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| |  |  | | --- | --- | | Open Badges | /Users/iain/Downloads/3455635902_38293ff39e_o.jpg | |  |  | |
| in Higher Education  Guidelines and recommendations for effective implementation |

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# What are Open Badges?

For all of us who try to learn something new, acquire a new skill or reach a deeper level of understanding of a subject, for example, it can help if we are able to mark our progress, to indicate how far we have come and take stock of the next stage. That awareness of how we stand with regards our learning progress (and taking responsibility for our own future development) is a key success factor in education. It is possible, for example, to consider a course (or a professional career) as composed of a series of such way-markers, some of which we’ll quickly stride past, others which might need pause for thought and a further glance at the map. We start to feel better on such a learning journey once we’ve a good few milestones behind us and a good pace at which to progress; ticking off the way-markers one by one and being able to recount the adventures we may have experienced at each stage.

An alternative metaphor for such learner development is that of ‘digital badges’. It’s a term that borrows from two other areas: that of gaming (and ‘achievements’) and skills badges used by youth organisations. It’s a metaphor that is currently very popular and making significant inroads into education and training, both in the public and corporate sectors. But it’s a nomenclature that puts some people off. That’s a pity, since really what we are talking about is a form of ‘micro-credential’ which fulfils two purposes: (a) *motivating and encouraging learners*; (b) providing a form of recognised credit for *a skill, achievement, or new knowledge*.

Such digital badges are usually designed to be robust and secure, ensuring that they cannot be counterfeited and that the learning to which they testify can be scrutinised through recorded evidence or links to a formal training curriculum and provider. The adoption of the ‘[Open Badges Framework](http://openbadges.org/),’ which was developed by the [Mozilla Foundation](https://www.mozilla.org/en-US/foundation/) (a non-profit organisation) and which is now promoted via the [Badge Alliance](http://www.badgealliance.org/why-badges/), has helped considerably in the adoption and spread of digital badges as a form of educational credential.

Many *Learning Management Systems* (eg Blackboard, Moodle, Canvas, etc) now provide the technology to issue digital badges and academic colleagues have been piloting their use in many subject disciplines and levels. They are also increasingly being seen as of value in continuing professional development and staff training.

# What are the technical requirements?

## There are several options now available for badge design and issuing, many of which also integrate with Learning Management Systems (eg Blackboard, Canvas, Moodle, etc). The key technical considerations are:

## A means of designing the graphical component of the badge and an agreed/consistent approach to such design;

## A system for capturing the Badge award criteria (and any evidential requirement) and ‘baking’ these in with the badge design;

## A means of issuing badges, whether done automatically on attainment of computer-based assessment, or via human approval;

## A persistent URL to which the badge is linked so that its award can be verified/confirmed;

## Some consideration also in terms of potential personal profile tools, backpacks or other means of badge earners displaying and organizing badges which they have been awarded.

## There are a range of commercial and open source products which can fulfil all of these requirements and this is an area of growing interest so we will no doubt see the evolution of platforms and systems. Note that this evolution might also mean that some systems will be superseded and cease development, something which in particular needs to be considered when addressing item (4) above.

## Amongst the examples of products/systems currently available are:

## **Credly** (<https://credly.com/)> Simple to use, commercial system. License costs can become expensive when scaled up to the size of a whole institution, but may be very useful for projects and groups and allows free use if issuing badges in batches of 50, but many other features require a licence fee.

## **BadgeOS** (<http://badgeos.org/)> This is a plugin for WordPress and so is particularly useful for groups or organisations which are using this platform for their main website (or indeed in combination with WP LMS-style plugins such as LearnDash).

## **Open Badge Factory** (<https://openbadgefactory.com/)> A commercial product which also provides a range of plugins for Moodle, Blackboard, Wordpress, etc, and which provides a simple to use interface for managing and issuing badges. This product is complemented by Open Badge Passport (<https://openbadgepassport.com/)> , which enables individuals to display and organise their badges, alongside other materials (such as a CV, for example). An Open Source version of Open Badge Passport is also under development.

## A more extensive list is available from the *Badge Alliance* at <http://www.badgealliance.org/badge-issuing-platforms/>

# Implementing Open Badges in Higher Education.

Digital badges have two distinct roles in higher education:

1. providing motivation to learners as they make their way through a course or module
2. recognition of the attainment of clearly specified skills, knowledge, or experience.

We might usefully, therefore, consider two categories of badges: (a) those which are *internal* to a module or course and whose value is largely to the learner as a sign of progression; (b) those which have an *external* value and which form a meaningful statement of knowledge and skill which may be recognised by employers, professional bodies and other educational institutions.

It is important to note that, in the case of the second of these (ie the externally recognised badges) the badge should not be awarded on the same general criteria as any educational credit related to a particular module or course - that is the role of the ECTS awards and the academic transcript. Rather, the role of badges is to signify a well-defined, specific skill, knowledge or achievement which (whilst it may be acquired within a course or module, or as is commonly the case, via extra-curricular or co-curricular experiential learning), is additional to that captured in a typical academic transcript.

Some examples might illustrate this distinction more effectively:

* A badge for completion of a study skills course which students may take in addition to (or in advance of) their formal modules/courses and which may form a required pre-requisite for entry to, or progression in, a course. *Such might be internal, but if it follows a standard set of content and skills held in common by institutions it might be possible to develop an external version which has currency in the sector.*
* A badge tied to a specialist skill such as (for example) particular laboratory techniques, or a demonstrable level of achievement in a new language, programming skills, media production, etc.  *If these skills are well-developed, readily demonstrable and useful additions to the students' CV, then these would suit external badges.*
* Badges mapped to the various topics covered within a module or course obtained when students pass each stage. *These are best suited to internal badges, which mean something to the students and to the lecturer concerned but not necessarily of interest to an external audience unless mapped onto very specific skill attainment.*
* Badges which map onto key 'transferrable' or broader skills such as those captured in statements of *Graduate Attributes* and/or associated with volunteering, service, entrepreneurship, work experience, etc. *These badges would be effective as external badges issued by an appropriate authority within the institution.*

It is important to have a clear policy and approach to the issuing of badges for a number of reasons, one of which is to ensure that they do not lose their power as either a motivational tool or a form of 'micro-credential' by being over-used or by badges being issued for relatively trivial attainment. *If every course and activity in which a student participates were to issue badges they would very rapidly lose any effective currency*. This aspect also emphasises the importance of establishing clear criteria related to *achievement* in the specifications for any badge.

## Recommended approach:

Badges used internally within courses and modules can be issued by the relevant lecturer/course coordinator. It is recommended that the criteria for the award of any badge are carefully thought through, unambiguous and mark a genuine (testable) achievement. Staff should refrain from issuing badges for trivial or very low level activities (eg attendance, satisfactory general performance in a module). Badges might, however, be used to mark particular individual achievement or distinction within a course but such might better be captured in 'distinction' grades or 'certificates of merit' (as exist in some institutions).

Externally facing badges are those which have a potential value to an external audience such as employers, professional bodies, other educational institutions, etc and which signify particular levels of achievement or skill. Care should be taken in the design of the criteria for such badges to ensure that they make sense to such an audience. *A measure of such value would be whether the issuing staff member of institution would be willing to recognise a similar badge from another institution*.

Because such badges are effectively 'certified' by the issuer (albeit for informal or only semi-formal learning) then it is important that there is a quality oversight which ensures that that badges have some intrinsic value, are designed using appropriate criteria, etc. For this reason, it is recommended that such badges should be subject to the approval of an appropriate individual or body within the institution. This 'authority' would issue the badges and ensure that the appropriate records are maintained (persistence of criteria URL, etc). Clearly if a corporate, institutional identity such as an adaptation of the official logo is being used then approval would have to be sought for that aspect too in keeping with institutional branding regulations and copyright ownership.

In summary, then, the *recommendations for an institutional implementation of badging* are:

1. Draft a local strategy and set of regulations pertaining to the issuing of badges which are intended to be externally-facing. These will require to address:
   1. Who has the authority to issue such badges, or who approves applications for such issuing and the criteria for approval;
   2. Use of the corporate logo for the institutions or derivations/adaptations from it and the overall quality of the graphical component of the proposed badges;
   3. Ensuring that the badge criteria, lifecycle/lifespan (eg period of validity), evidence requirements, assessment and mechanism for ‘claiming’ are clear and of appropriate quality;
   4. How the badges relate to other relevant structures or activities at the institutional level such as graduate attributes, co-curricular and professional experience programmes, the Diploma Supplement, and whether they augment/complement or certify specific components of a programme or course;
   5. Whether the institutional VLE/LMS should be configured by default to only allow the issuing of internal badges (for example, Blackboard Learn allows the option to publish to Mozilla Backpack (ie externally) to be switched off at the systems admin level, whilst allowing internal badges (or ‘achievements’) to be enabled).
2. Ensure clarity in terms of the relationship of badges to each other, whether or not they are part of a hierarchy, grouping or ‘constellation’, and how these might relate to institutional graduate attributes, programme level outcomes, personal development and employability policies.
3. Provide guidelines also for the design and issuing of internal badges to ensure that the system is not undermined by overuse or poorly articulated criteria. Ensure adequate training and development for staff and students and give appropriate consideration for the integration of badging within the course/module design process.
4. Where badges are of the external type (as defined previously) and relate to particular skills or professional experience, programme leaders should consider the scope there may be for:
   1. Developing badges collaboratively with a relevant professional body;
   2. Developing shared badges between institutions with agreed criteria;
   3. Recognising and approving badges awarded by other organisations or institutions which might address similar criteria, rather than building another slightly different variant.
5. Ensure that the badge issuing and management system works effectively with other information systems as required and that record-keeping is compliant also with data protection policy, particularly with regards any ancillary data that is associated with a student and their academic or personal records.
6. From a technical standpoint, badging systems should be Open Badge compliant. A number of proprietary badging systems are provided by publishers and other companies, without meeting the Open Badge technical implementation such systems will largely only be of use for internal badges and more restricted use.
7. Have a clear idea of how badges will be collected, displayed and shared including also due consideration to the provision or recommendation of a personal portfolio, backpack, profile tool for badge display.
8. Consider the opportunities that a badging approach may have for supporting staff development and training. Indeed, embedding badges within such systems will likely increase their acceptance and uptake across the wider institutional community.

# Examples of Badges used in Higher Education.

Many institutions are now issuing badges, both for internal and external purposes (see previous section). Amongst the recognised early adopters are Purdue (US) and Deakin (Australia), but the fact that badge issuing is now a standard, embedded feature in VLEs such as Blackboard indicates how interest has spread. Here we present some examples, taken somewhat randomly, but with the intention of giving an indication of the range of badging applications and contexts.

* **Passport** (Purdue) - a learning and e-portfolio system which records digital badge awards, demonstrating skills and achievements. <https://www.openpassport.org/Account/Login?ReturnUrl=%2f>
  + Example: Chemistry Lab skils: http://www.itap.purdue.edu/studiohq/stories/towns.html
* D**eakin** University – range of applications:
  + DeakinDigital – a subsidiary/spin-out of the University providing tools and services for assessment-only based credentialing and pathway programmes. Include Master of Professional Practice (IT): <https://www.deakindigital.com/degrees#mppit>
  + Deakin Hallmarks – a system of badges/awards that recognise a range of achievements associated with graduate attributes, transferrable skills and citizenship: <https://www.deakin.edu.au/learning/designing-assessing-and-evaluating-learning/deakin-hallmarks>

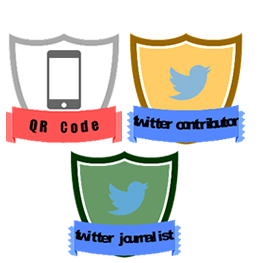
## Irish examples:

**Interprofessional Education -** The Interprofessional Education (IPE) programme involves undergraduate health and social care students from NUIG and UCD. These students work in small inter-professional groups with students from various health and social care disciplines within and outside the university to explore decision making in the context of inter-professional practice. The unit is built around some of the key competencies of IPE as identified by Interprofessional Education Collaborative Expert Panel (2011), namely roles and responsibilities, interprofessional communication and teamwork, and is facilitated online using the Curatr (social learning) system.

As the students are from different disciplines / institutions, there are varying levels of credits awarded (in some cases no ECTS credits are awarded). Students may earn badges within Curatr as they complete various tasks or activities. Students who successfully finish the entire module are awarded a certificate of completion, along with a digital badge (issues via OBF) to verify and recognise their participation. Over 200 badges were awarded to students in 2015.

ALIVE (A Learning Initiative and Volunteering Experience) is NUI Galway’s student volunteer programme. Students (or staff) who participate in volunteering activities, (minimum 10 hours), are eligible to receive the ALIVE certificate, awarded at a graduation ceremony held every year. These students have the opportunity to enrich their personal development and employability skills; have a fun experience and made new life long friends; learn from community which could enhance academic learning and build personal knowledge and skills while contributing to the capacity of community.

To allow students to display and showcase their volunteering experiences online, ALIVE decided to offer a digital badge to students to complement their paper certificate. In summer 2015, over 900 staff and students were issued with the first ALIVE digital badge. The badges were issued via the Achievements tool in Blackboard. A module space was developed on Blackboard to educate students about badges, to allow recipients to claim their badge and to outline how to export their badge to display it on social networks, online CVs etc.

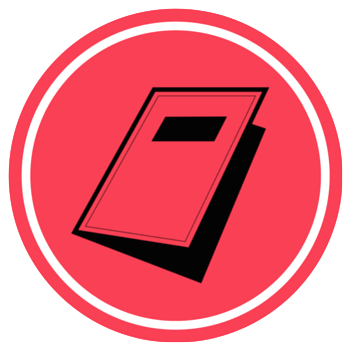
The Learning Technologies module CEL263 has been developed by the Learning Technologies team at NUI Galway and is offered to academic staff as part of a Postgraduate Diploma in Academic Practice (10 ECTS) or as a standalone module. It aims to provide a theoretical and practical exposure to a range of technologies used in teaching and learning in higher education, and how these technologies can be used to enhance the learning experience.

As one component of the module assessment, students are required to demonstrate a number of key competencies, based on the more practical workshops. Badges are awarded, via the Achievements tool on Blackboard, as competencies are demonstrated.

First piloted in September to December 2013, the use of badges made the requirement to demonstrate the competencies more explicit. There is also a sense of competition to acquire the badges

  
Social Computing and Media (UCD) Working with the module coordinator for Social Computing & Media, this project aims to address a lack of lab/tutorial time available to drive the 108 students completing this module to explore a number of different social networks and digital tools. A suite of 12 digital badges are offered, designed to encourage students to develop digital skills such as using social networks, online collaboration and building wikis. In addition, students are expected to learn how to use various tools including Prezi, MIT App Inventor, Twitter, LinkedIn and WordPress.

While the criteria for each individual badge varies, students are typically required to complete online self-study material on using and managing their digital tools, and later demonstrate that they have completed some assigned introductory-level activities using these tools in a lab or tutorial setting. Students who complete all activities and receive all badges will receive a final mastery-level badge.

Reflective Practice in Higher Education Teaching. A number of badges have been mapped onto professional development activities for academic staff, part-time tutors and Graduate Teaching Assistants to support and recognise good practice and a reflective, engaged approach to teaching enhancement.

Amongst such badges are those for: the compilation of a Teaching Portfolio; recognition of participation in a peer teaching observation and review process; engagement in detailed student evaluation and feedback processes; recording the attainment of a teaching excellence award; completion of a training programme for research student supervision; etc.

This set of badges replaces earlier pilot versions released through Blackboard for participants in a GTA training module and the PgCert in Teaching and Learning. These key skills and indicators of ongoing CPD are now being rolled out generally to anyone who can demonstrate attainment of the specified criteria, either whilst taking a formal qualification or as an independent learner.



Online Teaching. As part of an international consortium of universities, NUI Galway participated in the development of peer-reviewed resources to support courses in ‘online teaching’ aimed at academic staff. These materials (<https://www.epigeum.com/courses/teaching/teaching-online/)> , whilst copyrighted to Epigeum (the facilitator of the consortium) can be used in a variety of contexts by the partner institutions. In NUIG they form the core content of a full 10 ECTS postgraduate level module, taught via the institution’s VLE by members of the *Centre for Excellence in Learning & Teaching*.

The module is divided into a number of distinct blocks which are self-contained and which have clearly expressed learning outcomes and a set of associated assessments.  Satisfactory completion of the assessments results in the issuing of a digital bade for that Block and as participants progress through the module they can acquire a complete set. It is also possible for others to take individual blocks rather than the whole module, in which case, satisfactory completion of the appropriate assessments sees the award of the relevant badge.