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Digital badging at The Open University: recognition for informal learning

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Abstract
Awarding badges to recognise achievement is not a new development. Digital badging now offers new ways to recognise learning and motivate learners, providing evidence of skills and achievements in a variety of formal and informal settings. Badged Open Courses (BOCs) were piloted in various forms by the Open University (OU) in 2013 to provide a digital acknowledgement for learners' participation in three entry-level, unsupported courses: *Learning to Learn* and *Succeed with Maths Parts 1* and *2*.

The desire to build on the OU's badging pilots is informed by research (Perryman et al., 2013; Law et al., 2013) into the motivations and demographic profiles of learners using the free educational resources which The OU makes available through its OpenLearn platform. This research activity was repeated in 2014 and found that an increasing proportion of informal learners are keen to have their informal learning achievements recognised.

This paper outlines how the evaluation of the 2013 pilots has informed the development of a suite of free employability and skills BOCs in 2014 that are assessed through the deployment of Moodle quizzes. It also discusses why the University sees the growth in free, 'soft' accreditation to be of strategic importance against a backdrop of MOOC providers issuing certification for fee. The BOC project, which aligns with the University's Journeys from Informal to Formal Learning strategy, will help to provide accessible routes into the University for students who might not otherwise have the opportunity to participate and supports The OU Charter to promote the educational well-being of the community.

Keywords: digital badging, employability, open educational resources, OER, informal learning, MOOCs

Introduction

The application of digital badges in higher education is a recent phenomenon, although awarding badges *per se* is nothing new. The range of methods that have been developed to allow individuals and organisations to deliver digital open badges has rapidly expanded in recent years (Bull, 2014).

Across educational sectors, and largely in the US, badges have been used to recognise participation in learning i.e. that a learner has been present in a group activity or has completed a task. Anderson *et al.* (2014) studied the effect of awarding badges to learners who had participated in a discussion forum within a MOOC where the badges demonstrated progress towards milestones, not the milestone itself: "Our badges were based on … contributing to threads, reading content, and voting on content". Their findings showed that learners were more engaged than those not offered badges and that badges were delivered as an incentive to participate, not the motivation to complete a course of study overall. In addition, learners' badges were clearly visible to other learners participating in the MOOC.

Within higher education, Bixler and Layng (2013) note that digital badges 'hold great promise' but that 'policies on badges for higher education institutions do not exist'. This remains largely true over the higher education landscape as a whole although the Badge Alliance (a group of volunteers

discussing the potential use of badging, see http://badgealliance.org), is, amongst other things, taking case studies and innovations from contributors to build a picture for badge use within the sector.

The OpenLearn free learning platform
The creation of open educational resources (OER), whereby individuals and educational institutions make their learning content freely available, has grown rapidly over the last decade. It is now a by-product of the module production process at The OU. OER more generally ranges from tutors posting lecture notes online, to philanthropically-funded content production projects and educational institutions resourcing free content creation as business as usual activity. The OU uses OpenLearn (http://www.open.edu/openlearn) to deliver its OER and also syndicates much of this content to third party platforms.

OpenLearn was launched in 2006. It hosts hundreds of online courses and videos most of which are available under the Creative Commons 4.0 licence and is accessed by over 5 million users a year. It also serves as the channel through which the OU promotes its partnership with the BBC and the related broadcasting and free content that is created as co-productions with it.

Since its launch, OpenLearn has received 33.4 million unique visitors (internal OU data) and has grown from being a platform that hosts samples of existing decommissioned units from undergraduate and postgraduate courses, to one which delivers specially commissioned interactive games, videos, audio and free online courses. Much of the course extract content is developed using structured authoring tools and then made available to users in multiple formats such as Microsoft Word and epub, which are then syndicated to other platforms as ebooks. Around 5% of OU module content is released each year under a Creative Commons licence in support of The OU Charter "…to provide education of University and professional standards for its students and to promote the educational well-being of the community generally". This 5% now equates to around 780 study units available on the platform as OER.

The development of OpenLearn was funded by the William and Flora Hewlett Foundation in 2006 along with OpenLearn Works (http://www.open.edu/openlearnworks), a platform where NGOs and philanthropically-funded projects can publish, reuse and remix courses targeted to specific populations globally. With the end of the Hewlett Foundation grant, OpenLearn became a mainstream activity for The OU and now forms part of one of the University's strategic priorities – 'the Journey from Informal to Formal learning'.

For the period August 2013 to July 2014, The OU reports a 10.8% click-through rate from OpenLearn to the 'Study at the OU' webpage to learn more about becoming an OU student.

Methods
This paper reports the results of a large-scale study of users of the OpenLearn platform. This work was undertaken in 2014 to build on a similar study undertaken in 2013. It is intended to inform the commissioning process for informal learning at The OU and to contribute to research in this area. OpenLearn is a large platform with a great diversity of content delivered in large quantities, spanning all subject areas of the higher education curriculum. It is important to understand the profile of learners using it and to constantly review their activity in order to improve The OU's offering to them and its commitment to free learning.

The studies from 2013 and 2014 aligned with two of the hypotheses of the OER Research Hub project, and hence will form part of the data set collected by that project (see http://oerresearchhub.org):

- Open education models lead to more equitable access to education, serving a broader base of learners than traditional education, and
- Open education acts as a bridge to formal education, and is complementary, not competitive, with it.

A survey was produced and distributed across the OpenLearn platform across all areas of the website i.e. to reach those that are viewing whole study units and those who are viewing short editorial pieces. The survey was live for four months from April to July 2014 and received 1,177 responses.

In addition, data was analysed using the Google Analytics and ComScore software tools for the period August 2013 to July 2014.

The purpose of gathering data using these two methods was to:
- Review the demographic profile of learners, students and teachers using OpenLearn,
- Understand how the content serves learners' needs,
- Examine how the availability of free educational content is impacting informal learners and their motivations to take up formal study,
- Understand learners' challenges and successes when using the platform, and
- Examine where learners are visiting within the platform, what they are searching for and where they go next.

In addition to the research activity described above, pilot projects around digital badging at The OU were undertaken in 2013 on OpenLearn through open courses using the Mozilla Open Badge Infrastructure (OBI) (see http://openbadges.org/). Digital badges were awarded via three entry-level *Openings* courses (access level) – *Learning to Learn* and *Succeed with Maths Parts 1* and *2* – for the successful completion of the course and passing of quizzes. The courses were unsupported and open, in that they had no start and finish date, but ran over a period of notional 'weeks' with a set number of hours. Hence the provision of badges as a motivating factor was a key driver to examining the completion of these courses over non-badged open courses also delivered on the OpenLearn platform.

The evaluation of these badged open course pilots aligned with wider OpenLearn research around informal learners in that it gathered the same demographic data and asked questions about learner motivation in an open, unsupported environment, learners' challenges and successes.

Findings and interpretation of the 2013 studies
Findings from both the badging pilot and the 2013 OpenLearn studies have been reported (Law, et al., 2013; Perryman et al., 2013; and Law et al., 2014) and recommendations were delivered internally to inform the business of informal learning commissioning at The OU. Many conclusions were drawn from the studies; those relevant to this discussion are given below:

- Students that use free learning content during formal paid-for study declare improved performance and self-reliance,
- University-provided OER acts as a taster to those considering paid-for, formal learning,
- Work was needed to improve the usability of OpenLearn as an open course environment,

- The provision of digital badges enhances learners' motivation to complete an online course,
- The badged open courses attracted learners who were more inclined to take up formal study. These learners appeared to be key to meeting The OU's widening participation agenda inasmuch as there were significant variations in relation to existing educational qualifications, the numbers of retired learners and numbers of learners reporting a disability compared to the OpenLearn demographic overall, and
- Where content is syndicated across different platforms, it can meet the needs of both professional and personal development and can serve very different demographic groups.

Based on these conclusions, a number of recommendations were made within The OU. Those relevant to this study are reported here:
1. Create an entire (BOC) curriculum targeting access students (courses to be released on OpenLearn in October 2014, see Law et al., 2014),
2. Improve the usability of the OpenLearn platform especially around the user experience of moving through an online, unsupported course, and
3. Extend syndication of free content to reach new audiences (in 2013, syndication beyond OpenLearn was to iTunes U and YouTube only).

These three recommendations are expanded upon below.

1 Create an entire Badged Open Course curriculum

To expand on the first recommendation, a curriculum of assessed, badged courses aimed at improving employability and skills is being developed and will be launched on OpenLearn from October 2014. These Badged Open Courses (or 'BOCs') will comprise of 24-hours of learning each (8 notional weeks of 3 hours study per week), and will be assessed through the deployment of a set of Moodle quizzes. Again, these will be open, unsupported courses (no tutors) that learners can access free of charge and study at their own pace and will be released under a Creative Commons 4.0 licence. Content from the courses will be a mixture of existing modules released under a former 'access' curriculum, plus new material.

Test quizzes will feature each week to both function as a tool for formative assessment, but also to get learners used to the Moodle quiz environment. To achieve the OU badge for a course, a learner will need to have viewed every page of the course and passed the quizzes at Weeks 4 and 8 with a pass mark of 50%. Learners can attempt each quiz three times. If they fail on the third attempt, they can return in 24 hours, whereby their attempts will have been reset. In addition, learners will receive congratulatory emails from the course tutor at Weeks 4 and 8. Those learners who have stumbled at Week 3 will receive an email to encourage them to continue with the course. As each BOC is a standalone, unsupported environment, the 'course tutor' is the lead academic who devised the BOC and who features in a video at the start of each week.

The titles of the BOCs released from October 2014 to March 2015 will be:
1. Succeed with Maths Part 1
2. Succeed with Maths Part 2
3. Succeed with Learning
4. Succeed with English
5. First Steps in HE
6. Digital Literacy
7. Reflections Toolkit
8. Succeed in the Workplace

2 Improve the usability of the OpenLearn platform

The OpenLearn platform has been developed using a mixture of Drupal and Moodle software. Courses displayed in the platform run on Moodle, which is also the platform used for the University's VLE. In 2013, there was a great deal of signposting around all learner content on the site irrespective of the kind of activity someone was engaged with. For example, someone reading a short article in support of a BBC co-production was confronted with as much extra information regarding what to look at next, what might be of additional interest to them etc. as someone who had enrolled in a course.

Comments around usability and navigation problems were picked up in the qualitative data gathered in 2013 and from in-house usability testing. It was felt that a learner embarking on 15 hours of study would want a less cluttered visual experience that someone looking a news-type article. Hence, a range of IT developments were specified to 'tidy up' the course experience and provide learners with a cleaner interface when they had actively enrolled on a course with markers to show progress through it.

These IT developments were considered alongside a desire to recognise achievements and interests logged by learners in their My OpenLearn profile. The new profile layout will display digital badges, provide an opportunity for learners to view their Activity Record (an HTML page that summarises their progress through a course) and to print a Statement of Activity (a PDF certificate obtained on successful completion of a BOC or other non-badged open course). See Figure 1 below.
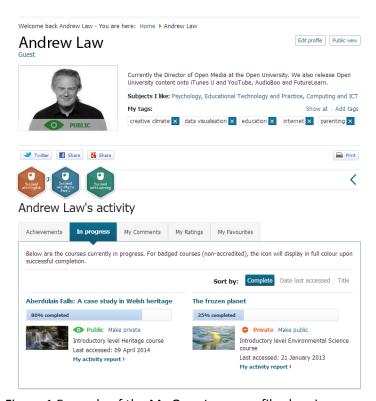

Figure 1 Example of the My OpenLearn profile showing courses in progress and badges achieved

3 Extend syndication of free content

New channels for syndication of content have been established to reach new learners aside what was already provided on iTunes U and on YouTube (https://www.youtube.com/user/OUlearn): free eBooks are now distributed through Google Play (https://play.google.com/store/search?q=open%20university&c=books) and shortly through

Amazon for Kindle; audio files are now shared on AudioBoo (http://www.audioboo.com/); and audio and video on Bibblio (http://www.bibblio.org/u/open-university/content) where thousands of new learners have already found free educational content.

Findings and interpretation of the 2014 study
As discussed, the purpose of the 2014 study, which combined research data with platform analytics, was to provide a richer understanding of learners' motivations and activities on OpenLearn and to provide a comparison data set with the 2013 study.

Reviewing the demographic profile of learners using OpenLearn
Table 1 shows a summary of the demographic data for studies undertaken in 2013 and 2014 on OpenLearn. (There are some variations in age range following a revision for the 2014 surveys.) The demographic data collected from this 2014 survey are broadly similar to those of the 2013 data which increases confidence that the data observed in 2013 is a good representation of users.

Given our social and business mission to engage underserved groups, we were concerned with the relatively low percentage of unwaged learners and apparently high percentage of well qualified learners when analysing data in 2013. We understand this to be a feature of learners finding OER more generally and we take consolation in the fact OpenLearn reaches such a high number of learners each year, that even a small percentage of 5.5 million visitors a year is still a lot of new learners when considering our reach to underserved groups.

Table 1 Comparisons of demographic data for OpenLearn between 2013 and 2014

	2013 data	**2014 data**
What is your age?	14% 0-24 yrs 38% 25-44 yrs 38% 45-64 yrs 10% Over 65 yrs	17% 0-25 yrs 27% 26-45 yrs 39% 46-65 yrs 16% Over 66 yrs
What is your gender?	41% Male 58% Female >1% Other*	41% Male 57 Female 2% Other**
Where do you live?	67% UK 6% US 27% RoW	61% UK 6% US 33% RoW
Is English your first spoken language?	81% Yes	79% Yes
What is your highest educational qualification?	16% School 9% Vocational 23% College 26% Undergrad 20% Postgrad 6% None	16% School 6% Vocational 24% College 24% Undergrad 20% Postgrad 5% None
What is your employment status? (Tick all that	58% Employed (full or part time) 5% Voluntary	52% Employed (full or part time) 7% Voluntary

apply)	14% Student 16% Unwaged 4% Disabled and unable to work 15% Retired	15% Student 9% Unwaged 6% Disabled and unable to work 18% Retired
Do you have a disability?	19% Yes	23% Yes

* Other = 'transgender' and 'prefer not to say'.

** Other = 'other' and 'prefer not to say'.

Understanding how the content serves needs

Results show that not all survey respondents were actually looking for free learning resources; some may simply have been looking for information or following a link. Around half (47%) of those responding to the OpenLearn survey said they had visited OpenLearn when looking for free learning resources. Platform analytics supports this finding, as the search criteria for learners visiting the OpenLearn **homepage** (i.e. not linking to a subject area within the site) is dominated by those looking for The OU specifically and for free courses. (See Table 2.)

Table 2 Known search terms for learners visiting the OpenLearn home page for the period August 2013 to July 2014 (data excluded where search term is not known)

open university / the open university / open university uk	47%
free online courses / open university free courses / online courses / free courses / free online courses uk / free open university courses	32%
openlearn / open learn / study skills	21%

Other observations from the data revealed that:

1. Fifteen percent of respondents said they were teachers and of those, 52% reported a positive impact on their teaching after using OpenLearn.
2. Almost half of those with disabilities who responded to the survey were between 46 and 65 years old. Indeed, in the 46-55 year old age group, 28% of respondents had a disability. This contrasts with 16% in the 19-25 year old group. 18% of male respondents reported having a disability compared to 26% of female respondents.
3. Over a quarter of all unwaged and retired respondents using OpenLearn were disabled. Whilst the largest two groups were full-time employed and retired, the proportion of those in full-time employment and disabled and using OpenLearn was only 14%. The data would suggest that OpenLearn may be more attractive to disabled people not in work or part-time work/study (see Table 3).

Table 3 The proportion of each main employment status group who said they had a disability

	Percentage of respondents declaring a disability
Full-time employed	14%
Part-time employed	20%
Part-time voluntary	14%
Full-time student	12%

Part-time student	24%
Unwaged	27%
Retired	27%

4. Thirty two percent of respondents with a disability had an undergraduate or higher qualification (compared with 48% of those without a disability). This may partly reflect the age profile as a greater proportion of younger people had university degrees. Also, 17% of OpenLearn users with a disability only had a school leaving qualification (at 16 years) which is higher than those users without a disability (9%).
5. Fifty nine percent of respondents with a disability said the materials on OpenLearn had improved their confidence in their ability to study. This compares well with those without a disability for whom 58% said the materials had improved their confidence.

Respondents declaring a disability had much to say regarding what they wanted from OpenLearn and how using free learning resources impacted them:
'I wanted to study maths and stats as much as I could so I could change my career prospects'
'I feel more confident and able to question activities'
'Dissabily means I need most content verbally (eg. Podcast) and minimal requirement to interact'
'more for dyslexia people'
'the learning helps me feel more positive and confident'
'I take courses to keep my mind sharp, since I am disabled.'
'My age and health make it unlikely that I will do further serious studying but that is why I like Open Learn as it helps to keep my brain alert without too much pressure and I find it enjoyable'
'I feel free with a course without professors sometimes, the pressure in the universities are so strong, we need sometimes to learn without this pressure'
'In order to provide people, of all ages and situations, to improve their lives and opportunities, it is essential that high quality courses and resources are FREELY accessible'

How the availability of free educational content is impacting informal learners and their motivations to take up formal study
As a result of using the materials on OpenLearn, around a third of users said they are more likely to take a paid-for course and around 80-90% are more likely to take a free course.

The groups with a greatest increase in likelihood to take a paid-for course (i.e. responded 'more likely') are part-time students (56.5%), part-time voluntary (50%) and disabled (46.7%) (see Table 4) and the least likely are full-time students (16.7%). These are not necessary the largest groups using the platform and it is not surprising that of the retired people (the second larger respondent group) only 25.6% said they were now more likely to take a paid-for course.

Table 4 Consequences of downloading materials by employment group

Group	More likely to take a paid-for course	More likely to take a free course
Full-time employed	43.8%	81.5%
Retired	25.6%	80.7%
Part-time employed	39.8%	83.5%
Unwaged	32.1%	87.1%

Part-time Student	56.5%	85.7%
Full-time Student	16.7%	92.6%
Part-time voluntary	50%	91.3%
Unwaged with domestic responsibilities	37.5%	76.5%
Disabled	46.7%	77.4%

In concurrence with 2013 data, learners expressed a great deal of concern about the cost of studying in higher education. This is reflected in comments gathered in the 2014 study:

'… I had expected in early retirement to study some (paid for) arts-based courses (OU or conventional university) to round out my education. The OU is no longer affordable for that scenario. Therefore, I need to explore other options, both free and payable.'

'Like many others, the present economic crisis has forced us to do everything we can to safeguard our personal finances.…. Also because even at the age of 82 my brain still needs stimulation.'

'I don't expect to have such material free of charge - that is an unreasonable expectation. However… I am looking for a middle ground - I want to undertake further study but have no need of yet another degree, and can neither afford not justify extortionate tuition fees for what would essentially be a private pastime in early retirement.'

'I would love to study but most course are simply unaffordable to me'

'it's free! I can't afford the costs of the full OU courses'

'Can't afford to study with the OU'

'Free is all I can afford...sorry.'

'I'm interested in online education only. Would leap at the chance to take a MOOC degree, if available, and would consider tuition fees, perhaps, for the right content, but cannot afford fees for a full degreed program. Thank you so much for the high-quality MOOC thus far.'

'Fees are now far too high for me to consider continuing with my studies towards a degree'

'It is important to have free courses as the price for education is soaring'

And more generally regarding reasons for study:

'Conducted a test to give confidence my next module choice is appropriate for me'

'I am 70. Learning is like o2 to the mind'

'open access at my convenience, free to explore new ideas before committing to a specific direction'

Seventy five percent of learners responded 'Yes' or 'Maybe' that they would be prepared to pay for educational content provided online; of these 85% selected 'Online courses with certificates or qualifications'.

Qualitative data collected in response to the question 'What other features would you like to see from The OU on OpenLearn?', also revealed a desire to see certification awarded for informal learning:

'Certificates paid/unpaid'

'Certificates'

'Certificates!! (Paid or unpaid short courses and certs).'

'Better format of Statements of Activity for printing for CPD purposes'

'I tend to use sites where the student is able to print off a certificate of completion. I wish OU did this as it enables me to see who has completed which mooc. I like the idea of students studying an OU course at the point where they are deciding whether higher education is for them or not - again, they feel a sense of achievement when given a certificate of completion'

'certificates of completion'

'Printable certificates on completion of a course'
'The ability to do a complete degree on Open Learn and print off a degree certificate in the subject of one's choice.'

Understanding learners' challenges and successes when using the platform
Approximately 80% of respondents said that The OU materials were of the high quality they expect from a university. Over half of respondents (58%) said that using the materials had improved their confidence in their ability to study. Around four fifths said that after using OpenLearn materials they are more likely to recommend OU content to others.

Respondents report finding OU content in different ways: for those with no knowledge of the OU, the use of search engines was by far the most common method, whilst for those familiar or with some knowledge of The OU, subscription to emails, prior use and search engine were the three most common methods. Relatively few had heard about the platform via Twitter or from newspapers or magazines.

A small number of learners expressed concern over site usability, despite efforts to improve this. Some of these comments are reflected below:
>'The problem was that the materials I looked at were standalone bits and pieces and just not a properly conceived course. I felt disheartened. Perhaps I am mistaken in my impressions - but I found it difficult to find relevant stuff. The videos were just entertaining rather than instructive, for example. If the free content starts to emulate the paid-for courses, then that would be something!'
>'I could not find relevant material due to the badly-designed website (ditch the word clouds, fancy pictures and "most popular" lists etc, give me a simple list of free courses that can be filtered by subject area and level)'

Examining where learners are visiting within the platform, their dwell times, what they are searching for and where they go next
Platform analytics show that 16% learners who searched using a search engine to arrive directly on the free courses page of OpenLearn (http://www.open.edu/openlearn/free-courses) were specifically searching for "free online courses with certificates".

Not surprisingly, dwell times for those looking at free courses and study units on OpenLearn are considerably higher (average 8.34 minutes) than those looking at interactive games and editorial pieces (average 3.57 minutes). However, significantly, 14% of those in the former category then go on to click through to the main OU page to learn how to become a student, versus 9% of those looking at shorter pieces of learning.

Recommendations
Based on this data, initial recommendations from the 2014 study fall into two key categories:
1. Usability and technical infrastructure of the OpenLearn platform, and
2. Approaches to commissioning and evaluation of free content.

These are summarised in Table 5 below.

Table 5 Initial recommendations

Technical infrastructure	Commissioning and provision of free content
Better site navigation and signposting to free courses as this is the dominant content people are looking for.	Over half of respondents (58%) said that using the materials had improved their confidence in their ability to study. We will evaluate open courses without badges as well as BOCs to compare learners' confidence levels.
Better signposting to 'soft certification'.	Prioritise the expansion of open courses that provide certification over the provision of sample study units.
More engaging and signposting of content for those looking at shorter pieces of learning to improve the informal learning journey.	Undertake a separate analysis of disabled learners using OpenLearn to gain deeper insight into their motivations for use of free learning and how we might better meet their needs.

Implications

Hickey (2012) identifies three possible functions for digital badges:

1. Summative functions, which are often called assessment OF learning.
2. Formative functions for individuals, which are often called assessment FOR learning.
3. Transformative functions for systems, which a few are calling assessment AS learning.

Clark et al. (2006) were clear that motivation is key to learning and that the subsequent application of this theory with the issuing of digital badges supports this (Law et al., 2014). Abramovich et al. (2011) state that: "…the potential benefit of an assessment is determined by its ability to both maintain learning motivation and accurately communicate a student's learning." By providing formative and summative assessment through Moodle quizzes in an open course environment as Hickey identifies above, The OU is attempting to both communicate feedback and provide motivation to otherwise unsupported learners. Moodle quizzes have challenged our ability to measure reflection through learning though and this will be the subject of future studies.

Cross (2007) describes informal learning as 'the unofficial, unscheduled, impromptu way people learn' but in an environment where "...no one assigns grades…" and "...no one takes attendance." However, we are currently experiencing the growth of paid-for certification by MOOC providers and where participation in informal learning is not always anonymous. We have moved from Cross' anonymous world to one of **identified informal learning**. Whilst learning is still taking place as a supplement to formal learning there is a growing demand and expectation that informal learners want recognition for their achievements and engagement that can be acknowledged beyond a closed forum of learners.

The data shows that learners in an informal environment are seeking to pay for certification and recognition of unsupported informal learning. The challenge to our understanding of informal learners over the coming year will be to understand whether the **free badge and associated certificate** proposition presented by The OU for substantial commitment and assessment through BOCs be perceived to have a different value to a **certificate that has been bought** from a MOOC provider. Equally, will a digital badge have meaning as currency for achievement and credibility with employers, or is it purely a motivational tool, in this context, to support informal learners on an open platform?

Anecdotal evidence from colleagues working on digital badging projects in the UK utilising an open badging infrastructure, indicates that learners do not always find the display of a digital badge to be easy to grasp. If we are intending to reach underserved learners with a suite of access-level BOCs, we must also expect that whilst we will endeavour to make badge display in the My OpenLearn profile as easy as possible, wider linking with the Mozilla Backpack, LinkedIn and other social media sites may not seem like a straightforward proposition. It may be that the printing of a badged certificate is as desirable (and easier to manage) than the display and sharing of a digital badge itself.

This isn't so much a pessimistic approach to the practical application of the badge when achieved, but a recognition of its use in an open unsupported setting. Indeed Abramovich et al. (2011) note that "The symbol, in the form of a badge, can then be displayed by the learner to let others know of their mastery or knowledge" in a closed, supported environment. This element of badge display contrasts with informal open learning when learners progress at their own pace and not in a cohort, and may be less important in this setting.

Future evaluation activities
It is hoped that the BOCs will enable learners to:
- Gain recognition for informal learning activities,
- Achieve a sense of progression and confidence in their capabilities to help them feel more able to take up formal study, and
- Demonstrate to potential employers their achievements through public display of achievements.

In addition, the Badged Open Courses that are applicable to formal students ('Digital Literacy' and 'Success in the Workplace') will present an opportunity to measure not just their uptake, but their relevance to supporting career development and digital literacy as an essential adjunct to formal study. Hence an evaluation project is in place to measure the success or otherwise of this approach and will examine:

- Demographics (in alignment with data collected in studies reported in this paper),
- Tracking data to show informal to formal movement of learners,
- Performance/completion rates in an informal setting on an open course,
- A picture of the types of learners who are more likely to convert to formal learning,
- The application of digital badges:
  - Numbers of learners who linked their badge(s) to a CV or equivalent
  - Feedback from learners who linked their badge(s) to a CV or discussion with an existing or potential employer, and
- Analysis of all five widening access target groups: carers, BME (black, minority and ethnic groups) who are also low socio-economic groups, offender learners, disabled learners and low socio-economic groups. (This would be both quantitative and qualitative analysis and would use the same methodology as the main study.)

These future evaluation activities will be key to understanding more about digital badges and badge motivation in a higher education setting, and further, in an open, unsupported one.

Conclusion
The OU sees the growth in soft accreditation through digital badges and issuing of certificates to be of strategic importance. Not only does the data from this study and from those undertaken in 2013 on the OpenLearn platform show that learners are seeking acknowledgement for their informal

learning activities, it also demonstrates a positive impact on the learning journey to formal study. The OU needs to keep pace with other digital badge developers and there are risks for not investing in digital badging, which include:

- **Potential financial loss** – if informal learners do find badges desirable, they could go elsewhere to obtain them and the opportunity to inspire them is lost; and
- **Reputational** – The OU being perceived as being 'behind the curve' in this domain.

We know that an increasing proportion of informal learners are keen to have their informal learning achievements recognised. The impact of MOOCs is demonstrated in peoples' expectations of gaining a certificate for informal study and in the search terms they are using to seek learning material on OpenLearn. As we move to an **identified informal learning setting**, we must endeavour to support and manage expectations of informal learners through soft accreditation, without adding a layer of complexity that might exclude the underserved groups that we aim to reach.

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