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Six Ways to Look at Badging Systems Designed for Learning

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*Written by Barry with scores of others**

Background

For over four years, Global Kids has developed badging systems within, after and outside of schools. We are currently designing a badging system for dozens of civic and cultural institutions within the [Hive Learning Networks](#) in New York City and Chicago, as well as [throughout](#) our organization. We have had a frontline view of the growing interest which has emerged over the past year in the development of badging systems across a wide range of formal and informal learning environments. We have also followed the rise of opposition, and sometimes confusion, about what digital badging looks like or is designed to accomplish. In this context we felt it might be useful to delineate the various interests we see aligning themselves with badges, or make distinctions amongst the different goals people have for them.

We initiated this review during March and April of 2012 in the hopes that understanding the different ways people approach badging systems, the different frames people are using, will help us all develop a more comprehensive and informed understanding of our emerging badging ecology.

Frame 1: Badges as Alternative Assessment

Badges are viewed as a vehicle for providing evidence-based assessment and correcting key flaws in the formal K-12 learning environment through a model of alternative assessment. The new interest in badges, which began tipping within a number of learning communities in 2011, developed as a response to the failings in current assessment models, as defined by Eva L. Baker's in her 2007 talk and paper "[The End\(s\) of Testing](#)." "My image of a Qualification," she asserted, "is a validated accomplishment, obtained inside or outside school. A Qualification means simply that, at various levels of challenge, a student has attained a certified, trusted accomplishment... Each Qualification is not a new test but an integrated experience with performance requirements." Badges become a way for youth to receive formative and summative feedback, for the learning environment to accurately understand a youth's abilities, and for those in the workforce and universities to understand a learner's abilities. With badges as assessment, or, more to the point, as a form of alternative assessment, badges exist within a network of other alternative assessment models, such as digital transcripts and ePortfolios.

Example(s): Media Masters (link [here](#)) was an after school program in 2008 at a Brooklyn-based high school in which youth produced social media projects about social and global issues. Youth earned digital literacy badges at the end of each module assessing skills development (formative assessment) and collected their badges on a final digital transcript (summative assessment). Youth then combined the two with the evidence behind them into an online, narrated portfolio.

Name: _____ Date: _____ School: _____

Media Masters Digital Transcript

The transcript marks your progress in developing new media literacies. Each diamond represents a literacy, which can be filled with up to three possible badges which represent your ability to utilize, recognize and describe a given skill. Over the course of Media Masters, different things you do in the program will cause the page to fill up with badges.

Legend - Status Triangles

- ▲ Do it - the ability to utilize the given skill.
- ▲ Recognize it - the ability to point out examples of the given skill.
- ▲ Talk about it - the ability to describe to others the given skill.

M (20)

Media Masters

Global Kids

Vital Voices: A major proponent is Cathy Davidson, co-founder of HASTAC, as seen in her blog post (Feb, 2012) "[Can Badging Be the Zipcar of Testing and Assessment?](#)" Daniel T. Hickey, Associate Professor of Learning Sciences and Research Scientist at Indiana University, posted a useful analysis of the badge proposals submit to the HASTAC competition to figure out how existing research literature on assessment, accountability, and validity is (and is not) relevant to the badge designers: (March, 2012) "[Some Things about Assessment that Badge Developers Might Find Helpful](#)"

Frame 2: Gamifying Education with Badges

In 2005, Microsoft [introduced](#) the Xbox' 360 Gamerscore system, which is considered to be the original implementation of a games-based achievement system. According to Wikipedia, "in [video gaming](#) parlance, an achievement... is a meta-goal defined outside of a game's parameters. Unlike the systems of quests or levels that usually define the goals of a video game and have a direct effect on further gameplay, the management of achievements usually takes place outside the confines of the game environment and architecture." By 2007, games and learning scholars, like James Paul Gee, understood that what was being proposed by Eva L. Baker had a strong alignment with the pedagogy being modelled within well-designed video games, specifically in this area of "achievements." So, in essence, "qualifications" filtered through "achievements" became "digital badges."

Some educators see the deep engagement afforded by games and simply hope, perhaps with a hint of desperation, that adding badges will bring the same level of engagement to learning. More sophisticated educators understand both the complexity of game design and the experience of gameplay, seeking to create a badge-driven system that is informed by good game design and applies those lessons in localized and appropriate ways for learning.¹ (Some might argue these two interpretations - badges to increase engagement and badges as gamified learning environment - are distinct enough to belong in different frames, given the different roles they play in the debates over badges.) Just as badging systems can be seen as a subset of alternative assessment models and used in coordination with other approaches, such as ePortfolios, badging systems can also be seen as a subset of ways to gamify education and be used in coordination with such things as point systems and leaderboards.

Example(s): DIG/IT ([link here](#)) in 20011 was developed by LearningTimes, in partnership with the DOE's Office of Postsecondary Readiness, to develop a digital course that introduced students in transfer schools (second-chance high schools) to digital literacy skills while they develop their plans for college, careers, and life after high school, providing a relevant context in which to learn how the Internet can be used to enrich their lives. DIG/IT is described as a "a social, gamified adventure in digital life" using challenge-based "quests" and badges to recognize competencies and reward good behavior.

¹ "I would probably contrast the "games as good learning environments" argument with the "gamification of education" approach as the former focuses almost entirely on gameplay/game mechanics and the ecologies around games such as forums/tutorials/walk throughs etc, and almost never on point systems and badging systems. When they do talk about those, I see in 2 ways: 1) external validation of existing expertise (close to the "badge as qualification/assessment" argument, rather than to the "badge as motivation/gamifying ed" argument here, 2) part of having clear/transparent standards about "what counts" as "good participation", which is more closely related to the "badges as scaffolding" angle." Rafi Santo, March, 2012



Vital Voices: Mitch Resnick raises concern about badges and motivation in his [blog post](#) “Still a Badge Skeptic.” David Theo Goldberg [responds](#) to Resnick in his post “Badges for Learning: Threading the Needle Between Skepticism and Evangelism”. Daniel T. Hickey summarizes and re-contextualizes this debate over intrinsic versus extrinsic motivation in his [post](#) “Open Badges and the Future of Assessment.”

Frame 3: Badges as Learning Scaffolding

Badges, as a form of scaffolded learning, reveal multiple pathways that youth may follow and make visible the paths youth eventually take. Scaffolding in a learning environment refers to providing guidance for youth to encounter learning opportunities that engage them at their level of ability before taking them to the next. In other words, badges not to assess or motivate, but to guide. Within an organization, that might mean using badges to provide youth a way to understand the options offered within a particular organization, customized to their current interests and abilities; e.g. introductory level badges might be pursued to unlock another set of badges. Across organizations, it might mean using badges to provide youth access to similar opportunities within their community.

Example(s): [PBS KIDS PLAY!](#) is an online learning environment using PBS content to engage and teach 3-6 years olds. Youth completing enough games to complete a learning level earn “rewards,” which function like badges, and, as can be seen in the image below, are collected in one’s treasure chest, where they can be taken out and displayed in one’s virtual room. Their [parent’s guide](#) explains how the site uses a learning scaffolding: “As your child progresses, PBS KIDS PLAY! adapts to his or her ability by automatically opening up new

game levels to try. This is particularly important because once a child masters a pattern of game play, he or she begins to react in a rote way. Advancing to a higher level creates changed conditions that challenge your child to adapt to a new way of thinking. Constant challenge is part of what makes games such fun, as well as a great learning tool.”



Frame 4: Badges to Develop Lifelong Learning Skills

Badges are viewed as a tool for developing the metacognitive skills required by today's youth to succeed in the classrooms, workforce, and civic spaces of the 21st Century. Badges support learners to give language to and value what they are learning, by offering names for their new competencies and providing a venue that recognizes their importance. As badging systems can aggregate the various formal and informal places youth learn, badges support learners to make connections amongst these places and develop strategies for negotiating and eventually shaping their emerging learning ecology. Badging systems also offer new communities within which participants may learn to negotiate their own learning identity, based on the theory that how well people learn and their motivations for learning are based on their identity as a learner. The 2012 HASTAC competition employed this frame in its title:



Example(s): Epstein Middle School (link [here](#)), outside Atlanta, began using digital badges in 2011 to integrate youth's learning inside and outside school to develop “executive functioning skills” and support independent learning.



Frame 5: Badges as DML Driver

Badges are viewed as a praxis to undermine the deficiencies within current learning environments and spread [Digital Media & Learning](#) practices. Badging systems require participatory learning environments, offering peer-based learning communities in which youth don't just receive badges but comment on them, share evidence around them, and more. Badging systems can reach youth throughout the Hanging Out, Messing Around, and Geeking Out framework (HO-MA-GO). Badges should disrupt existing practices. Badges should lead to a better use of digital media for learning.

Vital Voices: Concerns are well expressed by Henry Jenkins in his [blog post](#) (March 2012)

"How to Earn Your Skeptic Badge" - e.g. "As someone who helped to build up the current field of Digital Media and Learning, I am concerned that, if badges start to feel too much like a 'party line,' many are going to feel excluded from the field. This has the potential to be the first major divide in a field which many of us see as our intellectual and spiritual home." A major proponent is Cathy Davidson, as seen in her blog post (Nov, 2011) "[Could Badges for Lifelong Learning Be Our Tipping Point?](#)" - e.g. "I am wondering if, a hundred years from now, some historian ploughing through the dusty data archives of the Internet, will see this moment as digital learning's tipping point." I tweeted something similar, at 1:42 PM on September 15, 2011, while at the Hirshhorn Museum during the launch of the HASTAC Competition: "Will this event someday mark the public tipping point for the Digital Media & Learning Initiative and, if so, why badges & now?"

Frame 6: Badges to Democratize Learning

Some badge systems are designed to democratize the learning process, to change who does the assessment and what affect the learners have over their learning environment. Learners can shape the content of their badging system and perhaps even the structure itself. They might propose or add new badges, or the missions required to earn them. Learners can participate in the assessment process, ranging from recommending peers for accreditation to earning the right to be the accreditor².

Example(s): [Peer 2 Peer University](#) describes itself as a grassroots open education project that organizes learning outside of institutional walls and gives learners recognition for their achievements. In 2011, P2P University's School of Webcraft (link [here](#)) began to integrate digital badges to create a learning environment in which everyone can be both mentor and mentee. The frame of democratizing learning can be seen throughout their [June](#) blog post, e.g. "We'll be making it easier for users to produce badges themselves." In 2012, they launched the [P2PU Badge Maker](#), to do just that, and the tool was demonstrated within this [presentation](#) by P2P's founder, Philipp Schmidt, at the 2012 Digital Media and Learning Conference.

² "Assessment provides the structure on which feedback within a community of practice is built. It reflects the evolving collective knowledge and expertise of the community regarding what is important and what it means to be an effective practitioner in the community's domain of knowledge. What is important is assessed." chloe, March 22, 2012



Vital Voices: The official Wiki for the [Mozilla Open Badges infrastructure](#), the technology contributing to the emergence of digital badging systems, employs this frame to describe how both issuing institutions and learners are empowered by badges: in explicit contrast to schools, when “using Mozilla’s Open Badges infrastructure, any organization or community can issue badges backed by their own seal of approval. Learners can then collect badges from different sources and display them across the web -- on their resume, web site, social networking profiles, job sites or just about anywhere.” Another examples is the post by Trent Batson, (March 2012) “[Beyond the Course: ePortfolios’ Value for Credentialing](#),” which argues, in part, that the peer-review aspect of ePortfolios should be central to badging systems as well.

Towards an Integrated Frame

Should every badging system aim to address all six frames? Frankly, we can’t yet know. Maybe some combinations will work out better than others. Maybe a combination that works great in one settings will fail in another. We have a lot of experimentation before us, and a lot to learn. So in the spirit of experimentation, perhaps we can presume that all six frames should always be considered, and that, for now, is the most we can expect. Perhaps some day this framework can lead to a spreadsheet, or perhaps an infographic, categorizing projects by which frames they employ.

***Contributors:**

These six frames were developed through a public collaboration on Google Docs, originally subtitled “a participatory work-in-progress.” Readers added comments that corrected facts, clarified ideas, and contributed missing information. As such, the final ideas here were developed in collaboration between myself and the readers. The most significant contributions came from the following people; names are based on when they placed their comments, in reverse chronological order, and the name displayed within Google: Sheryl Grant, Anya Shyrokova, chloe, Brian Mulligan, Doug Truong, Rafi Santo, Jonathan E. Finkelstein, Leah MacVie, Bronwyn Stuckey, Alexander Halavais, benjamin.tarsa, danielthickey, and Doug Belshaw.

What follows was edited out of the final version:

What's Next?

What else can we do to avoid³ the bad examples and encourage the development of more good examples? Below are a few thoughts, from me and others:

Notice when “badge” is used versus “badging systems”. A badge is more than just an item of currency. It should be both the end of a learning process and the beginning of... something else. A college application? A new identity? Badges work within a system, and the system is what transforms the learner, to misquote Cathy Davidson, not the badge itself.

Badging is both a technical system and a social system. As a technical system, Mozilla's important [Open Badge Infrastructure](#) is NOT a badging system, just a key element within an ecology of badging systems. OBI creates the ability for learners⁴ to bring their badges from one badging system to another, from, say, the Global Kids badging system to their Facebook Account, but prevent it from moving to LinkedIn. But the OBI is NOT the system. LearningTimes' [BadgeStack](#) for example, is a toolset for managing working towards and the conferment of badges. BadgeStack⁵ then uses OBI to send out the badge. But that's not the whole picture. The technical badging systems needs to be integrated within a social badging system - which is composed of the institution providing content to the badges, the online and offline community of learners that confers value to earning the badges and participating within the badging system, and those outside the learner community (e.g. colleges, workforce, etc.) that understand how to interpret and value conferred badges.

Henry Jenkins [makes the case](#) (March, 2012) for four specific points, which I will quote in full below rather than summarize:

³ “Highlight the point that badges need to challenge the user and reward them for overcoming a skill based challenge, otherwise the badges will lose value and fail to motivate the user” David Truong, March 2012.

⁴ “Although the Mozilla folks have been talking a lot about learning, the OBI is essentially a microformat for badges. It can be used to exchange badges for fans, for politicians, and for dogs (if they have email addresses), not just learners. So, it's a helpful piece of tech, and allows--for better I think--badges given in one context to easily move to others, but it's not a badge system, and not just for learning badges.” Alexander Halavais, March 6, 2012

⁵ “BadgeStack provides an end-to-end experience: knowledge acquisition and sharing; assessment and performance measurement; badge earning and conferral, by a vast array of methods; progressive and evolving roles, statuses and power-ups; learner transcripts; community engagement tools, such as forums, document sharing, etc.; OBI-compatibility and direct social network connections, etc.” Jonathan E. Finkelstein, March 7, 2012

- “Experiment with badges but really experiment -- that is, try to figure out⁶ if these mechanisms really do what you hope they will do and be particularly attentive to the ways that they have unintentional consequences and damage the very activities you are seeking to recognize.
- “Also seed other kinds of research and experimentation which looks more closely at other mechanisms for promoting and appraising participation, including those which may already be in place within such communities of practice.
- “Be aware that the process of badging is going to make things more comfortable to those who are comfortable with getting recognition from adults and may make things less comfortable for those who have not yet fully bought into the values of the current educational system⁷.
- “And above all, if you are embracing badges, make sure you are doing so because you agree with the core premises, because it's the right thing to do for your group, and not because someone is offering a bucket of money to those who are willing to ‘give it a try’⁸.”

Philipp Schmidt, of P2PU, recommends [two points](#) in his post (March, 2012) “Let’s make badges not stink”: Use badges to define roles rather than as rewards, and anchor badges within community.

Further reading:

- Alex Halavais’ [post](#) (March 2012), “Badges: The Skeptical Evangelist,” does an excellent job analyzing the dominant frames and suggesting a direction forward.
- The badges segment of Miti Ito’s [post](#) (March 2012) “Reflections on DML2012 and Visions of Educational Change” also does an excellent job analyzing the dominant frames and suggesting a direction forward.
- Erin Knight of Mozilla penned this excellent [analysis](#) (April 2012), “Reflections on Reflections on Badges,” contextualizing and responding to recent concerns raised against current badging efforts.

⁶ “What is needed here is a framework for structuring our experimentation. This is a classic situation that begs for design-based research frameworks. We need to identify a core set of general design principles and then consider how they are turned into more specific principles in specific contexts.” danielthickey, March 27, 2012

⁷ “So for example, can we reframe this as a design principle? What are the implications of this principle?” danielthickey, March 27, 2012

⁸ “It’s worth noting, however, that if you were already planning on giving it a try, buckets of money can help grease the wheels of institutions, and open doors that would otherwise be sticky.” Alexander Halavais, March 6, 2012