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Scenario 2: Sink or Swim: Digital Dilemma in Higher Education

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Universities began as a need to concentrate resources. A concentration of scholars who worked together; a concentration of students who learned together; a concentration of resources in libraries; a concentration of expensive specialist equipment in laboratories. The need for the university to occupy a coherent single space was central to their development. It was late in the twentieth century before technology began to change that. Film and radio allowed lectures to be delivered off campus; cheap international travel allowed at least some students to study away from the campus at least some of the time. By the 1960s in the United Kingdom, the Open University used a combination of television and summer schools to allow degrees to be taken through technology. But even here the Open University has a major campus and students still have local tutors. Most universities now offer some online programs, while others, such as the University of Phoenix, specialise in that approach. And now the web has completely altered the fundamentals of the concept of the university as a host of institutions rush to create virtual spaces in virtual worlds such as Second Life.

So, for the first time in five hundred years, there is a need to fundamentally review what it is that a university as a place exists for. A recent encouraging report on the so-called 'Edgeless University', sees this as an opportunity. JISC (The Joint Information Systems Committee), which commissioned the report, described it thus:

Technology is changing universities as they become just one source among many for ideas, knowledge and innovation. But online tools and open access also offer the means for their survival. Their expertise and value is needed more than ever to validate and support learning and research.

Through their institutional capital, universities can use technology to offer more flexible provision and open more equal routes to higher education and learning. We need the learning and research that higher education provides. But this will take strategic leadership from within, new connections with a growing world of informal learning and a commitment to openness and collaboration. By exploiting this role, universities can harness technology as a solution and an indispensable tool for shaping their vital role in the future (Bradwell 2009).

Universities both create and consume information and knowledge. The progressive evolution of computing and the internet has both globalised and increased that creation and consumption, while creating quite realistic alternative routes which allow information users to bypass what were previously centrally provided services and seek alternatives at times and in places which are convenient to the user. At the same time, the staff who undertake the provision of information services have found the skill-sets they require, on the one hand changing at an impossibly rapid pace and on the other merging and overlapping. Web managers, content management system managers, repository managers, VLE managers and so on can be employed by any or all of the units which constitute these information services.

Within that wider debate there is a need to question what the nature and role of the university library should be and the nature and role of the university librarian. As Campbell has put it:

Because of the fundamental role that academic libraries have played in the past century, it is tremendously difficult to imagine a college or university without a library. Considering the extraordinary pace with which knowledge is moving to the Web, it is equally difficult to imagine what an academic library will be and do in another decade. ***But that is precisely what every college and university should undertake to determine.*** [my italics]. Given the implications of the outcome, this is not an agenda that librarians can, or should, accomplish alone.

Nor are we alone in facing challenges from the internet and technology. In a recent article in the online forum *Cato Unbound*, the perceptive commentator Clay Shirky said of the future of journalism:

The hard truth about the future of journalism is that nobody knows for sure what will happen; the current system is so brittle, and the alternatives are so speculative, that there's no hope for a simple and orderly transition from State A to State B. Chaos is our lot; the best we can do is identify the various forces at work shaping various possible futures.

These words apply just as certainly to libraries.

The greatest threat comes from the major players such as Google and Microsoft. Microsoft has developed a scholarly communications lifecycle in which everything from research data to research outputs resides in the cloud. Google has developed a model of college life which is entirely web-based, while its digitisation programme Google Books already has more than seven million books available. In other words, its collection is larger than all but the largest university libraries. It then seems inevitable that cash-strapped universities will question whether they need a library at all. This first happened in 2005 in the United Kingdom at the University of Bangor, where a consultation paper claimed that, librarians do not deliver 'value for money' when compared to the internet. It states: 'the process of literature searches is substantially de-skilled by online bibliographic resources.' The report dismisses the support that subject librarians bring to the academic and student communities as 'hard to justify'. This proposal was largely rejected but the sentiments are bound to reappear and even the half way house of outsourcing may be considered.

The green agenda may also have a profound impact on the concept of libraries as place. It has been very fashionable lately to look at the lifecycle costs of electronic information. One of the striking things about such studies is to demonstrate how little we know about the lifetime costs of existing libraries. A huge amount of effort goes into determining the annual library budget, with rare institutions perhaps looking at a three year rolling budget. But other major costs are simply ignored. Utilities costs (as with the rest of the university) are typically top-sliced from university income, as are local taxes. Maintenance, building upgrades (perhaps required by legislation or technological advances) and other costs are simply ignored, while the capital cost of building a library every fifty years or so is forgotten. The University of Strathclyde recently reviewed some of these costs. The library has a large but not huge collection of just over a million volumes and serves a student population of 20,000. The cost of utilities (power and water) is some £500,000 a year. The cost of maintenance, taxes and upgrades is unquantified but may well be the same sort of figure again. The cost of a new building with a fifty-year life was estimated at a minimum of £50,000,000. In other words, the overhead of running the library and amortising its capital cost is about £2,000,000 a year. This compares with a book/materials budget of £2,500,000 and a staff budget of £2,700,000. As a very crude rule of thumb then, for every pound the library spends on a book, it spends a pound on staffing and a pound on maintaining the building.

So how might libraries and librarians respond? There are three key areas which need to be addressed. The first is tackling the issue of born-digital material. Hitherto libraries have sadly neglected this, perhaps

because it is too complicated. As a profession we have preferred to digitise the material we already possess in paper form and to sit down with publishers to negotiate licenses similar to those already possessed by other consortia. There is no debate about the philosophy of e-collection building and it is doubtful that any university library has an e-collection development policy. Yet the analogy with the paper-based library is clear. In any major research library, the majority of items accessioned each year will be rare books and special collections – the non-commercial materials which lie at the heart of great collections. Yet we have ignored this as we approach digital material. It is very likely (pace the development of institutional repositories) that no university has a proper record of the research outputs it produces each year. It is even less probable that any university knows how much digital material it collects each year, randomly scattered around the hard drives of the university – in truth it is a rare university that knows how many hard drives it has. Yet universities produce huge quantities of born-digital material. A list (probably incomplete) would include:

- Research papers
- Conference presentations
- Theses
- Wikis
- Blogs
- Websites
- Podcasts
- Reusable learning objects
- Research data
- E-lab books
- Streamed lectures
- Images
- Audio files
- Digitised collections
- E-archives
- E-mail
- HR records
- Student/staff records
- Corporate publications
- National heritage artefacts

It is likely that each of these items is being managed and curated, but by different groups and individuals and to different standards. It should be a central task of the library to manage this activity. It may or may not hold the material but it should certainly be seen as the central and expert arbiter of preservation standards and archiving policy. One might go further and consider the area of special collections. A classic example is the University of Texas Human Rights Initiative, which aims to undertake the bulk harvesting of human rights sites from the world wide web, the custom harvesting of human rights themes from the internet and the preservation and disclosure of born-digital documentation. All of this material is fragile, and at high risk as governments attempt to suppress it. But whether Rwanda, Burma or Chile, this initiative will capture and preserve a hugely important set of materials.

All of this material requires two things which only librarians can give. First it needs to be bibliographically secure. It must be definable then accessible. This relies absolutely on work done by the local library. Second it must be aggregated with the resources of other university libraries and value added through creating virtual collections with metadata and tagging which demonstrates links between items in different libraries. Thus one might imagine a definitive collection of David Livingstone papers being created from the resources of thirty or forty libraries in a dozen countries or linked collections of research data coming from grid computing. The beginnings of such aggregation can be seen in the first struggles to build major collections. For example, the recently launched European database aspires to make available ten million cultural heritage objects from hundreds of European libraries, museums and archives by the end of 2010. This proved so popular at its launch in 2009 that it crashed under the weight of ten million hits on the website. In the same vein, Gallica links almost a million French objects. Importantly, both collections are distributed and libraries are using technology to aggregate links rather than objects. Both collections point to the digitised objects of the past rather than born-digital resources. But the methodology and importance are the right ones.

The second key area on which libraries should build is that of the trusted brand and trust metrics. Most of the marks of trust in the paper world simply do not apply on the internet. If a book is published by, say, Oxford University Press we have a set of values associated with that on the level of scholarship and authority for example. If a website is ox.ac.uk, we have little idea of whether this is a Nobel prizewinner or a first-year undergraduate. On the net, only Google seems to have any level of trust. However, even that is beginning to wane as we learn how Google kowtows to the Chinese government and has routinely passed material on usage to the US Intelligence services. At the same time it is American librarians who took a stand against the PATRIOT Act and refused to reveal information to the intelligence services about user behaviour. Libraries and librarians are seen as trustworthy, helpful, neutral, unbiased and objective. The whole area of kite marking, quality assurance, relevance ranking and recommended resources is an area ripe for exploitation.

The third key area is that of training, or user instruction. Prensky's notion of digital natives was contentious when he first propounded it a decade ago, but, as with climate change, the overwhelming weight of evidence is that the teenagers of today are fundamentally different. More interesting than that debate, however, is the growing weight of evidence that while the net generation are technically competent, they are information illiterate and assume that a Google search exhausts the possibilities of information gathering. It is, almost a definition that publishers sell on difference not similarity. No one closed a sale by claiming their product was the same as a competitors! So there is a need to instruct in how to maximise the benefit from the different search engines, indexes and electronic resources available to the university. This is a much harder challenge than it might appear. OCLC studies have shown that user satisfaction declines when librarians try to help. This is popularly attributed to what is known as the 'eat your spinach' syndrome. That is the librarian will insist on showing the student how to use the tool properly, rather than helping with the quick fudge which will get the student assignment completed on time. Nor should it be seen as purely a student phenomenon. There is growing evidence of young researchers using social networking tools for collaborative research – Openwetware is a prime example of this – and again the library has a real possibility of helping promote those tools and services.

Finally, there is one underlying principle that needs to be re-established and that is partnership rather than service. For decades librarians were seen as partners in the life of the academy – minor partners, perhaps, but partners nevertheless. Then from the 1980s onwards libraries expanded at a huge rate with rapidly rising budgets, staff numbers and collection sizes. Librarians became managerialist rather than academic. As a result, libraries have never been better run or managed. But, as a consequence, the library has become just another service department with all the power and status of the Director of Catering and a much smaller budget than the Head of Estates. We – and the burden falls predominantly on professional leaders – need to restore the notion that we are partners and part of the academy.

Conclusion

The keystones of building a library future then are user training, quality assurance of external resources and the building of e-collections aggregated with those of other libraries. Whether librarians will embrace this challenge remains to be seen. And even if they do, it will be fascinating to see how the concept of the library as place develops or diminishes.

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