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Investigating Perceptions and Potential of Open Badges in Formal Higher Education

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Abstract: Open Badges are a method, proposed by the Mozilla Foundation, to recognise skill acquisition and 'informal' learning, particularly as part of Lifelong Learning. However, there is also significant potential in the formal education sector. This paper outlines a project at City University London to identify whether Open Badges should be supported across the institution, and includes some possible uses for badges. The project involved interviewing staff and conducting focus groups with students to understand their needs and level of interest. The paper includes some anticipated and actual findings from the research and summarises the subsequent work being undertaken as a result of the project. The findings of this project could be used by other institutions considering the use of Open Badges in their own context.

Introduction

In 2010, the Mozilla Foundation, the non-profit organisation most widely known for the Firefox web browser, published an initial working paper on a project called Open Badges, with subsequent updates to reflect progress (Mozilla Foundation, 2012). Open Badges are images, with embedded validation information, which are awarded after demonstrating specific learning achievements, such as understanding a particular topic or acquiring a specific skill (Figure 1). This is conceptually equivalent to the badges earned and worn by members of the international Scout Movement. The learner is able to collect their badges together and create different sets depending on the intended audience, such as potential employers, project supervisors, etc. This focus on skill acquisition rather than purely academic achievement (Goligoski, 2012) lends itself particularly well to 'informal' learning through a recognisable non-educational organisation, such as a sports club or employer (Neale, 2012). There is also a natural fit between the use of badges and the concept of Gamification as a motivational technique with learners striving to gain badges in order to 'compete' against their peers (Glover, 2013; Štogr, 2012). There is growing interest in the potential of Open Badges in the UK, both as a mechanism for recognising skill acquisition and experience and as a tool for motivating students to take control of their learning. This reflects a sector-wide focus on Employability and Retention, which badges have the potential to support by surfacing the less-obvious learning that is often hidden due to the focus on grades and transcripts.

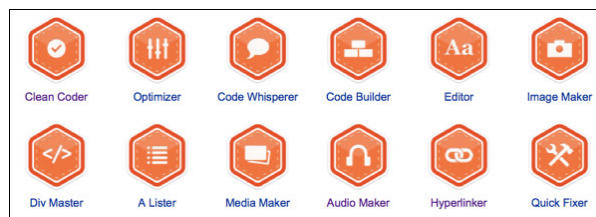


Figure 1: Example Badges from Mozilla's Webmaker Course.

There are two significant features of Open Badges that would allow their use as a rudimentary portfolio; a badge must contain a link to the requirements for obtaining it, and badges can be linked to evidence in meeting those requirements. These features, combined with the ability to make customised public collections of badges, would

enable students to create tailored clusters of badges for different audiences - such as potential employers, friends on Facebook, family members, etc. - and allow the other parties to understand what the badge means and how it was obtained. The transparency of the requirements for obtaining a particular badge also means that students can use this information to guide themselves in completing the necessary activities and use the information to check their progress. This would provide the opportunity for teachers to encourage engagement outside of formal teaching time, and provide an incentive for student to learn a topic or skill in greater breadth or depth.

In addition to the development of the concepts of Open Badges, the Mozilla Foundation has also been developing the online infrastructure to support their use. The technologies used to implement Open Badges are Open Source, meaning that they could be integrated with all existing Virtual Learning Environment/Learner Management Systems, making the issuing of individual badges automatic in many cases. This 'Open' aspect would also allow learners to create portfolios of badges collected from a variety of sources and it ensures that security features have been built into the badges to make them difficult to 'forge'. Given this Open and distributed nature, it is appropriate that the communities around Massively Open Online Courses (MOOCs) are currently exploring Open Badges as a method of providing a secure way to recognise course completion. Partly for these reasons, in a report on the expected impact of a number of learning technologies, the UK's Open University concluded that the use of Open Badges has a 'High' potential impact, likely to be felt within 2-5 years (Open University, 2012). Open Badges have also been named as a key innovation for 2013 by the Harvard Business Review's Michael Schrage on his blog (Schrage, 2012). Some Higher Education institutions have already implemented Open Badge-based systems, such as Purdue University's Passport platform shown in Figure 2 (Tally, 2012).

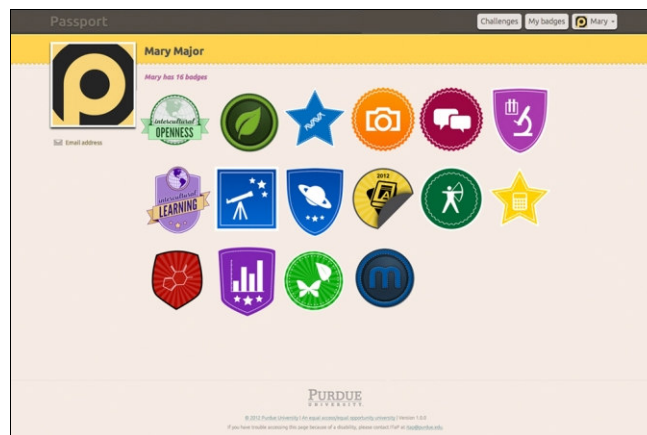


Figure 2: A Student's Badges Displayed in their Purdue University Passport Profile.

Potential Uses in Formal Education Environment

While the most obvious uses for Open Badges are with skills acquisition and the 'certification' of informal learning, there are also many possible uses within a formal educational environment. The following are scenarios where Open Badges could complement existing practice:

- A nursing student is required to learn particular clinical skills, but on completion of the course, it becomes difficult to extract the specifics skills learned from the overall grade on the transcript. Open Badges would make it possible for the student to build a public profile to highlight the specific skills he acquired during the module.
- A mechanical engineering student needs to have undertaken general safety training and a specific training session prior to being able to use a particular piece of equipment, and needs a refresher every year. With Open Badges, it becomes possible to check whether a student has completed the necessary training before allowing them on the equipment. The badges would automatically expire each year and so encourage the student to maintain their knowledge.

- Two computing students are on the same programme; one takes elective modules in advanced programming and the other takes electives on systems analysis. On completion of their modules, the students are awarded badges that highlight their chosen specialism.
- A student is elected president of one of the Students' Union societies. She is awarded a badge to recognise this, along with other related badges such as for 'Chairing meetings', 'Organising events', etc., after completing of her term of office.
- A supervisor uses badges to help identify whether a particular student has the necessary skills to undertake a proposed final project.

After graduation, these badges would allow students to differentiate themselves from other graduates by providing verifiable evidence about their skills and experience. This may also provide a boost to students' employability by enabling them to highlight sets of skills that are applicable to specific employers and roles.

Project Overview

This project is undertaking research into the potential for, and interest in, using Open Badges to supplement formal courses and qualifications at City University London, in order to make an informed decision on whether to implement Open Badges. Initially, interviews were conducted with staff, including those in teaching and support roles, to understand how Open Badges may work in their context and whether there would be enough support for large-scale use of badges in programmes across the institution. Student focus groups were also set up in order to gain an insight into how students perceive Open Badges, how they would make use of them, and whether they would like to earn them during their studies at City University London. All of this information has been collated into recommendation to the institution on whether there is enough potential benefit to justify a project to implement an Open Badges framework and how best to proceed.

Student focus groups have been limited to those from the Schools of Engineering & Mathematical Sciences and Health Sciences. These schools were chosen specifically because their courses generally require students to learn discrete skills which are directly applicable to their future career, making it easier for participants to visualise how Open Badges could fit in with their existing activities than in disciplines where the skills are more general or abstract. However, lecturers in all of the academic school at the university have been interviewed, along with some non-teaching staff from schools and central services, including the Students' Union. This decision to expand the recruitment of staff members was taken in order to establish whether there would be differences between disciplines and how badges might be integrated into subjects with a variety of teaching methods and intended learning outcomes.

Anticipated Findings

Prior to conducting the interviews and focus groups, some predictions on the results of this initial research were made:

- Some students, particularly those with high intrinsic motivation to learn, may see Open Badges as patronising or something for children.
- Open Badges will not be appropriate for a significant proportion of learning in a formal setting, either because the learning is too abstract or conceptual (that is, not skill-based) or difficult to compartmentalise into discrete units.
- Students will be interested in displaying their badges in social networking systems.
- Staff and students will highlight the potential employability benefits of publicly displaying badges.
- Staff will have concerns regarding the security of badges and may worry about diluting the institution's 'brand' by issuing too many.

Overall, it was anticipated that there would be a generally positive reaction to the use of badges, with some negative views being expressed by lecturers in disciplines where skill development is less obvious (such as abstract information skills) or less valued. Students were expected to be enthusiastic about the potential for badges provided

that they did not appear to trivialise the amount of work, and subsequent feeling of achievement, involved in mastering a skill or concept.

Actual Findings

The findings from the interviews were in general agreement with those anticipated. Key findings included:

- It is seen as important not to 'dilute' the significance of a particular badge by allowing too many to be issued, therefore some initial consideration into a 'badging strategy' should be made at the outset of any implementation. A further reason for a badging strategy would be to prevent inequitable/uneven distribution of badges, where some lecturers give them out more freely than others do, which could reduce credibility among students and employers and potentially damage the reputation of the University.
- Students want 'special badges' which would only be awarded to high achievers as this would be a way to stand out from their peers.
- Real value could be offered to students who don't do as well academically, but performed well in other areas that aren't formally assessed
- Using badges to link personal development/achievement with the membership requirements of professional bodies, such as the Institution of Civil Engineers (ICE), British Computer Society (BCS), Nursing and Midwifery Council (NMC), would help students to see how their studies fit with future career aspirations.
- The use of badges in formal education is a conceptual struggle for some people, particularly how it might work in their own context, however, once the idea is fully realised they are typically able to envision multiple ways that badges could work in their discipline.
- Security and the fraudulent use of badges was not seen as a major issue by staff or most students, however the importance of privacy of badge collections was occasionally raised, with students stressing the need to have control over who can see their badges. Mixed views were evident around sharing badges on personal social networks like Facebook, with students stating that they were more likely to share it on professional networking sites such as LinkedIn. However, all were in agreement that they would like their badges to be available on core University systems, such as the VLE.
- There were suggestions that badges would act as an extrinsic motivator, creating healthy competition within a cohort.
- Both staff and students felt it was important that major employers were aware of this badge initiative, in order to increase the credibility of badges.
- Students would need support with making the most of Open Badges, such as how they could use them to support, rather than replace, personal statements.
- Staff would like to use badges to help them in writing references for students.

Subsequent Work

Following the broadly positive results of the research a recommendation has been made to the committee that oversees Learning and Teaching issues, including those related to the use of educational technology. This recommendation strongly encourages a pilot implementation of Open Badges with teaching modules in several different schools of the university. This recommendation is now being considered, the required technical work is being assessed, and pilot modules are being identified and the involvement of the relevant teaching staff is being solicited.

Since beginning work on this project, one of the team has moved to a different institution, Sheffield Hallam University, and there has been considerable interest at senior levels in the use of Open Badges. Pilot implementations are being undertaken in several teaching modules and also in an institutional scheme which recognises student extra- and co-curricular activities. A further investigation is also underway into how Open Badges might be used to support staff development events/courses and Continuous Professional Development (CPD) in general.

Impact of Project on Other Organisations

It is important to note that, as Open Badges are a very recent innovation, there is currently little in the formal literature relating to their use or impact. Therefore, the findings of this project will be made published through a variety of channels, both formal and informal, and should help inform other organisations considering the use of Open Badges. Publication of any further work undertaken following the recommendation to the institution is also intended.

There is significant scope for institutions to introduce Open Badges as a motivational tool, an additional achievement recognition mechanism, and as a method of promoting their brand and quality of students. Implementations of Open Badges are either available or being developed for major online systems used to support learning, including Moodle, Blackboard, and Wordpress, and so there will shortly be few technical reasons for not implementing badges. As the findings of this study show, learners are enthused by the idea of earning badges as part of their studies, and over the next three-to-five years, as more institutions start using Open Badges, it may be necessary to support Open Badges in order to remain attractive to potential students.

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