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Scaffolds: Experimenting with student-driven digital badging in an iSchool context

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Abstract
Digital badge systems can be contentious to start and challenging to implement. In this project, we examine the development of an open, student-led, peer-to-peer badging framework within an iSchool context. Scaffolds is a dynamic set of digital badges created to give students more concrete guidance in their exploration of the field of information science. The badges provide a way for students to customize their exploration of co-curricular materials and activities to augment their educational experience. Using motivation and perception surveys, as well as in-depth interviews with participants, the goal of this research is to understand what motivates students to participate in digital badges programs and how an open badging platform can be used to encourage student engagement in co-curricular educational activities.
Keywords: digital badges, gamification, learning, credentials, education reform

1 Introduction

Open badging projects have become popular in many contexts in recent years (Ahn, Pellicone, and Butler, 2014). From personalized, professional development for teachers (Gamrat et al., 2014) to incentivizing certain behaviors in online communities (Anderson et al, 2013, Farzan et al, 2008), badging projects are implementing a wide variety of modalities to achieve a range of outcomes. Digital badges, which are "visual representations of a skill or achievement," (Mozilla Open Badges, n.d.) allow users to validate their skills and tell a story about their experiences and activities (Gamrat et al., 2014). In this project, we examine the development of a student-led, peer-to-peer badging framework within an iSchool context. The project, called Scaffolds, is currently running at the University of Michigan's School of Information. The goal is to understand student motivations to participate in digital badges programs and how an open badging platform can be used to encourage student engagement in co-curricular activities.

2 What is Scaffolds?

Scaffolds is designed as a dynamic set of digital badges created to give Masters- and Bachelors-level students guidance in their exploration of the field of information science. The goal is to allow students to create customized experiences navigating educational opportunities, both online and on campus, taking advantage of the benefits afforded by a residential college environment. This effort supports the cultivation of a strong, flexible foundation while encouraging professional development and continual, self-reflective learning. Similar to badges from the American scouting tradition, Scaffolds badges are designed to exist as part of the larger educational ecosystem as a way to motivate students, provide recognition and a system of credentialing, showcase evidence of achievement, and provide freedom of choice in an informal learning environment (Gibson et al, 2013; Jarman, 2005).

Scaffolds was introduced to students at the University of Michigan's School of Information (UMSI) in September 2014. Participants were recruited through a listserv email. Out of over 350 students, 10% signed up within the first month of launch.

Students enrolled in Scaffolds receive a biweekly email outlining articles, resources, events on campus and in Ann Arbor, Michigan, and suggested pathways to navigate through these materials. To develop materials for Scaffolds, we interviewed 17 students, alumni, employers, and professors about experiences, co-curricular activities, resources, and other opportunities that shaped their perspectives as information professionals. While the focus was on activities and resources unique to a University of Michigan context, we also gathered other articles and videos that were suggested by the interviewee as having an impact on their professional outlook. From these we structured a lightweight framework of co-curricular activities that expose students to new ideas while encouraging them to make connections across campus. Core, foundational materials are listed on Mblem (www.mblem.umich.edu), University of Michigan's digital badges website. Additional resources are added to a supplemental website, umsiscaffolds.wordpress.com, to provide students access to up to date resources.

Fourteen badges were introduced to students. Digital badges are awarded after a student has accomplished the defined criteria set out for the badge. Our criteria ask students to submit a statement structured to promote self-reflection and draw connections, providing an avenue to reflect and build connections between classroom learnings and co-curricular activities   (White & Frederiksen, 1998; Hakulinen, Auvinen, & Korhonen, 2013).

3 Soliciting Feedback

We distributed an online survey and conducted semi-structured interviews with students to obtain feedback on Scaffolds and to better understand student motivations for participating in digital badging programs.

3.1 Survey

We distributed an online mixed-methods survey to all students at the School of Information. We received 116 completed surveys from 482 possible respondents, a 24% response rate. We asked students about their familiarity with digital badging outside of Scaffolds, how useful badging would be in conversation with future employers, and its alignment with the larger UMSI community. We also asked participants to rate their knowledge, confidence and experience with topics covered by each of the badges.

Three broad findings arose. 68% of respondents were not familiar with the idea of digital badges before Scaffolds began. With the increased interest in incorporating gamified aspects within higher education, discussions of digital badging in the media, and the prevalence of the study of human-centered design within the school, this is a surprisingly high number. When asked how useful they thought badges would be in supporting conversations with future employers, 74% of participants responded neutrally or negatively, illustrating an uncertainty of the value proposition for badging as it relates to their future careers. Finally, 33% of respondents indicated they had low or very low experience, knowledge, or confidence in the badging topics. This is particularly interesting as the badges were developed based on existing topics in the curriculum. Respondents seemed unable to make the connection to use badging as a mechanism to recognize knowledge and experience in these areas.

3.2 Interviews

To supplement our survey, we interviewed five Masters students to further explore the topic of digital badges for co-curricular learning within the field of information. On the whole, our interviewees did not see any real

benefit for attaining badges. While some understood the value behind the resources and completing the activities to attain the badge, all did not see the value of the badges themselves. As one interviewee states:

> "Ultimately, I like the way Scaffolds is organizing resources. I'm not sure that I would be motivated to complete a reflection after reading the articles or attending the events in order to obtain a badge. So, yes the current model of Scaffolds would probably help me to navigate activities and resources related to core concerns of information students. I'm still not sold on the second part, though. I just can't see who the badges would be serving other than myself. Completing reflections for my own benefit is not usually something I feel I have time for, however beneficial it may be for my better understanding of information-related concepts."

When asked how they decide on co-curricular activities, two interviewees specifically sought opportunities available to them because of their student status at the University of Michigan. Students also selected activities that will specifically help build skills or explore areas of interest. One student used co-curricular activities to supplement her academics, seeking activities that provided opportunities not available in the classroom.

Finally, when asked how Scaffolds could better support them through the program, students noted that they do not see value in the badges themselves. One interviewee thought it could be incentive to attend local events, but did not see badges as an incentive to use any other material on Scaffolds. Two interviewees expressed a desire for a more tailored experience--including personally targeted notifications of events, articles, and materials that will help build their individual skills set.

4 Discussion and Next Steps

Our survey results and interviews illustrate an interest in the co-curricular activities and supplemental materials that Scaffolds provides, but little perceived value in badging as the avenue for delivering these materials. Students are particularly interested in resources and events that can support their immediate experience. Specifically, they want resources that supplement their current academic experience or will demonstrably help with their search for gainful employment.

In the next iteration of Scaffolds, we plan to restructure the program to provide a more substantial framework for students to explore topics they are already interested in. Resources will be re-tailored to suit students' interests and specific goals, and benefits will be more explicitly stated. We will add more structure for the skills-based badges, adding step-by-step type instruction to provide students more organization in their exploration. We will also be working with students in an advanced graphic design class to develop the visual culture of badges for Scaffolds.

While badging has already been explored as a way to develop skills in the workforce (MacArthur Foundation, n.d.); students in this project have thus far not seen the value of badging as a way to boost workforce readiness skills. In this next iteration, we will organize instructional events to teach how badges can be used to help explain the breadth and depth of students' graduate experience with greater granularity than a standard diploma provides. In our post-program work, we hope to explore students' motivations, their level of participation within Scaffolds, and their perceptions of how well they performed during the year.

Finally, tangential to this project, the authors of this poster are conducting research to understand how employers might use digital badges in their hiring processes and to help elucidate how badging can be

used by employers and students. The results from that research can provide insights as to how badging can be implemented as a way to help students with their job search.

Through Scaffolds we hope to provide students with more structured pathways in their exploration of the field of information science. The development of an open badging project within a higher education context, with an emphasis on peer-to-peer mentorship and co-curricular learning, will allow us to better understand students' motivation for participating in digital badging programs as a way to support on-going, self-reflective professional development practices.

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