

Evolving pedagogical practice at Middlesex University

The state of our art

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This paper describes the current pedagogical practice within the team of librarians at Middlesex University and some of the innovations we have introduced to our information literacy (IL) teaching in recent years. In particular it will look at the use of games and activities to encourage engagement and learning.

The Middlesex context

Middlesex University can trace its history back to 1878, but is probably more familiar to SCONUL members as a multi-campus polytechnic with sites across north London. A policy of campus closures to deliver economies in the UK combined with expansion overseas means the Middlesex University of 2016 is located on four very different campuses: Hendon in north-west London, Dubai, Mauritius and most recently Malta. Student numbers are now approximately 38,000 across the campuses, including distance learners.

The team of subject liaison librarians are part of the university's Library and Student Support (LSS) service, which brings together several student support services such as academic writing, numeracy, wellbeing, IT, and progression and achievement, with a one-stop, front-of-house student helpdesk called UniHelp.

Students at Middlesex come from a broad range of backgrounds, and, in the best former polytechnic tradition, Middlesex earns more in the UK from widening participation than it does from research. One consequence for IL teaching is that our students come to us with vastly different experiences, if any, of libraries. This recent email to one of our librarians is a good example:

I wanted to check out some of the books that have been assigned to us to read for required reading and I wasn't sure if I had to make a specific appointment to borrow/read them/take notes from them in the library or if I could simply come in and take my notes?

So, alongside students who are very well informed, we find ourselves supporting some students with very poor expectations of the library and limited perceptions of our offer.

On the positive side, the ubiquitous nature of the internet means that our students are now exposed to vast oceans of information and need our help navigating them. The assumption that they are all digital natives is questionable (Boukacem-Zeghmouri 2014; Prensky 2001). Indeed, we are all too aware of students whose assumption that they 'already know that' leads them to make poor information-seeking choices (Prensky 2009; White & Le Cornu, 2011). As Johnston and Webber put it, 'The scale and connectedness of the global information society demands an educational response that focuses on information use as distinct from use of information technology' (2003, p. 335).

As a result librarians are needed more than ever.

Our approach

A key change to our collective approach to teaching over the past few years has been a shift from didactic training to activity- and games-based learning (Edwards, Hill & Walsh, 2013). We use this approach to engage students and to activate their prior learning. The games and activities are designed to prompt collaboration, interaction, debate, discussion and decision-making. This enables students to construct new meaning, something that ties in with our pedagogy or the academic context (Burgun 2013; Walsh 2014; Zagal, Rick & His 2006 p. 25). We also make use of what Walsh calls 'engaging images' to prompt and even sometimes to provoke (2014, p. 42). What makes each session unique is the academic context of the session in which they are used.

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With the images, games and activities designed around debate and discussion, they can then be adapted and reused in different sessions.

The use of games in our IL teaching works because we have taken the positive aspects of games to create engaging learning experiences, whilst avoiding the negative aspects such as complex rules, 'aggressive competitiveness and, thus, demotivated losers'. (I'm sure we all can remember being the first to be bankrupted in Monopoly!) This is gamification, the use of 'the motivational power of games for purposes not solely related to the entertaining purposes of the game itself' (Sailer et al. 2013, p. 28), or, as we librarians might more pragmatically see this, games that 'make not-so-fun work into something less painful and even enjoyable' (Kim 2012, p. 468). Games help alleviate the fear of the new, what Walsh describes as 'library anxiety', as students are able to experiment with new ideas and concepts in a safe environment (2014, p. 41), and they work by linking 'cognition, emotion and motivation' (Howard-Jones 2011, p. 33).

How has this happened?

Since I started working at Middlesex University in 2010, three campuses have closed and staff have relocated to Hendon. At the same time, structural organisation has changed as the university moved from having four schools to six and then to the present three faculties. These changes have brought together new teams, with new approaches. As part of the process, the subject liaison librarian role has also changed, and the job description now puts teaching as the primary function of the role.

Librarians are encouraged to attend conferences and workshops and to be professionally active, which enables us to develop our skills and gain fresh insights. One workshop, attended by two members of the team, led to some fundamental rethinking about what we teach (Markless 2010). This workshop was timely in that it also resonated with these colleagues, who were unhappy with the way our information literacy teaching was delivered and raised issues that they were concerned about. The key principles they brought back to us are that:

- Librarians teach three to five times more than can be remembered.
- We should not try to clone our own expertise.
- Discussion is powerful.
- Learning by doing is empowering.
- Students should be learners and not the taught (Hill & King 2011).

What we needed in order to complement these ideas was a new means of delivering our training.

The vehicle for delivering these changes was developed after I attended a workshop on the use of games in teaching at LILAC 2011 (Boyle 2011), where I learnt that games are a very effective way to engage students as long as they are quick and simple to play, easy and cheap to create and reproduce and have a focus and an objective. Returning to work filled with enthusiasm, I invited others to discuss the ideas in more depth. Picking up on the use of games – the Markless approach to learning by doing and the use of engaging images – we came up with an initial set of games and activities.

The first game we devised was a card-sorting activity to prompt thinking and discussion about basic library resources, their value in academic work and what they are good and not so good for as sources of quality information (Edwards, Healy & Hill 2011). The original version compares five types of resources: books, web pages, newspapers, academic and non-academic journals. This enables us to explore a number of issues such as what is meant by a peer-

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reviewed journal, how such journals compare to magazines, and the dangers of using certain resources on the Internet. A template and full instructions can be found on the Merlot repository (Edwards & Hill 2016a).



Fig. 1 First-year thinking about resources game

A number of variations has been produced by different team members – for example, adding business reports or music encyclopaedias as a sixth resource type.



Fig. 2: Constructing keywords image (Parker, 2006)

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The use of images was initially trialled with a picture of a market stall, which we use as a metaphor for constructing keyword searches. For example, can we make a more refined search than 'fruit'? Yes – bananas and apples. Who

can we see in the picture, and how can we describe them, using alternative search terms – e.g. customers, clients, buyers, shoppers, etc.? Do the names of some of the fruit have a double meaning in a technical sense? This leads to a discussion about possible false positives, such as apple, orange, blackberry, etc. One colleague has taken this idea further, using striking images from the Notting Hill Carnival to encourage discussion amongst our criminology and sociology students about perception and bias as a precursor to searching for resources to evidence their thinking.

Cultural and professional change

Much of this change in practice has been gradual and bottom-up as different people have tried different ideas or adapted and reused ideas in different contexts. All this has contributed to a culture of change and innovation. Crucial to the cultural shift has been the support of our Deputy Director, who understands that experimentation and innovation can flourish only if they are supported and encouraged, and failure is not frowned upon.

Recruiting librarians who are also innovative and creative teachers has helped to bring about this cultural change. Our interview process now requires all candidates to teach us something in ten minutes. We often find that the successful candidates are those who have used non-library topics, for example plant splicing or basic yoga. This approach has proven very effective in finding candidates with the right professional and creative approach, not necessarily people with previous higher education experience.

There is also a clear understanding that all academic liaison librarians should obtain a teaching qualification. Most of the team have done so, but there is some variation: for example, some have previously qualified in further education or through teaching English as a foreign language. However, the majority have taken advantage of the Postgraduate Certificate in Higher Education (PGCertHE) at Middlesex, which was purposely rewritten in 2011 to enable it to be taken by librarians and other support staff. A distance education version enables staff at our overseas campuses to do the same qualification. The programme is also open to people at other universities. Two of the team have undertaken practitioner research exploring how UK university librarianship has changed over the past twenty years, how their teaching practice has changed and how future librarians can move on professionally (Edwards & Hill 2016a).

For those who have taken the PGCertHE, the theoretical understanding of pedagogy and constructivism has been very useful. It was also beneficial on a practical level, as the compulsory teaching observations by the university's teaching fellows (mostly experienced academic staff) means that the pedagogical practice of our librarians can be appreciated by staff outside our service. In some cases this has led to further collaborative development of teaching, for example in sport science.

Having set the context for our practice, we shall now explore some specific examples of our practice in more detail.

Resources for courses: creative arts

For creative arts subjects there has always been more emphasis on the use of images and objects in teaching, where good use is made of the variety of tangible resources in our Materials Room, such as our collections of architectural samples, fashion items and the publication *Visionaire*, a 'journal' where each issue is a unique artefact. For example, students are given a selection of objects to explore, from which they may develop research questions they need to answer or approaches to design tasks.

For product design we have an image-based activity (Hill 2013) in which students are given a picture and have to discover what it is by coming up with suitable keywords to find information using Google. For example, there is a picture of a concrete ear that was used in pre-radar days to amplify sound and hear enemy aeroplanes approaching the English coast. Students have to use anything they see in the picture such as the materials used, shapes and location to generate search terms in order to find information. The aim is to teach lateral thinking when searching for information, learning by exploration and, by presenting back, sharing, so the rest of the group learns alternative approaches. This is very different from a normal library search and is about the librarian sharing searching expertise in the context of the students' programme. It engages with more 'orthodox' resources only in the final year.

Resources for courses: pre-sessional programmes

Our pre-sessional programmes present their librarian with particular challenges. The vast majority of the intake are Chinese students with varying levels of English. They come with their own expectations of higher education and they can find western educational norms difficult to adjust to. To assist, Middlesex employs a Mandarin speaker as a Chinese Student Liaison Officer; she has developed a two-hour workshop to raise staff awareness of the cultural adjustments Chinese students need to make. She highlights the reluctance of the students to speak up in class with this traditional saying: 'If you are the leading bird you will be shot down first.'

A very simple but effective way to get such students to ask questions is to use post-it notes and ask them to write down at the end of the class one thing they learned, one thing they particularly enjoyed and one question they wanted to ask but did not. The students will not ask a question about something they do not understand in class lest they be seen as wasting everyone else's time. The teacher can then answer these anonymous questions.

Two more advanced approaches adopted by the pre-sessional librarian stand out: the use of quizzes to enable students to answer confidently and therefore more openly and the use of badges as means of rewarding progress and achievement.

The quizzes were developed jointly with the then psychology subject librarian (who had her own parallel project) to create 'filling the gap' exercises, so students could understand the elements required in accurate referencing. The iSpring software used is very similar to PowerPoint and easy to use; it enables colour coding, which is so much more visually interesting than the quiz application in Moodle, our virtual learning environment. Feedback on answers is given instantly and includes pointers on how to improve. Teachers can see the questions students have struggled with, which enables them to concentrate on those issues in the class or plan them in for later sessions. Students are protected from loss of face by the anonymity of the quiz system. A full account of the use of iSpring is in ALISS quarterly (Eades & Rizvi 2016). An alternative quiz system is Socrative, which also enables the teacher to see responses anonymously. Socrative has a race feature that enables teams to compete to answer questions correctly, in real time. The teamwork and discussion this produces act in a similar way to the original card game discussed above.

Badges are used to promote engagement, give a sense of progression and achievement, and encourage self-study and collaboration. There is a Pokemon-type appeal for the Chinese students, who are used to a very competitive system. Badges are awarded for achievements: for example, the completion of Moodle quizzes that demonstrate understanding, following the programme area blog, using <https://mdxenglish.com>, or contributing keywords to Padlet, which are then used in group assignments. These activities are part of an online programme that leads to a Middlesex University Certificate in Library Skills

and is presented at the Pre-sessional Graduation. On Moodle the badges are generated automatically. See Fig. 3 for an example.


 <p>Unit 1 Subject Guide mdx.ac.uk</p>	<p>Unit 1 Subject Guide 2016-17</p>	<p>I have completed and passed the Library Subject Guide Quiz</p>	<p>Users are awarded this badge when they complete the following requirement:</p> <ul style="list-style-type: none"> • ANY of the following activities are completed: <ul style="list-style-type: none"> • "Quiz - Library Subject Guide Quiz (London)" • "Quiz - Library Subject Guide Quiz (China)"
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Fig. 3: Library badge on Moodle

Badges encourage the students to be actively rather than passively involved in their education. So far they are electronic only, but there are discussions about a real badge being offered to students who achieve overall success in the programme. For a detailed account of the use of digital badges at Middlesex university, see SCOUNL Focus 67 (Rizvi 2016).

Success with pre-sessional programmes has led to the adoption of badges for the whole Foundation Year (855 students), with the initial scheme focusing on rewarding good attendance. The aim is to use automatic badges triggered in Moodle by polls and quizzes, but students will only know about the required polls and quizzes and have access to them if they attend the lectures where the information is given out.

Certification

Badges are one way to certify student's work. Another approach is to build on the certification programmes offered by vendors, in our case Bloomberg. The Sheppard Library contains a Financial Markets Lab, a small suite of double-screen PCs with special keyboards.



Fig. 4: Financial Markets Lab

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The accountancy and finance librarian has run a summer programme of certification courses using Socrative to create mock tests as training for the certification exam. Gaining the certification called Bloomberg Market Concepts permits the student to create a profile and CV on the Bloomberg employment databases, which are used by the industry to source interns and graduates. For example, a recent graduate is now a junior broker via this route.

In November 2015, this librarian ran the Middlesex University Internal Training Competition, which is open to all undergraduate and postgraduate students. Each team member was given Bloomberg training plus sessions on creating portfolios, stress testing stocks and running trade simulations – excellent skills for future job applications and interviews. The individual winner of the competition went on to gain an internship with a hedge fund, even though he was only a first year student. The winning team then became the Middlesex team at the national Bloomberg Training Competition.

So far this article has looked at various developments in specific areas. The next section focuses on examples of how the games and activities can be reused and repurposed, as librarians have adopted the good practice to meet differing needs.

Reuse and repurposing

The card games described above are used with variations, as we have seen, for different subjects and also, occasionally, at different levels. For example, 'Thinking about resources' has been used for overseas postgraduate students who were coming to us with basic IL skills.

Ideas from other libraries have been repurposed – for example, a semester-long USA IL programme which takes students on a journey from the familiar world of tweets and Facebook to academic library resources (Clossen 2014) inspired the creation of an evaluation card game.

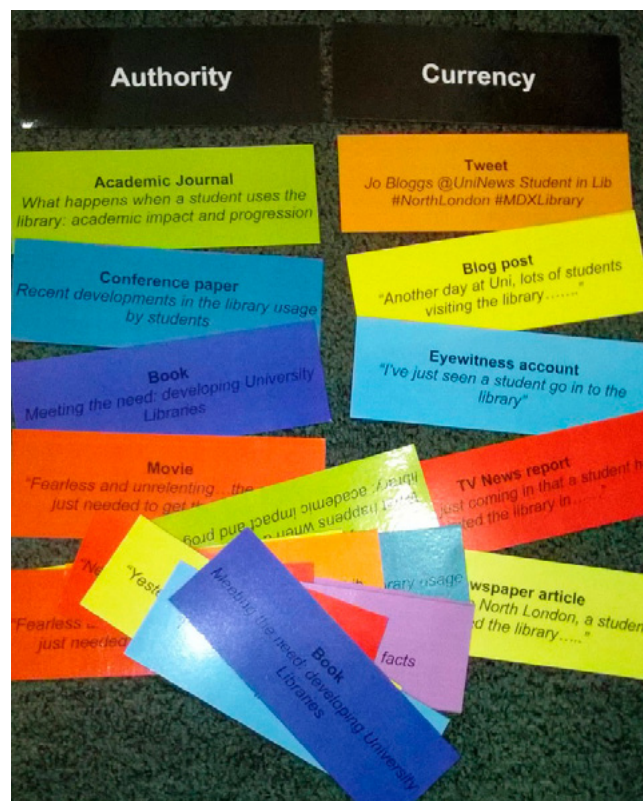


Fig. 5: Second-year evaluation game

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Our most recent developments have been inspired by a training event three librarians attended last year on the use of Lego in training. It is early days yet, but one idea adapted from the event is to teach the importance of referencing. Students have to build something in groups, using pieces from six different boxes of Lego. They then have to dismantle their creation and place the pieces back into the correct box, which is of course impossible, as they cannot remember the sources of the bricks. This salutary experience is then used to push referencing as an essential. Another referencing task is to build references in the correct order using bricks labelled with the component parts of a reference. Team Lego are also working on a scheme to use it with dissertation students to inspire creativity and problem-solving. The aim is that 'thinking with your hands' – i.e. thinking whilst doing – reinforces learning.

Another librarian does the same reference-building exercise with students holding cards with component parts of a reference; they moved up and down the line to get elements in the correct order. This activity was a repurposing of one designed to teach the order of Dewey numbers. It all goes to show that once one idea works, it can often be creatively developed into something else for use in a very different context.

Assessment

So far we have looked at our art in the context of learning and teaching. A few of the team have been involved in assessment of the students' work – for example, judging and grading student presentations, giving marks for the information content and referencing. However, two recent examples show librarians going more deeply into the assessment process.

One member of the business team has been working with the MBA distance learners to improve referencing. Students are given the option of submitting three weeks early via Turnitin. The librarian then used the Turnitin feedback system to suggest improvements to the referencing. Whilst this was very valuable to the students concerned, a problem is the workload generated. At thirty to forty minutes' work per assignment, this is not something that is easily scaled up.

Another approach to assessment has seen the librarians adopt a methodology pioneered by academic staff in Computer Science, using what they call Student Observable Behaviours (SOBs) to assess progress. In the Computer Science degree, students are assessed against a long list of milestones or thresholds, which they pass when they demonstrate the required knowledge and understanding to their tutors. The business librarians and academic writing lecturers have experimented with this approach to assessing students' IL in a postgraduate management module. This has enabled them to track progress across the year. The outcome appears to have been greater engagement and better attendance. The results were presented to the Business Librarians Association conference in early 2016 (Neilson & Halstead 2016).

Final thoughts

This paper has summarised the innovative and creative work being developed by Middlesex University's team of librarians. Looking back to 2010 when I joined the university, I can see a profound shift in teaching practice that is, we believe, making our teaching more engaging and meaningful for our students. As we have seen, this is not a one-size-fits-all approach. Ideas have been creatively developed in a number of specific contexts, and then taken up in different areas and repurposed and reused to great effect. We are of course very happy to share our ideas and experiences, should anyone be interested. If you are, please contact the author and we shall match you up with the expert librarian.

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