used, for whom, and how it is positioned and implemented. It's akin to studying "assessment" or "online learning."

So far, there are four pockets of research people can turn to:

- Studies of actual badging projects: the most informative resource in this category is "What Counts as Learning," the final report on the MacArthur-funded Digital Media & Learning Competition which seeded 30 badging pilots and 5 research studies.
- Research or 'market analysis' type surveys; for example, a study commissioned by Digital Promise, "Making Learning Count," which surveyed a national sample of K-12 teachers on their attitudes toward professional development and competency-based micro-credentials.
- Internal surveys or evaluations done by badging providers themselves (Boston After School and Beyond and the Providence After School Alliance are conducting focus groups and interviews with students and educators involved in their summer 2015 pilot and other market research this spring).
- Research on related, intersecting learning theories; for example, learner motivation, assessment performance, or game-based learning.

Early small-scale findings for PK-12 include:

- Badging can help students and educators be more articulate about "evidence" of learning. One study found that students involved in badging got more formative feedback about whether the evidence they submitted met learning criteria or not and were able to talk about their evidence with more detail and clarity.⁸ This effect may be more pronounced for programs that previously had no individualized assessment vehicle but was found in a school-based badging study also.⁹
- A carefully designed badging system can increase student autonomy – a badging system that lays out a learning trajectory or pathway, for example.¹⁰
- Programs report that badging can raise the bar on quality and give providers a more concrete way to articulate their value and/or be accountable for

Must Read Reports

- [What Counts as Learning \(2014\), DML Research Hub](#)
- [Making Learning Count \(2015\), Grunwald Associates and Digital Promise](#)

⁸ Beta Testing the Global Kids Badging System: A Global Kids, Inc. Report (2012). New York: Global Kids <http://www.olpglobalkids.org/content/global-kids-summer-badge-beta-report>.

⁹ Wardrip, P.S., Abramovich, S., Bathgate, M., and Kim, Y.J. (2015) A School-Based Badging System and Interest-Based Learning: An Exploratory Case Study. International Journal of Learning and Media http://www.acsu.buffalo.edu/~samuelab/UJLM_Badge_Paper.pdf

¹⁰ Ibid.

¹¹ For example, Global Kids, Boston Afterschool and Beyond, and the Providence After School Alliance.

individual student growth (not just overall program quality).¹¹ This is an interesting finding and relates to a question that often surrounds badging: does it help us define good practice or just certify that a practice was followed. This finding may also apply to certain types of providers, e.g., out-of-school and extended learning organizations.

- Badges can impact student motivation; however, the picture is nuanced. For example, a study of middle schoolers using badging as part of their math program found that different types of badges ('mastery' and 'participation') motivated learners differently depending on their expertise. Despite an overall bump in math interest, badge earning patterns were different between high performing and low performing students, e.g., high performing students who didn't care as much about poor performance earned more badges. The authors note the consistency of their findings with the broader body of research that indicates prior student knowledge (abilities, confidence in skills, motivation) can have a major influence on assessment performance.¹²
- Badges are not necessarily an 'extrinsic' motivator, as they are often cast, particularly when used to signal a credential rather than a reward. They reflect – sometimes inspire – a quality learning experience and can involve a combination of intrinsic and extrinsic dynamics. What they are and the impact they might have is a function of their design and their context. Research does raise a cautionary flag about the use of extrinsic methods in general, and whether doing so can actually inhibit intrinsic engagement in learning.¹³

All these initial studies are small scale and focus on short-term, early stage badging projects; for example, a summer or first year project. They are often voluntary – learners want to participate – and done when badging is very new to the culture and context. In some cases, they are connected only to digital learning or a particular software program. While they point to a potentially positive relationship between badges and learners in certain situations, they also suggest the need to pay close attention to badge system design, including which badges are implemented, and the motivations and ability levels of students.

At the very least, it is clear that learners need to value what the badge represents. It is also clear that research needs to figure prominently in the next wave of badging work to push it beyond experimentation into proof. People interviewed for this paper often highlighted this need specifically – with a call for more formative feedback now, while models and approaches are emerging, and focused impact studies where practices have had a chance to mature.

More immediate research questions include:

- More research into what's working and why (there hasn't been a very strategic focus to the research, in the view of both badgers and observers)
- What types of badges and badging systems lead to mastery or improved achievement and why do they work?
- What meaning do different learners make of badges? How do they interpret their value? Middle school students, low performing students, rural students may see them differently.
- What is the value of badging to school-based instruction? When used in a classroom setting, what happens to the value? Do student value badges issued by the school differently than those issued by non-school providers?

¹² Abramovich, S., Schunn, C., Higashi, R.M. (2013). Are badges useful in education?: it depends upon the type of badge and expertise of learner. *Association for Educational Communications and Technology, Education Tech Research Development*, 61(2), 217-232. <http://www.lrdc.pitt.edu/schunn/research/papers/Abramovich-Schunn-Higashi.pdf>

¹³ Deci, E.L., Koestner, R., Ryan, R.M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, Vol 125(6), 627-668. <http://psycnet.apa.org/journals/bul/125/6/627/>

What happens if badges are connected more directly to performance and advancement (grading, etc.)?

- What value do colleges, employers and other “consumers” of badges place on PK-12 badges? Are badges and micro-credentials a new “currency” for skills as they are often positioned (the consumer voice is noticeably faint in PK-12 badging conversations)?
- What is the link between badging and incentives, e.g., teacher compensation, other forms of recognition, badge provider’s reputation, connection of the badge or credential to formally recognized competencies, or other in- or out-of-school benefits students might receive?
- What is the impact of more mature or longer term badging or micro-credentialing systems? (longitudinal studies of badging pathways/trajectories and evaluations of programs after the novelty has worn off)
- What is the value of badging to PK-12 students who may not be able to benefit from the public and social/social assessment potential of badging because of privacy and data concerns?
- What is the relationship between badging and other systems, e.g., badging linked to grading, performance or graduation tasks, transcripts, CEUs?

“We have to make sure badging doesn’t become another assessment that separates the haves and the have nots. What will it mean for kids who already don’t have internet access and good technology infrastructure in schools? What will it mean for urban youth who may not understand how to leverage it for their future?”

– Alejandro Molina, Providence After School Alliance

Digital badging also raises a familiar set of questions related to equity, access, and the technology divide. In order to take advantage of a broader community and worldwide learning ecosystem, learners will need technology, connectivity, and a degree of badge/credential management fluency. Who wins in a connected world?

People who are connected. People with the financial resources to take advantage of extended learning opportunities. People who know how to use digital credentials as a new “currency” to advance their professional lives.

“I’ve seen maturing. We’ve reached the point where a digital badge as a gold star is not enough. It’s more about a credential. It needs to have meaning. If you’re a district, I don’t think “digital badging” is where you start. You start with what you want to achieve with teaching and learning or leveraging professional talent. You don’t start with badges for independent things. You first look at connections to bigger, more important achievements and what the stackable pieces are, then apply the technology.”

– Jim Goodell, Senior Analyst, Quality Information Partners

Future Outlook

On the whole, badging is still a very new practice in PK-12, only just emerging from an initial burst of experimentation. However, the past five years have been an important period of learning. Some of the initial buzz and hype of three to four years ago (“Grades Out, Badges In”¹⁴ and “A Future Full of Badges”¹⁵) has been tempered with more mature perspectives and valuable lessons learned from early pilots. In 2016, the practice finds itself at an interesting stage in its evolution and its overall positioning in the landscape of deeper educational improvement strategies. Arguably, the next 2-4 years will be tipping point years to determine whether or not badging can in fact serve as a valuable strategy for PK-12 change.

Even the language and positioning of badges in PK-12 seems to have shifted. People often opt not to lead with the word “badge.” Instead they talk about personalized learning, connected learning, project-based learning, or credentialing. Badging is still there

¹⁴ Young, J. October 2012. Grades Out, Badges in. The Chronicle of Higher Education. <http://chronicle.com/article/Grades-Out-Badges-In/135056/>

¹⁵ Carey, K. April 2012. A Future Full of Badges. The Chronicle of Higher Education <http://chronicle.com/article/A-Future-Full-of-Badges/131455/>

“We see a growing number of learning institutions developing self-referential badging systems. And yet, badge earners are not limited to one badge-issuing organization or institution: they can choose to earn badges from anywhere. This important understanding of the networked power of open badges has not yet begun to resonate with all issuers. Consequently, in-depth, sustained research into how the open badges ecosystem will continue to grow and evolve would benefit all parties.”

– Carla Casilli, IMS Global Digital Credentialing Initiative

as a tool and strategy but it isn't necessarily the headline. Even the latest [Digital Media & Learning Competition \(DML5\)](#) reflects the shift. All of the ideas badges represent are there – recognition for learning outside of school, the creation of connected learning environments – but the badge itself is in the background. LRNG is another good example. Badging is very much a part of their strategy and methodology but is relegated to the fine print.

From a technology standpoint, the open badge ecosystem is receiving less support from Mozilla than it was and there are still issues to address related to badge portability. Mozilla's Backpack for storing badges (making them portable) is getting old. LinkedIn is viewed by some as monopolistic and a potential logjam – currently you can only [display credentials and achievements](#) from organizations authorized by LinkedIn. Meanwhile, commercial learning management systems like Canvas, Agilix Buzz, Blackboard, and Pearson Acclaim now support badging. The Badge Alliance, a network of people helping to build an open badge ecosystem, launched in 2014 – yet dropped to one part-time staff person in 2015 (it has since received a small MacArthur grant to continue work on the open badge standard). One commercial badge hosting platform went out of business, while another well-known company appears stable and in March 2016 [raised \\$2.5 million in seed financing from a diverse group of investors](#) interested in digital credentialing.¹⁶ These ups and downs are common with emerging technologies so it's hard to draw a conclusion about what it all might mean for badging as a whole.

MacArthur remains the dominant funder in the PK-12 badging world with most resources being directed to Collective Shift/LRNG which just received \$25 million – yet other funders are entering, for example, the notable group of foundations supporting Digital Promise's educator micro-credentialing effort.

People get overwhelmed at the idea of a world of badges and learning pathways and worry that junk credentials will crowd out good ones. Technologists are less concerned – not that there isn't technical work to do to successfully navigate a scaled up badge/credentialing ecosystem, but that it is manageable. There are technologies emerging now that will provide better methods for classifying badges, adding endorsements and updating them if data changes over time (like the earner's email address), as well as [blockchain](#) technology which could help with portability, sharing, and validity. This, combined with roles such as the one Digital Promise is trying to play as curator, will help people connect with quality learning opportunities – likely better than they are able to do now.

Many of the people interviewed for this paper, admittedly many with direct interests in badging, are optimistic about the future of badging and micro-credentialing. In addition to advice about positioning and language, there were sometimes important caveats. There may, for example, be less value for badging in a school than outside. Badging may also be easier to do when layered onto something that already exists, making it no real agent of change.

Some people interviewed were very new to badging – enthusiastic, yet only beginning to understand the practice and the landscape. A few were on the fence or skeptical. Some believed badging

“The flexibility of badges is both a feature and a bug. Everyone is picking up on it and wants it to be the solution for what they want to do. It can be the Wild West. We need to dig in and show the value but keep others interested.”

– Erin Knight

¹⁶ This group of investors primarily reflects postsecondary and workforce development interests but Credly's user base also includes PK-12 organizations.

could work with adults but would be too messy with students or wouldn't change the dynamic of schools. Almost all want more mature examples and proof.

Challenge To The Field

Badging and micro-credentialing can sound so compelling. Specialized collections of competence have value and they are as unique to each of us as our journey through life. Why shouldn't learning systems reflect and validate this? However, to return to the question posed at the beginning of the paper, what kind of transformative force can badging and micro-credentialing be for PK-12 education? Can they drive a shift to more student-centered practices? Four years of experimentation have yielded strong pockets of experience but there is simply not enough to go on yet to answer that question.

This leaves a challenge to the PK-12 field hanging like a dare in the air. Probe more deeply and dig in strategically.

MacArthur's "1000 flowers bloom" approach made sense several years ago. It was a call to early innovators to test an intriguingly open source tool learning tool. We learned how to manage the mechanics of badge system development and were reminded not to put the cart before the horse – that it's absolutely essential to establish the value of badging or micro-credentialing in the learner's context and ideally beyond.

Now we need PK-12 efforts that push on systemic, substantive and meta-level uses of badging and micro-credentialing; for example:

- What does the system look like across schools, organizations or a community?
- What aspect of the system will the model actually change? What is the core practice being targeted (e.g., development of personalized learning pathways, validating and awarding credit for learning experiences beyond the classroom, teacher credentialing)...and why would badging/micro-credentialing be the ideal lever for change over other possible tactics and choices?
- Will the model have any value outside of the organization that developed it – for example, what opportunities it open for badge or micro-credential earners and can the model be replicated elsewhere?
- Can the approach help mobilize a coalition or network (particularly at a regional or national level) and build consensus about a prized skillset or map micro-credentialing and badges to a recognized framework for quality?
- Beyond offering badges and micro-credentials, can the approach show how they can be used as a human capital management tool? Does knowing student or educator skillsets help teachers, administrators, college admissions officers, or employers build strong teams and leverage expertise?

Language will likely also matter, particularly in PK-12 where "cutesy" badges and gamified badging co-exist with efforts like Digital Promise's micro-credentialing work which focuses on professional use. People interviewed for this paper are well aware of the challenge and acknowledge the term "badge" can be two-edged. On one hand, it can help people "get it" quickly and highlights an important technology (data visualization and the ability to use the medium of the internet to drill into a person's skill). But it can also draw fire or make it easier to knee-jerk an opinion or dismiss the innovation outright. "Micro-credentialing" seems to be faring better as a term, but practitioners wrap their work with strong messaging about the competency-based recognition for educators, teacher professionalism, and the craft of teaching. As the field moves forward, badges and micro-credentials need to be positioned as tools that work in service to serious, transformative ideas like "connected learning" and "personalized learning" for students and educators alike.



RESOURCES

Research Interviews

We are grateful to the following people for sharing their experience and thoughts on badging and micro-credentialing nationally and across New England.

- Erin Knight, Badge Labs, Founding Director Badge Alliance, Maine State of Learning
- Nate Otto, Interim Director, Badge Alliance, Concentric Sky
- Carla Casilli, Co-facilitator of the Common Language Working Group, Connecting Credentials initiative, and previous roles with the IMS Digital Credentialing Initiative, Badge Alliance, Mozilla Foundation
- Mike Muir, Policy Director, Maine Learning Technology Initiative, Maine Department of Education
- Steve Kossakoski, CEO, VLACS
- Barnett Berry, CEO, Center for Teaching Quality
- David Ruff, Executive Director, Great Schools Partnership
- Glen Hoptman, Executive Producer, The Lightbeam Group & Studio, Tides of Revolution
- Charles Dukes, Director of Postsecondary and Workforce Readiness Programs, Aurora Public Schools, Colorado
- Ellen Dickenson, Program Director, Partnerships & STEM, Boston After School & Beyond
- Jeran Mariani, Boston Afterschool & Beyond
- Alejandro Molina, Deputy Director, Providence After School Alliance
- Patricia Deklotz, Superintendent, Kettle Moraine School District, Wisconsin
- Jennifer Cohen Kabaker, Director, Educator Micro-credentials, Digital Promise
- Heather Peske, Educator Effectiveness, and AJ Kupps, Office of Digital Learning, Massachusetts Department of Elementary & Secondary Education
- Jim Goodell, Senior Analyst, Quality Information Partners
- Ian O'Byrne, former Assistant Professor of Educational Technologies, University of New Haven
- Kerri Lemoie, CEO/CTO, OpenWorks Group; co-founder and CTO, Achievery; former technology coordinator, Providence After School Alliance
- Jonathan Finkelstein, CEO, Credly
- Laurie Gagnon, Director, and Gary Chapin, Senior Associate, Quality Performance Assessment, Center for Collaborative Education
- Erik Hanson, Dean of Digital Learning, Appleton eSchool, Appleton Area School District, Wisconsin
- Eileen Rudden, Partner, Learn Launch
- Mimi Stapleton, Curriculum Development, SAS Curriculum Pathways
- Mark Daniels, Director of Instructional Support, Corbin Schools, Kentucky
- Educators and vendor representatives at the 2015 iNACOL Symposium in Orlando including our Digital Badging P2P group (educators from Indiana, Wisconsin, Florida), Agilix Buzz, Florida Virtual School, Blackboard, Buck Institute, Virtual High School

Selected Resources

General Badging

What is a Badge?

<https://www.youtube.com/watch?v=RDmfE0noQJ8>

Badges for Lifelong Learning: An Open Conversation

<https://www.youtube.com/watch?v=iqVidWPVBKA&feature=youtu.be>

Digital Badges: Unlocking 10 Million Better Futures

https://www.youtube.com/watch?v=zuAQ3P_TNOM

Mozilla OpenBadges FAQ

http://openbadges.org/legal_faq/

Digital Badges Systems: The Promise and Potential – Alliance for Excellent Education

<http://all4ed.org/wp-content/uploads/2014/11/DigitalBadgeSystems.pdf>

What Counts as Learning: Open Digital Badges for New Opportunities

<http://dmlhub.net/publications/what-counts-learning/>

An analysis of lessons learned from the 30 MacArthur-funded badging pilots

Digital Badges: An Annotated Research Bibliography

<http://hastac.org/digital-badges-bibliography>

Educator Micro-Credentialing

Preparing Teachers for Deeper Learning: Competency-Based Teacher Preparation and Development

<http://cdno4.gettingsmart.com/wp-content/uploads/2014/01/FINAL-Preparing-Teachers-for-Deeper-Learning-Paper.pdf>

Digital Promise: Educator Micro-credentials

<http://www.digitalpromise.org/initiatives/educator-micro-credentials#educator-micro-credentials>

Making Learning Count – Grunwald Associates / Digital Promise

<http://www.digitalpromise.org/blog/entry/making-professional-learning-count>

Report based on attitudes of a nationally representative sample of 856 K-12 teachers toward professional development and competency-based micro-credentials

Connected Learning and Badging for Students

LRNG

<https://www.lrng.org/cities>

Aurora Public Schools (CO) Badging Program

<http://www.globalminded.org/assets/badging-execsummary.pdf>

Corona-Norco Unified School District Passport to Success

<http://www.cnusd.k12.ca.us/Page/35485>

Maine State of Learning

<https://www.mainestateoflearning.org/>

Boston After School & Beyond

<http://bostonbeyond.org/initiatives/digital-badges/>

Badge System Design

10 Lessons Learned from an Award-Winning Digital Badging Program - EDUCAUSE

<http://nextgenlearning.org/blog/10-lessons-learned-award-winning-digital-badging-program>

Based on postsecondary badge use but helpful summary of key design lessons

Where Badges Work Better

<https://net.educause.edu/ir/library/pdf/elib1503.pdf>

Briefing paper based on lessons learned from 29 MacArthur-funded badging system pilots (2012-2014).



Nora Priest

Nora Priest is a school and district coach, trainer and educational program and product designer dedicated to creating outstanding learning experiences for young people that blend the best of human ability, instructional methodology, and technology. Her clients have included a wide variety of districts, regional collaboratives, state agencies, foundation, non-profit organizations, and K-12 commercial publishers and technology companies. Nora holds her Master's degree from the Harvard Graduate School of Education and Bachelor's from Georgetown University.

Nellie Mae Education Foundation

The Nellie Mae Education Foundation is the largest philanthropic organization in New England that focuses exclusively on education. The Foundation supports the promotion and integration of student-centered approaches to learning (SCL) at the middle and high school levels across New England—where learning is personalized; learning is competency-based; learning takes place anytime, anywhere; and students exert ownership over their own learning. To elevate student-centered approaches, the Foundation utilizes a four-part strategy that focuses on: building educator ownership, leadership and capacity; advancing quality and rigor of SCL practices; developing effective systems designs; and building public understanding and demand. Since 1998, the Foundation has distributed over \$180 million in grants. For more information about the Nellie Mae Education Foundation, visit nmefoundation.org.



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