Been there, done it, badge it! Information literacy and the use of digital badges at Middlesex University

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Introduction

The concept of physical badges has been evident for hundreds of years, from military medals to the Scout Association's badges recognising achievement and, more recently, fridge magnets as marks of achievement or as a record of travels. Until 2011, the concept of digital badges was more or less confined to gamification software (Kapp, 2012) but the Mozilla / MacArthur Foundation's (http://openbadges.org/) development of a common web-based system for issuing, collecting and displaying digital badges opened up a new way for educators to motivate and engage learners.

Contextual use of digital badges at Middlesex University

With the continuing emphasis on graduate employability, the use of digital badges to record 'soft skills' inherent in the curriculum but hitherto unacknowledged has been piloted by the Business School at Middlesex University. Best and Parkinson (2015) found that students achieve much more than module learning outcomes, and that a significant amount of this learning corresponds with recognised employability skills. These include communication, research and leadership and are acknowledged by the award of a Group Leader digital badge that can be stored on a virtual 'backpack' and shared with potential employers on e-portfolios and via social media.

Parkinson (2016) commented, of a pilot badge scheme at Middlesex University: 'We have decided to implement the scheme for a further year with a change in the way the badges are promoted in an effort to enhance their visibility and value. Anecdotal evidence from the project pilot would suggest that students with an interest in participating in extra-curricular activities place value on the granular acknowledgement of key skills that badges can offer. However, there is some concern expressed that without the endorsement of recognised external bodies or significant employers the badges may lack sufficient value as standalone certification of employability skills.'

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The Centre for Academic Practice Enhancement (CAPE), which works across the higher education sector and collaboratively at Middlesex University for staff development purposes, also used digital badges for a Massive Open Online Course (MOOC) for nursing and social care practitioners who wanted to improve upon and learn competence in culturally relevant compassion skills – skills which in the main they inherently possessed but had no way of recording and demonstrating except within the workplace (Dayananda, 2014). Although learners undertaking the course assessment were awarded a certificate of completion, digital badges were awarded to acknowledge progress within the MOOC and the ability to demonstrate specific skills through online activity.

The librarian's use of digital badges

The use of digital badges at Middlesex University does seem to have contributed to this competency-based pedagogical approach, so it seemed a natural step to use them in the teaching of Information Literacy (IL) for Pre-sessional (PS) students who do not have the prerequisite skills to enrol directly onto their main degree programme and need to focus on improving their English language and academic writing skills. The badge itself is an image file with capacity to link metadata: who earned it, what they had to do, when it was issued and who issued it. The badge can also be linked to evidence for meeting success criteria such as an assignment stored in an e-portfolio.

Having supported the PS programme for both undergraduate and postgraduate students over two years while working closely with lecturers, academic managers and the Director of Programmes, I was in a strong position to determine the level of library support and IL skills that PS students needed in order to pass the PS course and be able to transfer these skills to their main degree programme. Building upon the initial IL session, a series of workshops was developed and implemented at strategic points during the course, which empowered students by giving them skills to access library resources (electronic and print books, journals, reports, etc.), evaluate them and reference in the required format. The opportunity to interact with the students for 1.5 hours at least twice a month over a four-month period ensured that constructive methods of teaching were applied. Card games and interactive online quizzes using Socrative software (http://www.socrative.com/) were used to reinforce threshold concepts and assess the level of learning taking place in a fun and competitive manner. This seemed to resonate well with the international and mainly young students (18–21 years), and reflected behaviours discussed in general theories of motivation in relation to technology (Glover, 2013).

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In May 2015, Middlesex University offered the UK PS programme to learners based in China who were enrolled as Middlesex students with full access to our online library. One of the first considerations was their level of IL, followed by the library support and resources available to them compared with UK PS students, and how this provision could be made more equitable. The Moodle platform is used to provide curriculum resources, so a separate page was developed for 'library skills' (user-friendly term for IL skills!) and included activities based on the physical workshops carried out in the UK. With less reliance on text and extensive use of images, this page used resources already developed, such as links to the PS Library Guide (http://www.libguides.mdx.ac.uk/psg), PS blog (http://mdxenglish.com/) and embedded interactive quizzes created using iSpring software (http://www.ispringsolutions.com/) as well as quiz templates readily available via the Moodle platform (https://docs.moodle.org/27/en/Building_Quiz).

In total, five IL units (the word 'module' was deliberately not used to avoid confusion with the programme curriculum) were created to provide a bridge between studying and using university resources in China and coming to the UK to continue their studies at our Hendon Campus. All units required students to participate actively. On completion they were awarded digital badges that had a specific description of the skill that had been acquired, such as finding a company report and sharing it with other students via the Moodle blog, which had been created for this purpose.

The Library Skills Units (LSUs) were made available to both PS students in China (Renmin and Shenzhen) and in the UK. I was able to demonstrate the units and their corresponding activities to the Programme Leaders in China while they were visiting the UK.

Outcomes

From the outset I explained to lecturers that the LSUs were designed to be stand-alone IL learning resources in terms of ease of navigation. Because of the different educational backgrounds of international students and their relatively passive approach to learning, the units worked better when they were teacher-led in the classroom, and activities carried out individually and independently by students. There was 100% engagement from students in Shenzhen and disappointingly 0% from the larger cohort in Renmin; 15% in the summer PS programme in the UK when the units were first used and a significant 51% in the autumn / winter (a/w) 2015, UK-only programme. The correlation between confidence in using the Moodle platform, innovative methods of teaching and engagement with the LSUs was very apparent in China, while the greater student engagement in the UK can be accounted for by a relatively larger cohort of students during the summer and the streamlining of the number of badges available, as well as revision of the instructions for each unit in the a/w programme.

End-of-course evaluation produced the following evidence in the UK:
- summer course survey results: 52% found collecting badges very useful; 42% quite useful and 6% not useful

- a/w course survey results: 69% found collecting badges very useful; 30% quite useful and 1% not useful

Anecdotal comments revealed that postgraduate students found the badges less relevant to their studies than did undergraduates; this ties in with the novelty factor associated with gamification in a non-game context (Kim, 2015).

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I was unable to collect quantitative feedback from students in China but anecdotal response from the lecturer in Shenzhen was very positive: 'The self-paced, self-directed units were a wonderful opportunity to break with their [student's] reliance on teachers for "the answers".' (Dalby, 2015)

More significantly, in terms of IL, there was a considerable movement away from reliance on Google searches to using academic sources. When students were asked which resources they used for research:

- PS Library Subject Guide increased from 46.5% in 2013 to 54.7% in 2015.

- Summon increased from 57.7% in 2013 to a massive 84.9% in 2015.

- Specialist database such as ProQuest Newsstand increased from 7.0% in 2013 to 16.4% in 2015.

Lessons learned

Despite extensive technological innovations in higher education, the use of digital badges is still in its infancy. What is apparent, however, is that we should not be using technology in isolation; it is used most successfully when it is linked to improving pedagogy and consequently student success (Ford *et al.*, 2015). The use of digital badges highlights the ongoing need for academics and librarians to work collaboratively, so that there is a shared vision regarding IL, learning outcomes and curriculum objectives. Certainly for the PS programme, even before introducing the LSUs and digital badges, I had time and the opportunity to 'embed librarianship' (Schulte, 2012), understand which skills are required by PS students in order for them to succeed and progress to a degree programme and lifelong learning (Berdrow and Evers, 2011). It is also important to remember that although badges can be a motivating factor and can engage students (Glover, 2013), learning and developing the skills to obtain them is the objective – collecting them is not. For this reason the use of the JISC open badge design toolkit (https://hcukseal.files.wordpress.com/2015/02/jiscopenbadgesdesignToolkit.pdf) is highly recommended as it helps to focus on why badges are used, what learning outcomes are expected, and the aesthetics of badge design.

Future direction

The content of the LSUs was being reviewed and refined in readiness for the start of the PS programme in May 2016. Level of engagement is monitored

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through Moodle activity reports, and digital badges awarded for completed activities will help to build up more research data with a view to extending their use to other programmes such as the International Foundation Programme at our Dubai Campus. Academics on the PS programme have been highly supportive of the LSUs and the use of digital badges; this has contributed to their success so far: 'From pre-sessional staff and student feedback, it is apparent that the digital badges have offered students an independent method of developing highly valuable skills that are particularly beneficial in supporting students from "pre"-university level studies to undergraduate and postgraduate degrees' (Chatterton, 2016).

Staff development in China and full engagement with the Moodle platform in Renmin should also mean an increase in the number of students in China completing the LSUs and collecting badges.

There is a lot of room for development but 'badges can provide a way to translate all types of learning into a powerful tool for getting jobs, finding communities of practice, demonstrating skills, and seeking out further learning' (Knight & Casilli, 2012). These claims have not been proven (yet), but at Middlesex University educators, including librarians, are experimenting in order to give their students an edge in their studies and success in the job market. For students, digital badges give the opportunity to record visually the attainment of cross-curricular skills such as communication, working in groups and of course IL.

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