Space, Scholarship and Skills: Building Library Strategy on New and Emerging Needs of the Academic Community

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Abstract

This article follows the publication of a previous article which discussed the outcomes of the Understanding Academics research project (2016–2017) which sought to better understand academic staff at the University of York. The project centred around the use of specific ethnographic methodologies and in particular two UX techniques: cognitive mapping followed by semi-structured interviews. This article focuses on the key themes which emerged from that research and which now underpin the new Library strategy: space, scholarship and skills.

Key Words: academic library; UX; ethnography; academic staff; usability; strategy

1. Introduction

Over the past two years, the University of York Library has been undertaking a major research project to understand more about the needs of academic staff and to help inform new strategic directions for the Library. The project had three core aims: to gain a much better understanding of how academics at York approach their research and teaching activities; to consider how Library services currently facilitate and support those activities; and to integrate the 'academic voice' into future service planning and development of support for academics, ensuring that the Library continues to engage departments in innovative ways that respond to both current and future needs.

The project made use of specific UX ethnographic methodologies (cognitive mapping and semi-structured interviews) which placed the academics at the heart of the research and meant that we were able to fully understand their experience of using Library services in highly practical ways. In total, 142 interviews were carried out and the data was subsequently analysed using NVivo software. Results were set within national and international contexts through close analysis of the professional literature including the Survey (Wolff-Eisenberg, Rod & Schonfeld, 2016).

The research ultimately led to three key outcomes: a set of "quick wins" whereby the Library was able to make immediate changes to services for academics; a set of longer-term practical recommendations which are currently being implemented; and an evidence-based synthesis which seeks to define and explain academic life and understand the key motivations, frustrations and aspirations for academics.

Following the Understanding Academics research a further 6 in-depth interviews took place to gain a better understanding of digital scholarship at York.

Findings on the synthesis of academic life at York have already been published (Blake & Gallimore, 2018), including a bibliography of related literature on this topic. This article focuses on the second major output of the project: an analysis of the key themes that emerged from the interview analysis and which now underpin our new Library Strategy 2018–2020: **space**, **scholarship** and **skills**. This synthesis is combined with the Digital Scholarship interviews and this article embodies the digital world in which we operate

across all three themes. Throughout this article we talk about both the digital world and the physical world, and how these intersect and inform teaching and research activities across the University of York.

2. Space

Libraries as physical and virtual spaces continue to play a key role in the lives of many academics across subject disciplines. Much research happens within online spaces (whether provided by the Library or not), yet many academics still value the opportunity to access physical collections and space. For some, serendipitous browsing remains an important feature of the research process; for others, libraries provide an opportunity to escape the busy, everyday demands of the office and participate in a shared, scholarly environment that stimulates thinking and creativity.

> *"I don't tend to work in the library very much, often because it's quite full, whereas I do in the vacation, I quite like working in libraries as nobody can bother me. At my desk there are always emails pinging in." Humanities Academic*

The very presence of physical books representing decades of knowledge and wisdom can help to inspire and encourage the scholarly endeavour by setting a particular tone and intellectual precedent (Beer, 2017):

> *"Writing spaces matter. The environment we write in inevitably shapes the work… The liberating enormity and evocative presence of the library's books make it a place to think and work that, I think, adds some energy and a bit of fizz to what I'm doing. It's a space I tend to turn to when I need a bit of a push to keep writing or to keep editing. Sometimes I fetch those books down from the shelves to inform what I'm doing, but often they sit there suggesting to me to think more, to be a bit freer and to get on with it."*

Academics are conscious of the varying demands on library space from different users, and some tensions were raised in the study about the perceived loss of quiet study space. Academics will make conscious efforts to avoid using the Library at busy times for their students and are keen to promote the space to their students and encourage academic thinking and collaborations:

> *"Being in the Library makes [the students] feel like they're doing something intellectually productive rather than staying at home which is a good thing."*
> *Social Science Academic*

Some academics noted anxieties in their students about using the Library which can feel a busy, overwhelming and intimidating environment at times. Individual study rooms can reduce these concerns but are in short supply.

> *"I have a surprising number of students who come through with mental health difficulties and they really struggle to be in the quite busy, hive of activity. There are bookable individual rooms so it's not as if we're not providing, it's just that obviously, it's the amount of space is limited. But I do get a handful of students who say they just can't work in the Library because it makes them too anxious."*
> *Social Science Academic*

Both this research and a previous study involving PGR students found that our community of users wanted different spaces for different activities. Like most libraries, with this in mind, we have tried to create a range of flexible spaces to suit different needs including a traditional silent study area, quiet study spaces surrounded by books, and group study areas where users can choose to be more sociable. To further address some of the specific issues around space raised in the Understanding Academics project, the Library at York has carried out a range of other targeted UX activities to understand more about how all users interact with the physical space. Over the past year, for example, the Space UX project has focussed on the lounge area of the Morrell Library just beyond the main entrance. Use of the area was monitored over time and the furniture layout subsequently adapted to fit how students actually prefer to use the space. A new fabric "wall" is currently being installed to help define the space and reduce noise levels from it. A specific focus on PGR needs led to the creation of dedicated PG spaces with added facilities including lockers and access to a tea and coffee machine.

Next steps will focus on how to ensure that the Library's virtual services match those that are provided physically and in person. Many academics rely on online spaces and resources to access the information that they need for research and teaching, and many never or rarely make use of the physical library space.

3. Scholarship

Despite the opportunities to explore new research areas, and potential collaborators facilitated by the digital discovery services now ubiquitous in scholarly publishing, many York researchers prefer to follow their hunches: inspiration strikes while reading, listening to conference speakers or discussing ideas with colleagues.

Collaboration is key to the research process, as one academic noted: *"Grants make research a much more sociable business!"* (Humanities Researcher). Some academics said that nearly all their work is collaborative: *"There's pretty much no project I do that isn't collaborative. There's almost nothing I sit and do on my own."* (Science researcher). It is clear that attending scholarly conferences and networking events in person is still a valued opportunity for learning about new developments and sharing ideas.

Outside the applied sciences, it is reportedly uncommon for funding constraints, REFability[1] or the prospects for impact to dictate the direction of academic research, at least initially; however, researchers note the value of pump-priming and time to discover gaps in the literature and will often road-test ideas with peers before or during the funding application process. They can be frustrated by the complexity of the process, and cynical about prospects of success:

> *"I usually have various ideas which may appear spontaneous but are often the results of going to conferences, talking to colleagues, reading and previous research. Maybe one or two will get fleshed out. At that point start thinking about who might fund this, or the whole thing might be driven by a funder. Or call or deadline for studentship. Then I have an outline, I also look at funders website to see what they are looking for and what they'll fund. Then try and get pump priming funding for it from the department or the university."* Science Academic

> *"So, if you're interested in doing research we have what we call pump priming…that would be as like testing the water part of research because obviously you will want to be developing your research on a wider scale which means applying for a larger fund either overseas or within Europe."* Social Science Academic

> *"So I'm trying to work out what are the current trends, what are the areas of interest, what are the gaps, where can my field add something." Humanities Academic*

With a few exceptions, researchers are broadly positive that the Library's collections meet their needs, and adopt a pragmatic approach to sourcing material unavailable at York, often consciously breaching publisher licence terms by sourcing journal articles through personal networks (including social media) or 'guerilla' open access platforms. Quick access to journal articles in particular is critical for many academics, with websites like Google Scholar helping academics to quickly identify what isn't available at York. All of this results in few academics being reliant on inter-library loans, and there was little evidence that green open-access articles are widely recognized or utilized.

> *"And it's actually great the fact that York is linked with Scholar so you can just access everything straightaway without having to go through the Library unless it's absolutely necessary because it's much faster this way." Social Science Researcher*

Academics are working in a fast paced culture with high expectations of accessing information instantly at the point of need. This cemented findings from our PGR UX study in 2016 which had similar findings: some felt that the advertised interlending times were too long, while others felt the costs were prohibitive. Overall people, be they students or staff, want something when they need it. At York we are starting to investigate ways to change how our service operates and implement a "tell us what you need" service where we then take the burden away from the requestor and decide how best to fulfil the resource request, for example, buying the resource, sourcing it through interlending or possibly purchasing short term article access. This includes removing user charges wherever possible.

There were some comments from academics about gaps in our journal subscriptions which can impact research; websites like Sci-Hub and arXiv provide easy access to what academics need and help to facilitate and further their research and discussions and they are shaping the way that academics conduct their research and changing the nature of the research relationship with the Library. This explanation of the use of arXiv by a researcher in the Sciences sums up how the landscape is changing for accessing scholarly material:

"The first thing is that you know it's there! And it's like a Library which is available all the time and you get typically pretty close to final versions and you get very new stuff which hasn't been published so depending on time, there are various ways you manage the flow from the arXiv...

But then I sometimes actually when I know a paper has been published in a journal, if the first link I get to is on the arXiv I don't bother to look for the link to the journal and then go through the Library and log myself in to read the final published version, I'm perfectly happy with the arXiv version in most cases. So it's that important really. Some people who have secure positions they have given up on journals, they only read what's in the arXiv, it's available to everybody. If it's good, it will be referenced, and some metrics it might not count but in others it does, especially in the community. A good arXiv publication can be as good as published paper. And only for careers, jobs, do you then need the stamp from the journal.

And of course in the scientific community there is a lot going on against these 'institutions' of editors which hold the stamp of approval for careers which is a very weird distortion in some sense. Why is some scientific result excellent if it has been published in Nature? And if the same result has been published in the arXiv, the content is the same but it's somehow not recognised as equally valid. By certain parts of relevant communities, like appointment communities, but the community itself doesn't really bother that much." Science Researcher

Similar views were expressed about SciHub:

"Well I only learnt about it a year ago, but it seems to be fifty times the size of the arXiv, if not more, probably many times the Library...It's going to be possibly taken down, so it's not necessarily reliable, legal, it's an interesting question. What I liked about SciHub is that they actually put in a manifesto. They had somebody, a quote from a retired professor in Harvard, who said that somehow, something is really broken in the sciences, because the situation is like this: we have scientists producing work, we have scientists judging the work by refereeing, and then once the work has been published, we have scientists paying to have access to the work which they produced and they refereed. And that seems to be really the wrong way round, and this is a historic distortion which is just not correct somehow." Science researcher

With this in mind a new project at York to ensure that the Library's key discovery tool, YorSearch, is fit for purpose and able to evolve in response to

shifting ways of researching, communicating and collaborating within the scholarly world has commenced. It will also investigate new discovery tools such as Yewno.

During our Digital Scholarship interviews, more junior participants seemed to hold "traditional" modes of scholarly communication in higher regard than their more senior colleagues, with strong preferences for the printed text for immersive reading and serendipitous discovery. Overall academics still had a preference for reading in print, rather than online, again aligning with the findings of Ithaka S+R survey (Wolff-Eisenberg et al., 2016). There is still a blended approach to downloading articles, reading them online or printing them out, although some appear to access scholarly literature primarily via their smartphone.

For many researchers, the research design and data collection are inseparable from the literature review: particularly in the humanities where a text may be an object of research in itself, but also in the sciences and social sciences where secondary literature can suggest new data sources or methodological approaches. Access to third party data is occasionally a source of frustration, and awareness of good practice with regard to data management somewhat patchy with Library support welcomed.

Researchers repeatedly noted the cyclical nature of their research: attempting to write up their findings or present them to an audience often highlights unanswered questions or incomplete analyses.

Choosing where to publish appears to be largely down to reputation and informal networks, with superficial use of journal metrics. Whilst many researchers are articulate about the shortcomings of the established scholarly publishing economy, very few appear to give serious consideration to alternative platforms, and misinformation about the costs and risks of open access is widespread.

> *"Then of course, you're looking, where do we publish our results, and more and more now, it used to be less so, but more and more when I think where am I going to publish I'm thinking who's going to read it, you know, is it going to be widely accessible, because there's no point in publishing it if nobody can get to read it… and the other thing when I publish is we're having to think of metrics now, I'm*

not sure I believe in them but ultimately the people who count, the what their impact metrics are in any given field." Science academic

"...there's a certain subset of journals, three or five journals, that everyone should publish in. It's good for your CV, good for your promotion and everything, to publish in those journals." Social Science academic

"If it's an article I have a fairly strong idea of the sorts of places I want to publish it and I would always go for the best journals I think the piece is capable of sustaining. So I have a sense of whether I think it's important and would go in a top ranking journal, or if it's less important and would go in a lesser journal. And the journals I identify are also the ones I think people will read in my field." Humanities academic

4. Skills

There is clear evidence from the interviews that staff have mixed abilities in relation to digital skills. Some talk at length about their collaborations (and how they use digital tools to enable these) while others feel they need more support in both new areas, e.g. digital note taking, as well as refreshers on more traditional skills such as finding and managing information. Many staff also expressed concern about the digital skills of their students.

Collaboration was a key theme from the interviews, with digital technologies, tools and websites enabling academics to keep in touch with each other, to collaborate across borders and to share their research data. Researchers utilise a range of tools to enable collaboration. Their choice of tool may depend on who they are collaborating with and what they need the tool to do; however a number of academics interviewed were mindful about the risks of using certain tools, particularly when it comes to confidentiality of data. Many academics noted the fundamental failure of digital tools to compensate for having real face-to-face conversations with people.

Unsurprisingly the majority of academics across all disciplines talked about the importance of working digitally and the need for this to be easy. Indeed, this aligns with the findings from the Ithaka S+R survey (Wolff-Eisenberg et al., 2016). This is perhaps best summed up by the heavy reliance on Google.

"I never read books, I just Google it." Science researcher

What was highly noticeable across the majority of interviews was the importance of Google Scholar for literature searching today, particularly for current awareness activities. The majority of academics interviewed who discussed their literature searching habits start with Google, Google Scholar and/or specific subject databases. For some academics and disciplines, but not all, Google Scholar is now much easier to use than traditional databases like Web of Science and is equally comprehensive in terms of coverage. Google Scholar is often the starting point before academics then turn to Library databases for more in-depth research (if they turn to them at all). For some academics, however, databases will always be more important than Google Scholar searching because the academic content of the databases simply isn't available through Google (Law databases, for example).

"YorSearch can be quite cumbersome sometimes. I've tried using it several times but whether you end up with a lot of resources and sift through lots of them, or you get hardly anything. And then you go to Scholar and it finds lots of articles YorSearch didn't find but you have at York anyway!" Social Sciences Academic

"I...use Google Scholar because it's easy and user-friendly and easy to drive." Science Academic

"I tend to stick with the more recent literature. So I just use Google Scholar's function to tell me what has been done since 2005." Social Sciences Academic

Few academics start with the Library's search tool, YorSearch, supporting findings from the Ithaka S+R survey (Wolff-Eisenberg et al., 2016); however, some who do, find it hugely beneficial and a way to facilitate serendipitous browsing which they value.

"I'm heavily reliant on YorSearch. I will put in a keyword or something, see what I get out of it. It's always been my natural inclination to use a Library's catalogue, that's always been my starting point...I know I'm better at using the Library catalogue unlike my colleagues for example so I must've been taught it or had a guide I used to discover that information?" Social Sciences Academic

The interviews indicated that academics are moving away from traditional search techniques (such as Boolean logic) so we must consider what this

means for libraries and our traditional information skills and whether these are still needed. At the University of York we have started to focus on critical evaluation skills rather than on finding information: how we teach students to differentiate between different types of (online) text and to engage critically with the literature, rather than just trying to find the "right answer" and copying and pasting that into written work.

It was clear from the interviews that academics develop their own individual ways of searching the literature and keeping up-to-date with new research and publications in their field. Across the interviews, a range of different methodologies and search techniques were discussed, from highly structured and systematic, to more haphazard and serendipitous approaches. While some of these are clearly illustrative of good practice, many others were questionable in how effective the search techniques are. This presents opportunities for the Library to support academics in improving their search skills, particularly those who said they have limited time. One particular concern raised was around effective keyword searching to find relevant results, which a number of academics found particularly problematic.

> *"I should [use databases] but frankly I just don't know enough about them. It's always rather haphazard. Talking to people helps a lot and, oh, you should read so and so...So it grows by word of mouth, it grows haphazardly..." Humanities Researcher*

> *"Literally just using big keywords, to put it into a very generic, I know I shouldn't say this, like Google or the top line of Chrome or the top line of your phone." Social Science academic*

Academics reported concern about research students' level of proficiency with literature searching but sometimes lack those skills themselves and wondered if the Library could do more to support them in this area. Poor search skills can have a disproportionate impact on students who don't have the established networks which many academics identified as key for the discovery of new research materials.

> *"I do encourage PhD students in particular to come and speak to the [subject] Librarian and I should do that myself more often actually. In terms of I'm doing this module, am I missing things? Actually as I'm doing this I'm thinking really I should do that myself because it would really help students. I always feel that*

> *the support is great, the staff are fabulous. I could possibly ask for more, for myself... I'm possibly not thinking that's the right thing to do; thinking that I know how to find these things better myself, well actually I might not."* Social Sciences Academic

> *"It could be if we work smart rather than work hard and utilise all the resources that we've got. You guys in the Library are good at searching and good at finding stuff whereas academics might not be."* Science Academic

There were also some comments warning against the over-reliance of Google and worried that colleagues may not be aware of these.

> *"You see a lot of researchers who just do that [Google] when they're trying to get into a topic, don't go to EconLit or don't search PubMed with MeSH terms, or don't explore things quite as deeply, and they miss out on a rich literature. I also...try to do at least...searching old texts and literature. You know, I've been to the Library to use the stacks to find textbooks. Part of it is because there is a lot of old [subject] texts, [subject] theory that's been out there years and years, that tends to get lost if it's not picked up on some website...people find it really interesting in presentations when you bring up more classic texts or more older papers... everyone cites papers from 2013–2015, and if you cite a paper from 1948 or 1953, people are like 'woah, what's this, I didn't know that was there.'"* Social Science Researcher

> *"The problem that Google has, as a search engine in general, is that it has this sort of secret weighting algorithm that causes some results to drift to the top and others to the bottom, and that's partly the result of the work that they do to keep things relevant because if the results aren't relevant their user base will disappear. But it's also ripe for various kinds of manipulation and optimization by people who profit by having that, so there's an uneasy truce between those two sides—as long as neither of them break it, it carries on working for everyone but those forces do not operate if you're trying to find journal articles."* Science researcher

With the proliferation of information now available, some academics interviewed found it challenging to find the time for current awareness activities; however, for others, the real challenge is in understanding how to go about finding new scholarly materials published in their field and uncertainty about using social media.

> *"I don't do systematic 'let's keep up to date', I don't have time for that at all. It's very much, I'm writing something and I need a reference for X and then I go and look." Social Sciences researcher*

> *"It gets harder and harder as there is more and more material, just to keep control of the basic bibliography of things is very hard and I still come across things and think how have I missed this which is a bit frightening when you're supposed to be on top of things. There's so much information these days." Humanities Academic*

> *"It's knowing where to look. Latest information isn't always easy to find." Science Academic*

> *"So it's difficult sometimes to find the journals, that's where things like Twitter and Facebook, that networking, has been incredibly useful. And that's the thing, you used to go to conferences and meet people, but now you add them on Twitter and they post something: 'I've published an article' or 'Someone else has an article'…You don't want to tell people they should be on social media but at the same time they're missing out on all this stuff. But people have their own networks. In some way something like Twitter is no different from keeping up with people via phone calls or writing to them, but on a vast scale." Humanities Researcher*

As mentioned previously, academics still have a preference for reading in print, rather than online. They also raised concerns about their students in relation to this.

> *"Maybe we need to start structuring into the modules ways of getting the students to actually use the physical texts. I don't know how we do that, it's going to be setting it on weekly reading, it might be through Library tasks where you have to go look at books… To some extent we are not introducing them to the skills of a researcher. After undergraduate level, they will have to use books and they will need to be able to search the catalogue and find a book on the shelf, and that when you look at a shelf there is a whole context of shelfmarks around that could be useful. So they should be, still. You know reading an e-book is a different experience, it's nostalgic, it's pragmatic, they will have to use physical books eventually." Humanities researcher*

For some academics, it is not just the impact of ebooks on student reading that causes concern. Ebooks in general do not always fit in easily with their

own research methods which can often involve referring to multiple texts at once, browsing footnotes and bibliographies across texts, making notes etc.

> *"Reading stuff online is great if you know what you want—it's useful for teaching preparation like reading two chapters or browsing stuff. For what I'm doing, you read the texts, footnotes, bibliography simultaneously and open access books are hopeless for that. You can't browse or keep moving between the bibliography and the book. If i were more technologically advanced I would use Google Books and word searches and I know some who do that, but you can't use a scholarly edition online—I would always print out and scribble on it, you need to read something intensively." Humanities researcher*

A proliferation of different software and their use was reported across interviews. As with literature searching, academics expressed weariness about the struggle to keep up to date with new analytical techniques, software releases and research dissemination platforms. A result of this may be the over reliance by some academics on one tool and being closed to new ways of working, for example: *"I do everything in Word, anything else seems like overkill,"* (Humanities researcher). A few academics noted shortfalls in the University's provision of training for research students and their supervisors—particularly with regard to effective use of IT, impact maximisation and academic practice generally. There was also evidence of a gap in the provision of training for data retrieval and analysis, particularly for research students, however, it was not clear who should provide this training.

It is anticipated that the Library's digital skills projects will help ensure academics have the technical competencies and confidence to thrive in a digital environment irrespective of where they are physically located.

5. Conclusions

Academics are increasingly working in a digital environment using a range of digital tools; however they still access Library print collections when they need to. As a library service, we need to ensure that all staff and students have the necessary digital skills required to be successful in their scholarly practice, employment and more generally as lifelong learners. We also need to ensure that the physical library space continues to provide collections

and space that both support, inspire and empower the academic endeavour. Evidence and insights gained from academics throughout the project emphasised how critical the physical and digital spaces are and how, for many academics, they continue to co-depend on each other.

The scholarly world continues to develop and realign itself to shifting priorities and innovations. As libraries we need to be responsive and agile to such change and continue to be valued and trusted partners in the academic endeavour.

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Note

[1] The Research Excellence Framework (REF) is the UK's system for assessing the excellence of research in higher education institutions [see: https://www.ref.ac.uk/].