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## Chapter 7

### Knowing me...Knowing You: the role of technology in enabling collaboration

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### 1 Introduction

This chapter uses the University of Huddersfield as an example of how technology has allowed libraries of all kinds to work more collaboratively and analyses to what extent these developments have been successful. It focuses on the broad approaches that are being used via innovative technology and rich media to both reach and understand our customers as well as how developments in the community (e.g. open data, social media, open publishing, repositories, shared services etc.) have enabled the sharing, use and re-use of information, data and objects.

‘Our job over the next five to ten years is to provide a way to access these valuable resources in an intuitive, easy to use one-stop shop, and not to be afraid of running a continual beta test where new services and functions can be added as and when necessary. To do this we need flexible, interoperable resource-discovery systems based on open source software. In addition, we must keep evaluating users’ needs and reach out by adapting our systems to fit their requirements, rather than expecting them to come to us; indeed our very future depends on it (Stone, 2009,156)’.

This chapter examines a selection of projects that have been inspired by the use of technology and social media at the University of Huddersfield in order to enrich the student experience. These projects have either been borne out of collaboration or inspired by the spirit of collaboration and sharing with others. The chapter will show the importance of both collaboration and the sharing of data and will discuss this in the context of collaboration on a national scale.

Computing and Library Services (CLS) staff at Huddersfield have over ten years’ experience of collaborative working as both the lead or as partner institution (Brook et al., 2002; Stone, Ramsden and Pattern, 2011a; JISC, 2008; Sero, 2009; Pattern et al, 2010; Copac, 2012).

In 2007, JISC (Joint Information Systems Committee) (Anderson, 2007), reported on the implications of the development of web 2.0 technologies for the UK higher and further education sector by discussing six keys themes.

1. Individual production
2. Harness the power of the crowd
3. Data on an epic scale
4. Architecture of participation
5. Network effects
6. Openness

They conclude that web 2.0 technologies change the way some people act ([www.jisc.ac.uk](http://www.jisc.ac.uk)) and the report also highlights the importance of using and preserving the data being generated by web 2.0 (and in difficulties of accessing and preserving the 'hidden web') and the shift to user centred design of library 2.0 services which is taking place.

Many of the projects at Huddersfield have come from user-driven technology, building upon the founding principles and practices of web 2.0, and are based on user collaboration where the user acts as co-developer (Collins, 2012), in that the tools 'get better the more people use them' (O'Reilly, 2006). Huddersfield has been experimenting with social media tools for several years and has utilised usage data in a number of ways to encourage an element of serendipity in discovering resources. Some of the results of this work have led to other internal and external projects some of which are described in this chapter.

## **2 Resource discovery**

*'Why is Google so easy and the library so hard?' (Tenopir, 2009, p.22).*

In recent years libraries and librarians have struggled to persuade users to move away from Google, seeing it as a direct competitor to traditional library resources. However, this raises an important question, why do users flock to Google and what can we learn from this? A factor in the success of companies such as Google, Amazon and Tesco PLC is that they work hard to collect and understand their customers' data to provide the services that users want, enhancing, simplifying resource discovery and adding value.

### **2.1 Enhancing resource discovery: understanding the data**

*'...many librarians do not have sufficient understanding of their users and, as a direct consequence, are facing serious problems (Nicholas, 2008,1)'*

Initial work on understanding data at Huddersfield using web 2.0 technologies in order to enhance resource discovery was centred on the library catalogue. Recommender services and usage logs were used to create additional features (Pattern, 2009). Due to the nature of the catalogue's holdings, work had often focussed on increasing the use of print resources. Typically this included features such as a keyword cloud on the front page displaying the most popular keywords of the last two days, a 'did you mean...' option and spell checker, which was introduced to counter the ongoing issue with search results that returned zero hits (this accounted for 23% of searches over one six-month period), instead providing a serendipity search, generating suggestions for the user by running the search against sites such as [www.answers.com](http://www.answers.com); these results are then compared against the catalogue to generate a series of potentially relevant keyword searches.

Further analysis of user activity within the library catalogue revealed that the word 'renew' was a common search in the catalogue. To aid the user, the message 'to renew items you currently have on loan, please click on the 'My Account/Renewals tab' now appears which prompts the user to go to the correct option in the catalogue. A 'people who borrowed this also borrowed' option based on borrower history is also available and is a feature that users will be familiar with on sites such as Amazon.

In order to enrich the student experience when using the catalogue, further services based on usage data have also been implemented. This includes an in-house system, inspired by the Ex Libris bX recommender service (Ex Libris, 2011), which provides recommendations

based on usage data for both books in the catalogue and e-journals using the 360 API (application programming interface) (Serials Solutions, 2012a) from Serials Solutions®.

Trends in borrowing patterns cannot be directly attributed to these services; however, there is a noticeable increase in usage. Unique titles borrowed from the library jumped in 2006 after the first of these services were introduced. Perhaps more significantly, the average number of items borrowed per user also increased (see Figure 7.1).

Insert Figure 7.1. Average number of items borrowed per academic year per user

More recently work has been extended to include the new reading list software, MyReading (Pattern, 2011a), which includes a feature that exploits usage data to recommend wider reading. This initial work on usage data has been the basis for many of the collaborative projects undertaken by Huddersfield and its partners described later in the chapter.

## **2.2 Simplifying Resource Discovery: Summon™ project**

*'These products present a new generation of resource discovery by attempting to provide the best bits of federated search while eliminating the downside (Stone, 2009, 146).'*

Since 2009, a number of web scale discovery systems have come to market; these systems move a step beyond the traditional federated-search products by creating a union index of harvested content direct from publishers and local library collections in order to make searching simple and fast (Gibson, Goddard and Gordon, 2009). Unlike federated search, web scale discovery means that users no longer have to wait for the slowest resource to retrieve a search before all results are displayed, or to have to negotiate separate online resource platforms in order to find information. Summon™ is one such service.

In the summer of 2009, after a comprehensive review of the market, the University of Huddersfield became the first UK commercial adopter of Summon™ from Serials Solutions® (Stone, 2010). Huddersfield was followed by a number of other UK universities in purchasing Summon™, this included Northumbria University. In 2009 Huddersfield and Northumbria Universities collaborated on a successful proposal entitled, 'Simplifying resource discovery and access in academic libraries: implementing and evaluating Summon at Huddersfield and Northumbria Universities' or Summon4HN™ (Pattern et al, 2010), which was funded under the JISC (Joint Information Systems Committee) Information Environment Programme 2009 to 2011. The project aimed to create a case study report describing the selection, implementation and testing of Summon™ at both Universities drawing out common themes as well as differences, with suggestions for those intending to implement Summon™ and some ideas for future development (Thoburn, Coates and Stone, 2012).

Although Huddersfield and Northumbria implemented Summon™ at slightly different times, the two universities collaborated in assessing the support from Serials Solutions® and listed a number of recommendations for others planning their own implementation. Following implementation both universities worked together to devise a similar online survey and a common approach to running focus group sessions. Feedback was also gathered from staff and students through formal training sessions. Data was collected to ascertain what users liked and did not like about Summon™ to gauge the impact of such a major cultural change to library systems and to improve training materials where necessary. Huddersfield and Northumbria produced marketing material which was then made available on the project blog for others to share. The final report detailed a number of recommendations for Serials Solutions®. Key points for effective practice for others planning to implement Summon™ were also described and these may impact on project planning and timescales for implementation at other universities (Thoburn, Coates and Stone, 2010).

One of the impacts of the collaboration between Huddersfield and Northumbria was the formation of the UK Summon™ User Group, which is now part of the wider Serials Solutions® User Group UK (Serials Solutions® User Group UK, n.d.); this user group, currently chaired by Huddersfield, meets twice a year, with one meeting in the north of England or Scotland and one in the south of England, in addition to the yearly Summon™ Camp Europe meeting that takes place after the UKSG Conference ([www.uksg.org](http://www.uksg.org)). The group exists to share knowledge and experiences and regularly feeds back to Serials Solutions® with recommendations for enhancements and community developments, such as the Community wiki (Serials Solutions®, n.d.).

## 2.3 Adding value

*‘... there is a continuing focus on the student experience and a desire that all students should achieve their full potential whilst studying at University (Stone, Ramsden and Pattern, 2011b)’.*

This chapter has discussed the use of data in order to improve the student experience, however, so far we have only seen anecdotal evidence that the library adds value (see Figure 7.1). Data, specifically library usage data, can also be used to start to understand student activities and show that the library has a real impact.

### 2.3.1 Library Impact Data Project

*‘There is a statistically significant correlation across a number of universities between library activity data and student attainment (Stone, Ramsden and Pattern, 2011a)’.*

The Library Impact Data Project (LIDP) was developed from earlier work undertaken at Huddersfield (Goodall and Pattern, 2011; White and Stone, 2010a), which analysed the non/low use of library resources over a four year period (2005 to 2009). The initial driver of this work came from a project looking at equality impact assessments. Library usage data, defined as the number of e-resources accessed, the number of book loans and the number of physical accesses to the library was compared against student attainment. The initial work suggested a strong correlation between library usage and degree results obtained by students, notably with a significant underuse of library resources at both faculty/school and course level emerging as a factor. This evidence was presented at the 2010 UKSG conference (White and Stone, 2010b), however, it was emphasised that the data did not in itself prove irrefutably a cause and effect relationship between library usage and student attainment. In addition, it was not known whether the Huddersfield findings would be substantiated when compared to other institutions.

As a result of this pioneering work, a number of universities approached Huddersfield in order to benchmark against the data results. In February 2011 the University of Huddersfield along with seven UK partners; University of Bradford; De Montfort University; University of Exeter; University of Lincoln; Liverpool John Moores University; University of Salford and Teesside University successfully bid through the JISC Activity Data programme (JISC, 2011) to ‘address common challenges such as:

- ensuring privacy,
- sharing data between systems and institutions,
- effective analysis,
- enabling reuse and developing or enhancing tools and services’.

Projects under this call were asked to provide a hypothesis, in the case of LIDP it was that:

'There is a statistically significant correlation across a number of universities between library activity data and student attainment (Stone, Ramsden and Pattern, 2011a)'.

One of the greatest challenges of any collaborative project, especially one with such a limited timescale is the ability of to get all parties to share the same understanding of purpose to work together and provide deliverables at the right time. The project anticipated that there may be issues in collecting the data from the collaborators at an early stage, not least because of the short timescale of the project; this was seen as a significant risk. All potential partners were asked if they could provide at least two of the three measures of usage required as well as the student attainment data (see Table 7.1) in a machine readable format (Stone, Pattern and Ramsden, 2011c).

Insert Table 7.1: Data requirements (Stone, Pattern and Ramsden 2011c)

Data provided from the partners were analysed and the project successfully demonstrated that there is a statistically significant relationship between student attainment and two of the indicators; that of e-resources use (authentication logs) and book borrowing statistics. This relationship has been shown to be true across all eight partners in the project that provided data for these indicators. Figure 2 shows a typical result from one of the project partners, figures are based on averages for each degree classification.

Insert Figure 7.2 Relationship between book loans/Athens (e-resources authentication) and student attainment (Stone, Pattern and Ramsden, 2011c)

One area where a statistical significance was not found was for library gate entry data. The project partners attributed this to the fact that students enter the library building for a number of reasons, such as use of group study facilities, lecture theatres, cafes and social spaces and to access student services and that a student is just as likely to be entering the building for these reasons which may or may not have an impact on final grade.

Close collaboration by the partners throughout the project resulted in a number of important lessons being learned for example, one of the partners discovered that there was a local issue with the retention of data within the University. As a result, the project made a number of recommendations for other libraries to include forward planning for the retention of data. LIDP used EZProxy and Athens authentication data to measure the number of times a student was logged into the University's e-resources. This data may not be as reliable as Counting Online Usage of Networked Electronic Resources COUNTER reports, ([www.projectcounter.org](http://www.projectcounter.org)) however, it was the only comparable data that can be collected and traced back to an individual. The project found that different institutions collect different data in this respect and some do not collect this data at all.

As noted above, a significant risk to the project was in getting eight universities to work to a common goal in a short space of time and the success of the overall project was dependent on the contributions of all the partners who made every deadline and in many cases provided additional information over and above the project's specification.

The project generated much interest from other universities in the UK, Europe, Australia and the United States. As a result the University of Huddersfield submitted a proposal for an extension to the original project and in December 2011 funding was approved to take this forward into phase two. Phase two will further exploit the data and investigate possible causal aspects that may influence usage and attainment. This investigation will help libraries make service improvements and provide better management information thus refining decision making and showing the value added impact of academic libraries. Phase two of the project will use final percentage mark gained rather than degree classification to check

for a correlation between usage and outcomes including mapping to demographic information, such as ethnicity, disability and country of domicile, e.g. overseas students 'home' country to understand usage patterns. In addition, the project is also looking at information about students who dropped out of their course early (Stone, Collins and Pattern, 2012a).

JISC have also asked the project to conduct a feasibility study on the viability of a national shared service that involves collection and analysis of library impact data for all UK higher education libraries. Potentially this would ease the process of data collection and allow benchmarking to be undertaken by a central clearing house.

LIDP is also liaising with other projects undertaking similar research, such as that being carried out at the University of Wollongong (Margie and Cox, 2010) and by Megan Oakleaf for the Association of College and Research Libraries (ARCL), (ARCL, 2010) in order to benchmark the findings. A more direct way to benchmark is the release of data under an Open Data Commons licence (Open Data Commons, n.d.) in order to encourage the sharing of '...potentially useful data to a much wider community and attaching as few strings as possible (Pattern, 2008)'.

### **2.3.2 Shared Data**

*'The coolest thing to do with your data will be thought of by someone else (Walsh and Pollack, 2007)'.*

One of the philosophies at Huddersfield is to share data where possible under an Open Data Commons licence. As part of the JISC TILE project (JISC, 2008) in 2008, Huddersfield released book circulation and recommendation data, which included over 80,000 titles derived from just under three million circulation transactions over a 13 year period. The data released covered two areas:

- Library circulation data: this breaks down the loans by year, by academic school, and by individual academic courses. This data was primarily of interest to other academic libraries, the relevant UCAS course codes were included to allow benchmarking (UCAS is the organisation responsible for managing applications to higher education courses in the UK [www.ucas.ac.uk](http://www.ucas.ac.uk))
- User recommendation data: this is the data, which drives the 'people who borrowed this, also borrowed...' suggestions in the library catalogue referred to earlier (Pattern, 2008).

The data, which was thoroughly aggregated and anonymized before release, went on to inspire the JISC Mosaic project (Sero, 2009), which planned to '...investigate the technical feasibility and issues around exploiting data to assist resource discovery and evaluation in higher education'. Data in the Mosaic project included circulation data from Huddersfield and others.

The Library Impact Data Project also had the express aim of releasing all data from the project. After consultation with the partners the release of an anonymized set of data (Patten, 2011b) was agreed under an Open Data licence. The data contains final grade and library usage figures for 33,074 students studying undergraduate degrees at the eight partner universities. In order to ensure complete anonymity for the partners they are listed as LIB1 to LIB8; subject disciplines at each university have been replaced by randomly generated identifiers (IDs) and some courses have been 'generalized' to remove elements that may identify the institution. A further output of LIDP was a toolkit (Stone, Ramsden and Pattern, 2011d), which provides instructions for libraries on how to extract their own data in order to benchmark against the data described above. The toolkit discusses the extraction of

the data and gives advice for statistical analysis and suggestions for further investigation. Phase two of LIDP will build on the original toolkit as more data is extracted, in addition to releasing the new data under an Open Data Commons licence.

Another collaborative data project, the Copac Activity Data Project (CopacAD), (Copac, 2012) is adding to ten years' worth of circulation data from the University of Manchester by adding normalized data from Cambridge University, University of Lincoln, Sussex University and University of Huddersfield to build a recommender service using a web based applications programme interface (API). CopacAD aims to:

'...strengthen the existing business case for openly sharing circulation data to support recommendations, and will produce a scoping and feasibility report for a shared national service to support circulation data aggregation, normalization, and distribution for reuse via an open API (Copac, 2012)'.

Data code from the Summon4HN project (Pattern et al, 2010) was also shared under Creative Commons licence for others to use as part of their implementation of Summon™.

Another form of collaboration through the use of data are the mashed library events, 'an un-conference' styled event centred on the use of data mash-ups in a library context, or 'bringing together interested people and doing interesting stuff with libraries and technology (Balman, 2009)'. These events have been running since the original event in 2008 at Birkbeck College, UK, organized by Owen Stephens. Huddersfield hosted the second event, 'Mash Oop North', in 2009. These events aim to attract 'tech-savvy' librarians, developers, and students and facilitate an environment where delegates can benefit from the opportunity to meet like-minded delegates and discuss and share data on topics such as information literacy, mobile technologies, and web 2.0. The 'un-conference' combines a networking event with pre planned and lightning talks and can be highly unpredictable, but very creative. (not dissimilar to the process described in Chapter 5). Mashed library events since have been held all over the UK, such as MashSpa (aka 'Mash and Mashibility') and Pancakes and Mash.

A fundamental aim of using data collected either at the institutional level, or via collaboration at library level is to improve the student experience by gaining a better understanding of their needs. One such project at Huddersfield is the Roving Librarian project. The project is further inspired by the findings of the Library Impact Data Project and its predecessor, the non/low use project and by the collaboration work done in conjunction with the Student Union as part of the Summon4HN project and is described next.

### **2.3.3 Roving Librarian**

*'Explor(ing) the possibility of using informal, mobile environments to interact with students and offer them on the spot information skills inputs (Sharman, 2011)'.*

The original non/low use library project revealed an underlying lack of use of the physical and electronic resources in the library across all academic schools (Goodall and Pattern, 2011). As many as 40% of full time undergraduates did not visit the physical library during the length of their course. Although the LIDP did not find an overall statistical significance between student attainment and visits to the library, it did find significance between visits and higher and lower degrees (Stone, Pattern and Ramsden, 2011e). However, regardless of significance, students who do not visit the library are obviously missing out on the physical resources and also the training and support on offer. This training and support has traditionally been held in the library, either in induction or literature searching sessions or via one to one appointments with library staff.

During the implementation of Summon™ a slightly different approach was taken, with a number of drop-in sessions being held outside the library, most notably in collaboration with the Student Union. These sessions proved popular with students, but the staff who ran the sessions felt that the set up was rather 'cumbersome', in that the laptop was slow to boot, required a desk to be set up and immediately formalized what was intended to be an informal situation. However, the drop-in sessions were considered very successful in that by leaving the confines of the library, staff were able to engage with students with little or no library experience in a more informal environment.

Roving Librarian received funding from the University of Huddersfield's Teaching and Learning Institute (TALI) (University of Huddersfield, n.d.) and takes its inspiration from work undertaken at the University of Queensland (Lister, 2007), who used a Roving Librarian equipped with a tablet to replace enquiry desk services. The project allowed librarians to answer questions and demonstrate services while on the move and to run drop in sessions within buildings across campus. These drop-in sessions are advertised via email and social media and provide support at point of need. It is hoped that by raising staff and student awareness of library resources using mobile technology that more use will lead to higher achievement. Initial findings are that the project is proving successful in reaching students that may not necessarily enter the library.

### **3 Engaging library staff and users with new technologies**

*'I have joined Twitter (which I hate to admit is a lot better than I thought it would be)' (Anon, 2011)*

As described earlier in this chapter, Huddersfield has been experimenting with web 2.0 technologies for a number of years by using a drip-feeding approach, both via the library catalogue for users, and for staff by using a variety of blogs and wikis. This section will discuss how these technologies have been used to engage with staff and users at a more fundamental level. Due to the very nature of social media, collaboration had been on a very informal level, often using the media itself to collaborate and discuss ideas.

#### **3.1 Social media**

*'...in the last ten years, social media have gone from a radical way of exploiting the networked promise of the internet to a routine part of many people's personal and professional lives (Collins, 2012).'*

The drip-feeding approach has meant that while many library staff were using blogs and wikis, others were completely unfamiliar with such technologies. This apparent skills gap was the inspiration for Huddersfield's 25 Things for Computing and Library staff (Barrett et al, 2008). The course itself was based around the Learning 2.0 concept (Blowers, 2006a) created by Helene Blowers, the then Technology Director at the Public Library of Charlotte and Mecklenburg County (USA). Learning 2.0 was aimed at encouraging public library staff to learn about the new and emerging web 2.0 technologies. Blowers adopted a 'steal these ideas' approach by licensing the programme under Creative Commons and around five hundred libraries across the world have adapted the course (Blowers, 2006b). Huddersfield 'stole' ideas from two other programmes: Learning 2.0 @ Mac from McMaster University (Canada) (McMaster University, 2007) and Murdoch University's Library 23 Things (Australia) (Murdoch University, 2007) and also the work undertaken by Bobbi Newman, then at Missouri River Regional Library (Newman, 2011). In 2009, 25 Things at Huddersfield, along with Learning 2.0 at Imperial College London, became the first two library 2.0 programmes in UK higher education (Barrett, et al, 2009).

The idea for the follow up: '25 Research Things' course (Collins, Pattern and Stone, 2011) is a case study in collaboration and technology in itself. Initial discussions about the idea came about after a Tweet-up at the 2010 LIBER conference. This sparked a conversation about the then forthcoming UK Research Information Network (RIN) report on the take up of social media and web 2.0 tools and technologies within the research community (Research Information Network, 2010). Huddersfield and the RIN collaborated in writing and delivering '25 Research Things', an innovative online learning programme which gave researchers a structured way to engage with selected web 2.0 tools. The collaboration itself was done entirely via Google Docs, with the three authors not meeting for the first time together until after the course had started.

The course ran with two cohorts during 2010 to 2011 via a WordPress blog. (<http://wordpress.org>). The 'thingers', ranging from first year PhD students to professors, were given specific tasks which encouraged them to take control of their learning through exploration and play. All participants established and maintained a blog of their own to report on their experiences with each tool. This helped to build a supportive community, with participants commenting on each other's blogs. As a result, they not only received peer support on the various tasks, but also began to understand the benefits of being part of an active online social network. A number of web 2.0 tools were introduced each week around the themes shown in Table 7.2.

Insert Table 7.2. Themes covered in 25 Research Things

All 'thingers' completed a survey before and after the course. The preliminary results of these surveys, along with analysis of the blogs, suggested that researchers found the course to be useful. For many, it increased their confidence in using web 2.0 tools; many have also commented on the engaging and stimulating nature of the course, particularly its interactivity and structured learning.

Unfortunately, many participants did not make it beyond the first few weeks; more support at this stage from the 25 Research Things team may have been needed, including an initial face to face launch event. However, most of those who completed the course enjoyed it and felt it was pitched at the right level for their needs. In particular, they enjoyed reading each other's blogs – both to get a different perspective on the tools they were trying, and also to get to know other researchers at Huddersfield.

Observation of the blogs revealed that most researchers who finished the course said that there were some tools that they would continue to use and identified some that they did not find useful but may return to later. Many of the researchers also commented that being able to discriminate between the useful and less useful tools was very important. In this respect, the course broke down the somewhat daunting concept of web 2.0 into different and more manageable techniques which can be adopted, or not, according to the researcher's individual needs. Even those participants who already had some experience with web 2.0 tools found the course useful, either because it introduced them to tools they had not previously encountered, or because it gave them a dedicated framework to explore and experiment with the full capacities of services that they already used.

Researchers identified several ways that web 2.0 tools would enhance their existing research processes. These included, finding resources, managing references, ways of communicating findings, working with collaborators in other departments or institutions on articles and grant applications and the potential value of web 2.0 tools in building their professional networks, finding collaborators and possibly also new jobs. An unexpected outcome of the course was the potential for added value to teaching and learning, as many participants used ideas from the course with their students, such as CiteULike

([www.citeulike.org](http://www.citeulike.org)) to compile reading lists or Prezi ([www.prezi.com](http://www.prezi.com)) to deliver presentations. Others asked students to blog about their experiences on a work placement, for example.

Huddersfield and Imperial College, London, had remained in contact since the original 25 Things course in 2009. In May 2011, Imperial launched its own web 2.0 course for researchers entitled, 'Blogs, Twitter, wikis and other web-based tools (Imperial College, 2011)'. The course addressed many of the issues that the Huddersfield course encountered, such as the length of the course and its impact on the busy schedules of researchers. The Imperial model was much shorter with a minimum of six blog posts including three compulsory elements and three optional elements. Looking to the future, Huddersfield plans to re-visit the 25 Research Things course as part of a project on information literacy for researchers, which will roll out in 2013.

### **3.2 Lemon Tree**

*'Why do we want to teach our users to be librarians? (Pattern, 2009).'*

Lemon Tree ( See Figure 7.3), like 25 Research Things, is designed to be a fun, innovative, low input way of engaging students through new technologies and increasing use of library resources and therefore, final degree awards. It aims to increase usage via an easily adaptable social, game based eLearning platform to enhance the Huddersfield CLS environment. Lemon Tree focuses on students rather than on staff intensive instruction and the traditional promotion of library resources, this allows sharing of the student experience of library resources by peers.

Lemon Tree (Running in the Halls, 2011) is another project that took part of its inspiration from the non/low use project at Huddersfield (Goodall and Pattern, 2011). The project is a collaboration between CLS and Running in the Halls, the key collaborator being a former lecturer at Huddersfield, who based his Masters dissertation on innovative methods of interacting with the library. This project aims to increase usage of library resources using a custom social, game based eLearning platform designed by Running in the Halls. This builds on previous ideas such as those developed at Manchester Metropolitan University to support inductions and information literacy (Whitton and Jones, 2009). In addition, Lemon Tree uses rewards systems similar to those used in location based social networks such as Foursquare (<https://foursquare.com>).

Insert Figure 7.3 Lemon Tree

As part of the project an evaluation of student perceptions of social game based learning systems will be undertaken. In addition, the project intends to provide data to Phase two of the LIDP project in order to assess whether participation in Lemon Tree helped to increase student attainment through increased use of library resources. When registering, students sign terms and conditions that allow their student number to be passed to CLS. This allows CLS to track usage of library resources by Lemon Tree gamers versus students who do not take part. This data will then be anonymized and analysed as part of the Library Impact Data Project.

Lemon Tree's primary objective is to improve student attainment through better use of library resources and engagement with new technologies, however, additional outcomes of the project are to provide a better awareness of how a social game-based learning approach may work across the University and the sector as a whole and to reduce staff time spent on library and computing inductions, thereby releasing valuable staff resource for other uses. It

is expected that if successful, other institutions would be interested in collaborating on further developments of the proposed system.

#### **4 Collaboration at the national level**

*'...there is potential for HEIs (Higher Education Institutions) to secure sustainable efficiencies (including both economic benefits and service improvements) where they are not in direct competition. This is not just through sharing support functions, but through considering the wider range of areas where there is collaboration (KPMG, 2006 3).'*

So far this chapter has looked at how the University of Huddersfield has used technology to collaborate with others to improve the student experience at a local level. This section will look at two further JISC projects, which are inspired by calls for collaboration and whose recommendations are aimed at the national level.

##### **4.1 Huddersfield Open Access Publishing**

'Open access publishing has arrived (Bloomsbury Qatar Foundation Journals, 2011).'

At the time of writing, Open Access is front page news, On the 2 May 2012, David Willetts, Minister of State for Universities and Science in the UK addressed the Publishers Association annual general meeting regarding the Government's commitment to Open Access (OA) in that 'Opening up access to academic research will put more data and power in the hands of the people who pay for it' and maximise the impact and value of the UK research base (Willetts, 2012a, 2012b). In March 2012, the Research Councils UK (RCUK) released their draft policy (Research Councils UK, 2012) on access to research outputs clarifying that their definition of OA includes unrestricted use and re-use of content as allowed for under the Creative Commons CC-BY licence.

Huddersfield has been using the EPrints ([www.eprints.org](http://www.eprints.org)) platform for its institutional repository (IR) since 2006 (University of Huddersfield, 2012). Like many repositories, the aims of Huddersfield's IR are twofold, to provide a complete record of the University's research outputs and to make as many of them available on open access (OA) as possible; currently around a third of outputs are available on OA (50% of those published since 2008), including PhD theses, conference papers, journal articles, book chapters and non-textual material such as artwork. The IR also provides data to the University's Research Information Management System, which is an in-house system developed for the 2014 Research Excellence Framework (Research Excellence Framework, 2012) and funded through a number of successful JISC funding calls.

In 2011 the University re-launched the University of Huddersfield Press. The Press was investigating the possibility of supporting University journals and developed the Huddersfield Open Access Publishing (HOAP) Project (Stone et al, 2012), which aimed to develop a low cost, sustainable OA journal publishing platform using EPrints institutional repository software. The project was funded by JISC and led by CLS, in conjunction with the School of Education and Professional Development and the Research and Enterprise Directorate. See Figure 7.4.

Insert Figure 7.4. Teaching in Lifelong Learning: a journal to inform and improve practice

Taking inspiration from an earlier project at the University of Glasgow (University of Glasgow, 2004), the HOAP project developed a platform to convert the peer reviewed journal, Teaching in Lifelong Learning (University of Huddersfield, 2009), from a print

subscription model to an OA e-journal. A front-end was created for the journal with content being archived in the University repository. The creation of the journal landing pages (Figure 7.4) and the volume/issue pages is fully automated, enabling articles to be uploaded into the repository using existing workflows in just 30 minutes. The articles themselves maintain the standard repository branding linking back to the journal landing pages on the platform, aiding discovery via Google (Scholar) <http://scholar.google.co.uk/>. Journals on the platform have been submitted to the Directory of Open Access Journals (DOAJ) (Directory of Open Access Journals, 2012), this will enable the journals on the platform to be retrievable from resource discovery systems such as Summon™.

In order to disseminate its output and to encourage this sort of collaboration at other universities, the project developed a toolkit (Stone, 2011), which features sections on how to move to an OA model, setting up the landing pages and adding content, workflows and notes for contributors, including a Licence to Publish document.

The project was also keen to initiate informal collaboration through social media by encouraging reader comments and ratings and social tagging as part of the publication process. Although this has been partly achieved through the bookmarks and sharing features of the existing repository, RSS feeds and automated tweets for new articles, and through the project blogs and Tweets, the project team wanted to go one step further by encouraging authors and readers to use social media by implementing the SNEEP (Social Networking Extensions for EPrints) (JISC, 2007), suite of social networking extensions as part of the next release of EPrints. This will allow readers of the journal and other repository content) to comment, tag and make notes once they log in.

The HOAP project concluded with a list of recommendations for the wider community around the agenda for national shared services. It is hoped that this project will help to encourage other universities to investigate publishing in-house journals for early career researchers and undergraduates and perhaps pool resources by using the HOAP software as part of the EPrints Bazaar (Eprints, n.d.).

The UK higher education (HE) sector has a rich history of collaboration through shared services at this level. Recently this has been led by Society of College, National and University Libraries' (SCONUL) work on shared services, which reported to the Higher Education Funding Council for England (HEFCE) in late 2009 (SCONUL, 2010). The shared services agenda generated a lot of interest in UK HE, with 89% of respondents to the SCONUL Shared Services Survey stating that they were open to "any arrangement that delivers benefits"; a significant number supported a governance mechanism operated by 'a sector agency' in the style of JANET (UK)'. (Kay, 2009) In 2011, JISC Collections was appointed by HEFCE and JISC to take this project forward as Knowledge Base Plus (KB+). (JISC Collections, 2011). The KB+ project aims to develop a central, shared, above-campus knowledgebase of electronic resources management (ERM) data for the UK HE community.

## **4.2 Next generation Library Management Systems (LMS)**

'2012 will be a watershed year in the roll out of a new generation of library automation platforms, especially in the academic library arena (Breeding, 2012, p.1)'.

Ken Chad has warned that the LMS marketplace is 'ripe for disruption' (Chad, 2009) and that the legacy LMS currently in place in most of UK are beginning to hinder the library by requiring specialist staff knowledge offering fixed workflows leading to duplication of effort, such as rekeying financial information into several systems.

Huddersfield, collaborating with KB+ has been awarded funding by the JISC to investigate and evaluate the possibility of integrating data flows between KB+ and local knowledge

bases at Huddersfield and the Serials Solutions® knowledgebase behind Intota. Intota is a radically new system with little of the legacy baggage associated with traditional LMS (Serials Solutions®, 2012b). The Huddersfield, Intota, KnowledgeBase+ (HIKE) project, reporting in early 2013, will look at the potential for collaboration between the systems and will evaluate the suitability and potential of Intota as a replacement to the traditional LMS in the UK market and the potential effects of cultural change that such a collaboration would create.

## 5 Conclusion

'Keep your feet on the ground and keep reaching for the stars (Kasem, n.d. cited in Wikipedia, 2012)'.

Many of the projects discussed in this chapter could not have been developed without the support of JISC or internal University funding. CLS uses JISC calls for funding to enhance services and foster ideas that are at an embryonic stage of development. New ways of funding, such as the JISC Elevator pilot, a crowd sourcing platform encouraging ideas to be submitted in order for the community to vote to show their support of the idea (JISC, 2012) is an ideal way to encourage collaboration and to help small scale projects flourish.

Although this chapter has been about the use of technology, it is the underlying culture in our libraries that supports the themes discussed. There is a strong culture of collaboration and innovation within CLS, and as a result, staff within the service are encouraged by senior management to attend conferences and internal events and to cultivate ideas. Even in times of fiscal constraint, it is these ideas that have helped to keep Huddersfield moving forward.

Ultimately, the *raison d'être* for the collaborative projects described in this chapter is simple: to show how library services can add value to enrich the student experience and increase attainment. Technology can be used to achieve this, whether it be through simplifying services, by introducing new discovery services and systems, or by sharing data to understand the needs and behaviour of students. The impact of collaboration has been a source of both inspiration to staff at Huddersfield and to others through the various JISC funded projects and community shared services discussed above. It is hoped that this close collaboration with partners at a local, national and international level will continue and that outputs will result in further lessons being learned by the HE community as a whole.

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