Academic Affairs
Millar Library
School of Community Health
Digital Badges for Creativity and Critical Thinking

End-of-Project Report
Project Description
The purpose of the Digital Badges for Creativity and Critical Thinking Project was to procure a digital badge system, create a digital badge curriculum to certify and acknowledge skills attainment for creativity and critical thinking, and deploy this curriculum for a subset of undergraduate students in Community Health.

Project Outcomes
● Mapped library learning outcome to undergraduate community health curriculum.
● Established a system for deploying instructional content and credentialing student mastery of information literacy competencies.
● Piloted credentialing system in a subset of undergraduate community health courses.

Project Lead
● Emily Ford, Assistant Professor, Urban & Public Affairs Librarian, Portland State University Library

Project Team
● Betty Izumi, Assistant Professor, School of Community Health
● Aifang Gordon, Instructional Designer, Office of Academic Innovation
● Jost Lottes, Research Associate, Institute on Aging
● Dawn Richardson, Assistant Professor, School of Community Health

Project Sponsor(s)
● Marilyn Moody - Dean, University Library
● Stephen Percy - Dean, College of Urban & Public Affairs
● Carlos Crespo - Interim Dean, College of Urban & Public Affairs
● Leslie McBride - Interim Director, School of Community Health, and Associate Professor

Project Management
● Reagan Vincennes - Project Manager, Office of Academic Affairs
● Hans VanDerSchaaf - Sr. Project Manager, Office of Academic Affairs

Impact of Project
Key accomplishments of this project include the development of a badge curriculum for existing Community and Public Health courses, the development of assignments and assessments geared toward specific learning outcomes, and the strong collaborative relationships developed by the project team.

Nearly 200 students were enrolled in participating classes. As such, this number of students received course integrated information literacy instruction and assessment. Anecdotal impact includes students communicating that they see the value of the skill presented in the badge curriculum; course instructors will be retaining portions (if not all) of the redeveloped assignments in future course offerings; and several students created and shared their badges on their Credly profiles.
This project explored a model of delivering and tracking learning outcomes, and how librarians can partner with teaching faculty to integrate creativity and critical thinking (information literacy) skills—often referred to as co-curricular skills—into disciplinary course offerings. Based on this framework, the Library General Education team is considering how these findings may influence their future efforts. Moreover, the Project Lead’s contributions to the ePortfolio team to inform badging requirements in its RFQ for an ePortfolio product, will have long term impacts on the campus. (Depending, of course, on which solution is purchased.)

Mapping learning outcomes, developing the curriculum, administering badges, and continuing conversations about badges and their value with students was a time intensive enterprise. The project required the help of two teaching assistants to do the bulk of the technological work to award students badges. The ability for all collaborators to work on the project had impact within each department, as funding was not sufficient to cover all of the time needed to successfully implement badges.

This work has already had regional and national impact, as evidenced by the following scholarship:

Forthcoming presentations and articles:

Completed Presentations:

The following badges can be viewed on PSU Library’s Credly Profile.
Project Deliverables

- Mapped library learning outcomes to undergraduate community health curriculum
- Identified needed creativity and critical thinking skills that will support student success both during studies and later in the workforce
- Identified and developed creativity and critical thinking skills badge curriculum
- Piloted credentialing system in a subset of undergraduate community health courses:
  - PHE 250 - Our Community, Our Health
  - PHE 327U - Community Nutrition
  - PHE 354U - Social Gerontology
- Reflection and documentation of successes and challenges using a badge system

Project Sustainability

This was viewed as a “proof-of-concept” project. However, it remains difficult to separate the concepts of micro-credentialing from technological issues, as well as the inability to track student success over time. This project required an immense amount of time and energy with the research, design and development work contributed by project collaborators, and was done with little funding. As such, engaging with badges on this same level will be unsustainable without suitable funding and “buy-outs” for individuals involved.

One of the major setbacks to sustaining this project is the nascent badging technology. Working with students with poor digital-literacy skills and attempting to get them up to speed to use and understand badges will continue to pose problems to project sustainability. Should the institution consider pursuing badges on a larger scale, technological systems need to advance. Either a new course management system that incorporates robust badging functionality needs to be obtained, or more time and energy needs to be devoted to programmers who can develop, implement, and support a badging system. Third party products that are not integrated into the University’s course management system pose too many problems and barriers to students and faculty for badges to be adopted wide-scale, or even to continue this project without continued funding.

The team plans to continue to integrate developed assignments and assessments into courses without badges.

Mitigation of challenges to sustainability could be accomplished by:

- incentivizing and prioritizing development, implementation, and support of appropriate technology for badging;
- incentivizing and prioritizing faculty development time and resources for the re-development of courses to incorporate creativity and critical thinking skills;
- providing students or requiring students to have, at an institutional level, digital literacy skills enabling their success using technologies such as course management systems; and
- providing faculty development time to learn and master teaching technologies and systems such as course management systems and badging.

Lessons Learned

For this project, badges were a final layer of information literacy skills delivery. The main take home lesson from the team is that the instructional design work behind badges enriched course curriculum, and would have done so without the implementation of badges.
The technology and implementation of the badges themselves, however, posed many challenges.  
- Anything thought of as “extra” outside of course work will not be readily adopted by students. Some students were critical of the perceived added workload, and there was a marked difference between graded assignments, which most students completed, and often minimal additional badge work, which was omitted. The team made the decision to be generous with deadlines and give credit for flawed work, so most students could earn all badges. Without such lenient grading, less than half of the students would have earned the culminating “Master Info Analyzer” badge.  
- Badges may be better geared toward introductory level classes, since there were many junior and senior students who felt the badges added little to their education. However, these same students who feel they already have the required information literacy skills, have clear gaps in their knowledge as evidenced by questions posed in class, as well as demonstrated skills on assignments.  
- Badges are not widely adopted or used by the institution, which caused barriers to student adoption. Despite repeated and ongoing efforts to “sell” students on badges, few students took an active interest in the project.  
- Badges might only work to motivate some students, and endanger the motivation of others. Some students noted that badges motivated them, because they liked instant gratification. Others felt that badges were “too cutesy” and felt that they took the work less seriously as a result.  
- Because students expected instant-gratification with badges, the lag in time between earning badges and their receipt of said badges elicited questions.  
- Badge technology is nascent, and must be fully integrated into other online learning environments to be successful.  
- Students lacking digital literacy skills were given yet another technological barrier to success. The badge technology was especially challenging for non-traditional students.  
- Badges are meaningless without articulated learning outcomes and good assessment. Essentially, badges are a trendy technological layer that can highlight good instructional design.  
- Without implementing badges the project would still have been successful. The goals to map learning outcomes and to better integrate information literacy skills into course curriculum were achieved. Instructors will retain the newly created assignments in their syllabi, and the connection between the department and the library has grown even stronger.

Some input from the students’ Post-Badges survey:
“[I] said this in an e-mail to Emily but I will happily say it again. The content of the badges are a great tool and I feel that those who disregarded the badge assignments missed out as the learning content was very helpful. In my experience working with my group none of them knew how to properly site [sic] the data or the peer reviewed sources we used in both the bibliography and in text. They also were not competent when it came to using search engines as they would often e-mail me telling me they could not find the information they were looking for and I was able to find the information using the search advice provided in the badge content. All in all I thing [sic] this is a great program and I hope that the suggestions I gave Emily can be made in order to entice more students to take part in it.”

“I think this program could be really valuable if it were initiated at the beginning of any
education series. For instance: if this was a required method that began the first day of freshman year of college (or high school), I think it would be really helpful! It's great to see benchmarks and have incentive, but when it is started so late in the process, it just seems to be extra work with little to no value.”

“I still don't quite understand the point of badges. We do the assignment and we get badges. It's the same thing as we do the assignment and we get graded for it. The badges doesn't make me want to go extra and beyond. Regardless whether or not the badges are there or not, someone is going to do the assignment if they don't want to fail.”

“My experience using badges made me renew or review some of what I already know such as citing sources and search techniques. As a result, I now have mastered those skills. Thanks!”

“They seemed a bit childish and I would not feel completely comfortable putting them in a resume in fear that my potential employer might find them immature.”

“The badges, although a good idea for recognition were not user-friendly enough to use efficiently in class. The credibly app and online services were very flawed and hard to use. The badges themselves were corny and not something I could be proud of. If the badges were made to look more official and had better naming instead of some ninja name or source sloth [sic] or anything else not as corny then I would probably take a little more pride in them but I don't really care to have something attached to my name stating that I am a sourcesloth [sic].”

“I enjoyed using them in class I thought it was fun. I don't see me using them in the future mostly because I don't see use for them in my daily life.”

**Organization of Provost’s Challenge**

The Provost’s Challenge began haphazardly, and caused a lot of confusion among funded participants about reporting and structure. Hiring Project Managers was an important step to remedy the seemingly impulsive way in which the challenge was announced and executed. One confusion was the lack of clarity around funding and buy-outs. It was decided halfway through the time that buy-outs couldn’t be considered true buyouts, but were rather funds to hire adjuncts. This caused consternation to those who had already agreed to partner, but also business administrators within the departments in charge of organizing and planning for teaching loads.

It would have been a good idea to gather all of the PIs socially, or for check in meetings. While the PMs helped with some of the communication across projects, it would have been highly beneficial to have provided for an arena, a listserv, or some other communication mechanisms amongst those funded project PIs. Generally, the Provost’s challenge, although geared toward collaborative projects, reinforced the existing or created new silos in which faculty operate.

**Collaborations with the Office of Academic Innovation**

For this project we had a representative from OAI on the project team. The Instructional Designer guided us during the curriculum development as to how we might consider assessing student skills.