Open Badges:
Portable rewards for
learner achievements
A MyKnowledgeMap
white paper

Authored by Dave Waller
Product and Design Manager, MyKnowledgeMap Ltd.

Open Badges: Portable rewards for learner achievements

Contents

Introduction

Why do we need portable rewards?

Modern learners are engaging in education, training and personal development in new and exciting ways, recording progress, skills and achievements using disparate and innovative technologies. With so much activity taking place across so many different systems, applications and locations, it can be difficult to get recognition for the skills that learners are gaining and demonstrating – and even more difficult to get that recognition in a format that learners can use and share.

Even if achievements are recorded, technology generally has limited functionality for exporting, transferring and sharing them in the ways that modern learners need to. This issue becomes even more acute as learners transition from one organisation or institution to another, often unable to take their record of achievements with them.

Interoperability between e-portfolio tools, Learning Management Systems and student Management Information Systems is increasing and standardised formats for data transfer are emerging but these, in most cases, require a compatible system to import these records into. It's also easy, when exporting and importing achievement data, to lose the validation aspects of the achievement and therefore the integrity of the claim.

What are Open Badges?

Awarding badges for achievement and recognition of skills is no new innovation. Cast your mind back to childhood when swimming 25 metres, or carving a tent peg with a pen knife would gain you a sew-on badge.

Each badge could be used as demonstrable proof that a skill had been learnt and proven, and the badge itself would be evidence of the authority that issued the award. What's more, these badges would be collected and displayed in a single place (a shirt sleeve, a neckerchief, a swimming towel) allowing the owner to show their achievements to all.

The Open Badge Initiative, from Mozilla, aims to provide a platform where this approach to the recognition of skills and achievements can be replicated, albeit in a digital way. Mozilla describe Open Badges through their website[1] in the following terms:

> Learning today happens everywhere but it's often difficult to get recognition for skills and achievements gained outside of school. Mozilla's Open Badges project is working to solve that problem, making it easy for any organisation or learning community to issue, earn and display badges across the web. The result: recognising 21st century skills, unlocking career and educational opportunities, and helping learners everywhere level up in their life and work.

---

[1] http://www.openbadges.org/

It's not just achievement of skills or milestones that can be rewarded by issuing Open Badges, they can also be used to reward and reinforce positive behaviours. As the administrator of an issuing application you could distribute badges to learners who, for example, keep regular learning journals, or members who continue to dedicate time to continuing professional development or even tutors who regularly meet their student feedback SLAs.

The dynamic nature of Open Badges, and the data they can contain, means that it's possible to award badges for almost any system achievement, behaviour or action.

How do Open Badges work?

The Mozilla Open Badge project provides a technical definition for how Open Badges can be created, stored and shared – providing an approach to interoperability, not for the systems using Open Badges, but for the badges themselves.
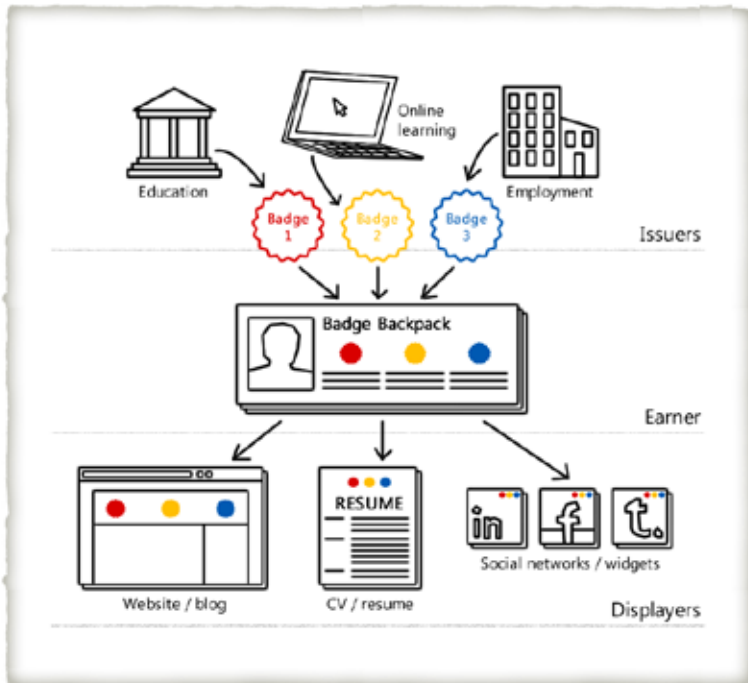
This simple process[2] demonstrates how badges can be issued by a range of bodies, collected by an individual, stored in a central application (owned and managed by the individual) and then shared in different contexts.

---

2   Adapted from http://openbadges.org/en-US/about.html#how-it-works

This model is intentionally straight forward and employs three key stakeholders:

- *Issuers* create and award badges for the completion of tasks and activities as well as the demonstration of skills and competence.
- *Earners* are individuals who complete tasks, demonstrate skills and earn badges.
- *Displayers* provide a platform for earners to show their badges, or selections of badges, within different contexts.

A beta-phase earner-centric application is provided by Mozilla to support the collection of badges from multiple sources – The Badge Backpack. The Backpack gives users a central location for storage of their badges and implements all of the functionality needed to prevent spamming of unwanted badges into a backpack.

The open nature of the badge specification doesn't just tie users to the Mozilla backpack but leaves the platform open for anyone to provide the "backpack" for collected badges, even allowing users to download their badges to store themselves.

What's the technology behind the badges?

Mozilla Open Badges have been designed to be totally portable and make use of the ability to embed additional information into a PNG image (a standardised and non proprietary image format). By incorporating a reference to a badge description, hosted by the badge issuer, along with information about the individual, a generic badge image can be re-encoded to provide a personalised badge for an individual – a portable badge that can be owned and used by the individual however they may require.

How secure are Open Badges?

The Open Badge specification dictates that the information encoded within the PNG image is minimal (a single assertion[3] URL) and that the information that validates the badge be hosted and maintained by the issuer. This means that there's very little within a badge that can be tampered with, and validation of the badge can be achieved by quickly and simply reading the information held in the assertion.

The assertion itself is again simple in its construction and provides details of the individual the badge was issued to (hashed using SHA encryption or similar) as well as details of the issuing body. The assertion also references the criteria for the badge which is also hosted by the issuer. In fact, the only thing not held by the issuing body is the badge itself. Security and validation of the badge is therefore maintained by the provision of a valid assertion served by the issuing body.

You can read more about the technical specification for Mozilla Open Badges at https://wiki.mozilla.org/Badges/Onboarding-Issuer.

---

3   An assertion is a small snippet of data (in JSON format) that is held and served by the issuer of the badge describing it, the owner and the badge criteria.

Open Badges, assessment & lifelong portfolios

Providing recognition of achievement during an academic programme can support learners with understanding their strengths, targeting areas for development and building confidence in both the use of the software systems and the tasks being performed. This recognition can be provided in many ways – automatic scoring of assessments, inclusion of automatic feedback as well as manually added review comments – but none of these offer true portability when extending academic systems beyond the institution.

Open Badges could provide a portable and personal approach to recording achievements within academic systems and supporting the display of achievements and verified skills both academically and beyond.

Question author

Mobile user

Top marks

Blogger

Using a combination of automatically issued badges along with badges created by tutors and administrators to recognise specific skills, a portfolio of personal achievements can be created that a student can take with them, using and reusing in all of the contexts of their lifelong learning journey.

It's also possible, using Open Badges, to reward the positive behaviours and attributes of a learner outside the achievement of skills or particular milestones.

Open Badges could be used in an equally powerful way to demonstrate the commitment of a learner or their ability to support their colleagues – all of the additional skills that can help a candidate stand out when entering the world of work.

As well as issuing badges, a toolset for collection and display can also be provided – both for those issued internally and for those collected from other sources. This type of functionality can be used to support learners with the demonstration of vitally important life skills as well as those gained on placements and in the field: learners can be given their own web showcase where they can display badges and contextualise them with a supporting narrative.

Open Badges & national skills infrastructures

Recording and validating skills, experiences and abilities is at the core of online national skills infrastructures, especially in industries where an accepted set of predefined competencies and training standards exists.

In the nuclear industry in the UK, for example, a set of Basic Common Induction Standards are recognised across the industry, and achievement of this is tracked using a Skills Passport system open to everybody working in the industry. In the Railway Engineering sector, contractors employed by a range of organisations work on the lines, but training requirements are set and tracked centrally by Network Rail and the National Skills Academy for Railway Engineering.

Fire safety grade 1

First aider

PTS

Training provider

Open Badges offer a unique approach to the recording of transferable skills and the documentation of validated training. Building functionality for the issue of badges, by approved training providers, and the collection of badges within skills passports, could provide users and members with rich, portable portfolios of competence that can be read and validated quickly and easily.

The role of a national skills body doesn't have to end at the issue of badges but could also extend into the provision of an industry specific "backpack" – a space for the collection of relevant badges tied directly to a user's personal skills passport.

When combined with embedded issue dates and expiry dates, Open Badges could be adapted to support and enrich not only personal skills records but also systems that manage compliance within an organisation or industry.

Open Badges & online learning

Certificates for learning and CPD records have long been a staple of personal records of achievement, CVs, resumes and job applications. In the age of online learning, however, it can be more difficult than ever to obtain proof of these achievements in a format that can be easily extracted and shared. Open Badges offer a unique solution to this problem, providing learners with a library of badges each one demonstrating completion of an online course, achievement of a required quiz score or completion of a set number of CPD hours.

| Course complete | 5 Courses complete | 15 CPD hours | Employee mentor |

Using Open Badges it's possible to reward more than just achievement of specific milestones. Positive behaviours, such as commitment to monthly CPD or regular forum interaction, can also be rewarded in exactly the same way.

Using a combination of automatically issued badges along with badges created by training managers and LMS administrators to recognise specific skills, a portfolio of personal achievements can be created that a learner can take with them, using and reusing in all of the contexts of their lifelong learning journey.

Open Badges & capability management

The subjective and self-analysis nature of capability management systems makes automatic awarding of Open Badges a little more difficult than in other applications. There are, however, a range of positive behaviours that can be rewarded through the use of Open Badges as well as actions that an individual may see benefit in showcasing.

| First assessment complete | Skills map proficient | Successful 360° result | Personal development plan built |

Badges, like the ones above, could be designed to demonstrate an individual's commitment to their personal development and to the processes in place within an organisation. The Open Badge mechanism could also provide visual indicators of compliance against certain skills maps, or proficiency in those maps set at a system configurable level – 80% for example. When combined with embedded expiry dates Open Badges could be adapted to support and enrich not only capability management processes but also systems that manage compliance within an organisation or industry.

Still reading?
Give yourself a reward

We think that Open Badges represent an innovative and exciting approach to recognition of achievement and skills and we'd like to work with you to bring this to your learners and users. But, to really understand how Open Badges work we think you should give them a try.

To help you get started with your own Open Badge Backpack we'd like to award you one of your first badges – the MyKnowledgeMap Open Badge Awareness badge – as recognition of your new understanding of Open Badges. Just follow this link and provide your details, including the code below, and you'll be able to send this badge directly to your backpack.

http://ob-awareness.myknowledgemap.com/

22-08-39-74-13

If you'd like to know more about Open Badges and how they can support your own applications and initiatives then we'd love to talk with you. Just get in touch with your account manager or give us a call and we'll be happy to help – +44 (0)1904 659465.

MyKnowledgeMap
33-37 Micklegate, York, YO1 6JH
United Kingdom

+44 (0)1904 659 465
www.myknowledgemap.com