# DIGITAL BADGES:
# PRINCIPLES AND STANDARDS OF QUALITY FOR RECOGNIZING LEARNING

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This resource is a brief summary of various related digital badge articles and could be used as a basis for developing basic standards and criteria for badge use.

**Digital Badges: Principles for Recognizing Learning and Badge Face Credibility for Employers and Colleges**

## Introduction

Modern electronics ushers in a host of communication and sharing services today from Twitter and Facebook to LinkedIn. Both the individual and the professional have valid uses of these conveniences today. It isn't a surprise, therefore, why digital badges are becoming popular in the communication world as they project a "picture worth a thousand words" in a manner that is supported by many of the electronic services. Uses for these badges are often to convey a level of accomplishment, completion, or proficiency both in the game world as well as in the educational realm.

With Michigan's current focus on preparing all students to be career- and college-ready and the need to meet the increasing demand for a skilled workforce, the "any's"[1] have helped focus instructional improvement efforts on personalized learning and multiple learning pathways. There is also a recognition that increased learning time, particularly through quality after-school and other informal educational experiences, provides opportunities to engage and empower students to learn outside the formal education arena. This flexibility in learning options presents a challenge to traditional student transcripting processes. However, technology, in particularly local and regional data systems, supports documentation of student learning in a digital, portable format, i.e. digital badges. This document will review a few key articles that highlight the principles for recognizing learning with digital badges so that they are seen as credible communication tools as to what the bearer knows and can do. Standards and criteria to evaluate a badge are then proposed.

## Principles for Recognizing Learning with Digital Badges

Rehak and Hickey (2013) describe nine principles for recognizing learning with digital badges. The principles emerged from a project titled "Introducing the DML Design Principles Documentation Project" posted by Hickey (2012). In short, digital badges are credentials that can be obtained in numerous ways from a performance, product, or other assessment proficiency. As the digital badge is the achievement product it is easy to see that motivation, assessment, and learning are related factors that should not be ignored. The following nine principles are summarized below in order of prevalence in the current badging practices as found in the prior research work cited.

1. Use badges to map learning trajectories.
   Levels of badges can be linked with various levels of student accomplishments and aligned with standards or competencies. This would require that the curriculum is organized in a manner that offers badging opportunities. This would likely occur at the course or program level and could include learning projects.

2. Align badges to standards.
   National or International learning standards serve to increase the credibility and external value of the badges. Alignment of the standards to the badges provides transparency within

[1] "Any time, any place, any way, any pace"

the credential and improves communication. Further, this badge-standards relationship formalizes the credibility of the assessments (any number of types) and the related badge.

3. Have experts issue badges.
   Expert authorities issuing badges builds the credibility of the badge and likely influences the usefulness to the external community (employers and postsecondary program leaders). It was noted that if the issuing authority also held an external (certified program) or community recognized credential, that may build legitimacy and credibility to the badge being issued.

4. Seek external backing.
   External backing of the business and industry community partners is important to the perception of the stakeholders. For instance, the automotive group Automotive Youth Education Systems (AYES) has a direct link to its business alliances and is completely transparent by way of presenting those partners' logos – who further link to their industry alliances.

5. Recognize diverse learning.
   Individual student progress is a personal and individual experience that cannot be expected to follow a production line learning pace. Recognizing these personal differences is important and also builds credibility to those who understand human development. Credentialing badge options that meet a broad spectrum (specific and numerous) of student learning needs is the utility of badging.

6. Use badges as a means of external communication of knowledge and/or skills.
   Communicating how badges can be shared with other individuals and organizations is important as this conveys the importance to the student as well as the individuals and organizations who seek candidates to fill programs or employment positions.

7. Make badges permanent.
   Technologies and processes change and both standards and assessments will change in time. Although badge expiration policies are a specific and legitimate decision by the authorizing entity, it seems important to preserve the individual's historical record. This information should be important to both the person as a part of his or her learning development (*I obtained certifications in the past; therefore, I can accomplish additional competencies to achieve another badge.*) as well as to the employer or postsecondary program leader who may value the individuals past accomplishments as an indicator of his or her future prospective accomplishments.

8. Recognize educator learning as well.
   Allowing the educator to obtain badges either from individual professional development endeavors or along with the students while progressing through a project builds value towards badges. Professional development that leads to badges allows educators to brandish their accomplishments among their colleagues as well as other stakeholders in the world of work. Students who see their teachers with credible badges would likely identify their teachers as role models to follow. Students who see their teachers obtain badges in projects along with the students will likely view their teachers as partners in the learning process.

9. Award formal academic credit for badges.
   A summative or high level badge that is obtained from completing an educational program's competency that results in their academic credit would likely make all the students feel empowered. This empowerment is built via transference from achieving lower level badges, which the allotted accumulation could result in academic credit. Students can focus on the next badge as a goal, while learning that multiple milestones sum to a greater product of a more recognized badge or credit. Although the research indicates this is rare – it is an opportunity that can be achieved as well. The key will be in allowing other decision makers to see the badging system as a credible process and badge product. This will likely need to be accomplished on an individual program basis. Transparency and communication will likely be key to informing and persuading the decision makers. Therefore, it would make sense to provide these leaders with tools to assist in this communication process. Which brings us to the next topic: credibility of digital badges.

## Credibility of Digital Badges

It seems obvious that a sheriff's badge obtained from a box of cereal is not as credible as a brass stamped badge with some official number engraved on the lower end. In the case of digital badges it isn't the art or the medium that brings credibility, but rather the issuing authority of the badge itself. For instance, if a student received a digital badge as a result of passing a teacher-made test in programming that would not be nearly as credible as a specific badge issued by Microsoft, Linux, or SAS.

Casilli and Knight (2012) describe that the value of the badge as a credible source will depend on the employer's perception of the badge's issuing authority. In the case of educational academics, where the students will transition to a postsecondary institution, the value of the badge is a most important criteria from the school or the program they will attend. Therefore, credibility depends on the employer's or school program leader's perception of the badge through the issuing authority.

One important aspect that needs to be mentioned is that the not all badges are equal. For instance, if an employer is looking for a professional to perform tasks that require competency in multiple common computer applications, then a badge representing the Microsoft Office Suite (MOS) 2013 Master certification badge would be more valuable than the MOS Exam 420: Excel 2013 certification badge. However, if an employer were looking for a professional Information Technology expert for the company, he or she would likely value the Microsoft Technology Associate (MTA) Exam 366: Networking Fundamentals more than the MOS 2013 Master certification as the credibility aligns with the duties and competencies that need to be performed by the prospective employee.

In summary, we have three criteria tied to two cases that we have discussed to this point. The three criteria are: target person's perception, issuing authority's credibility, and the specific competencies tied to a specific badge. The two cases are education and employment. Therefore, we have two targets that should be focused on to evaluate the credibility of the badge for a specific use:

- School program leaders' perception of the issuing authority and the duties and competencies tied to a badge.

- Employers' perception of the issuing authority and the duties and competencies tied to a badge.

## Standards of Quality for Digital Badging

Summarizing the information from above into a set of standards statements would convey the spectrum of principles and target uses (postsecondary and/or employment) as related to a badging process. The following list is a summary of those principles and items that would be needed for the ideal learning-badging system.

| Standard # | Standards Language Statement |
|---|---|
| 1 | Acquiring various levels of digital badges result in higher levels of digital badge/s. |
| 2 | Badges are aligned to international or national learning standards and at various levels of the standards and competencies. Badge acquisition toward progression is highly visible in the chosen path of learning. |
| 3 | Badging authorizers are perceived as an expert group or organization to the learners and the stakeholders (e.g., employers and postsecondary program leaders). |
| 4 | Badging authorizers have highly recognized external links, alliances, and supporters that are easily verified. |
| 5 | There exist multiple levels and routes to demonstrate achievement to acquire a badge/s of competency. |
| 6 | Communication material is developed and shared in multiple ways of how student badges can be shared effectively for the level of accomplishment. |
| 7 | Badging authorizing or storage systems are designed to store and present historical badges accomplished by an individual. |
| 8 | Educators are able to acquire and share their badges through professional development as well as in a manner that matches their students in their partnered learning projects. |
| 9 | Academic credit is awarded by a student directly obtaining a recognized digital badge. |
| 10 | Postsecondary program leader/s perceives the badge issuing authority as being credible. |
| 11 | Employer/s perceive the badge issuing authority as being credible. |
| 12 | Badge duties and competencies align to the postsecondary program. |
| 13 | Badge duties and competencies align to the employment duties. |

It is important to note that although the above list presents quality standards for badging systems or processes, that information could be gleaned to create a set of standards for the value of a badge.

Rating Criteria for Digital Badges

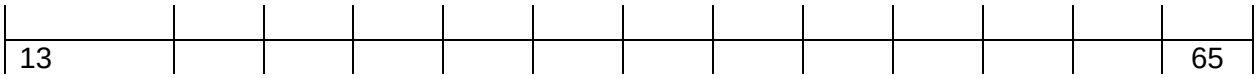
Although the standards listed above could be used simply as a check list, it would be more meaningful if each standard could be rated. To rate a badging system on the badging system or process standards above, it is apparent that anchors are needed to classify a rating. Therefore, a rubric was developed using a five-point rating system with at least two to three anchors. The first standard was pretty cut and dry and resulted in a dichotomous "yes" or "no" check. See the Badging Systems Rating Rubric at the end of this review.

Scoring the Badging System

The score is the point of meaning for any assessment. Typically scores consist of a continuum and the score point on that continuum indicates where the specific rating falls for measure. Therefore, it would be important to clarify the continuum that is relayed in standards. In reviewing the standards it becomes apparent that the continuum of importance is the formal credibility perceived via the badge by employers and/or postsecondary program leaders.

The sum of the maximum rating (5 points) multiplied by the number of standards (13) provides the maximum rating attainable on our continuum of badge formal credibility (65 points). Therefore, the range of scores is the minimum (1 point) times the number of standards (13 points) to the maximum of 65 points. In viewing the continuum we can assign both an anchor and a usefulness statement. The low end of the scale indicates a low credibility badging, which result in badges that a person may only want to share informally. The high end of the continuum would include highly credible badges that are valued and add credit or certification to the person's profile. See the graphical depiction below for a depiction of the continuum of badging credibility as well as the anchors that could be associated.

Continuum of Badging Credibility




**Informal Credibility** — **High Formal Credibility**

*Share with my personal friends and family*

*Share with friends, family, and in a professional profile*

## References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## Badging Systems Rating Rubric

| Standard # | Standards Language Statement | Rating Criteria and Point Value | | | | |
|---|---|---|---|---|---|---|
| 1 | Acquiring various levels of digital badges result in higher levels of digital badge/s. | Yes = 5 | | | | No = 1 |
| 2 | Badges are aligned to international or national learning standards and at various levels of the standards and competencies. Badge acquisition toward progression is highly visible in the chosen path of learning. | A set of highly recognized standards are used and are reported to students as a progression through their learning path = 5 | 4 | 3 | 2 | A set of locally developed standards are used = 1 |
| 3 | Badging authorizers are perceived as an expert group or organization to the learners and the stakeholders (e.g., employers and postsecondary program leaders.) | A highly recognized group or organization for their content area are the badge authorizers = 5 | 4 | A popular group, organization, or individual authorizes the badges = 3 | 2 | A group, organization, or individual authorizes the badges = 1 |
| 4 | Badging authorizers have highly recognized external links, alliances, and supporters and are easily verified. | Badge authorizers have multiple easily verified and highly recognized alliances and supporters = 5 | 4 | Badge authorizers have one to two easily verified and highly recognized alliances and supporters = 3 | 2 | Badge authorizers award badges = 1 |
| 5 | There exist multiple levels and routes to demonstrate achievement to acquire a badge/s of competency. | Badge awarding exists on multiple levels and routes in each students learning process or projects = 5 | 4 | Badges are awarded for achievement on multiple levels through the students learning process = 3 | 2 | A badge is awarded for achievement as a result of the students learning process = 1 |
| 6 | Communication material is developed and shared in multiple ways of how student badges can be shared effectively for their level of accomplishment. | Students are educated in multiple ways in which badges can be communicated and shared = 5 | 4 | 3 | 2 | Students receive badges = 1 |
| 7 | Badging authorizing or storage systems are designed to store and present historical badges accomplished by an individual. | Badge systems retain historic information for individual students - citizens = 5 | 4 | 3 | 2 | Students receive badges = 1 |

| Standard # | Standards Language Statement | Rating Criteria and Point Value | | | | |
|---|---|---|---|---|---|---|
| 8 | Educators are able to acquire and share their badges through professional development as well as in a manner that matches their students in their partnered learning projects. | Educators are able to receive badges from both professional development and along with students in their program projects = 5 | 4 | 3 | 2 | Educator receives a badge = 1 |
| 9 | Academic credit is awarded to a student directly obtaining a recognized digital badge. | Students receive direct credit as a result of achieving a credible badge = 5 | 4 | 3 | 2 | Students receive a badge that represents program completion = 1 |
| 10 | Postsecondary program leader/s perceives the badge issuing authority as being credible. | Postsecondary program leader/s values the badge issuing authority = 5 | 4 | 3 | 2 | Postsecondary program leaders/are familiar with the badge issuing authority = 1 |
| 11 | Employer/s perceive the badge issuing authority as being credible. | Employer/s value the badge issuing authority = 5 | 4 | 3 | 2 | Employer/s are familiar with the badge issuing authority = 1 |
| 12 | Badge duties and competencies align to the postsecondary program. | Badge duties and competencies align to the postsecondary program = 5 | 4 | 3 | 2 | Badge duties are similar to the postsecondary program = 1 |
| 13 | Badge duties and competencies align to the employment duties. | Badge duties and competencies align to the employment duties = 5 | 4 | 3 | 2 | Some (20%) of the badge duties and competencies align to the employment duties = 1 |
| **Score = /65 = %** | | | | | | |