1 The changing higher education context

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Introduction

This chapter will focus on how we prepare for the changing environment(s) for higher education institutions (HEIs), with particular note to libraries and professional support services. I have attempted to scan the current horizon, as all wise clairvoyants do, and consider what it means to be a student or staff member in an HEI so that I can map possible options for future success and highlight implications for collaboration and new ways of working.

Why are we here?

It is always tempting to create a complex picture of where we are and why we exist by focusing on intricate definitions of our current landscape. However, setting off on a brave march by looking at our feet is a sure way to stumble and fall. As a keen walker with particularly poor balance I have learned, to my cost, not to focus on each footfall or to over-think how to avoid each small rock I need to transverse. Instead, by focusing on the distant path ahead, I can avoid painful mistakes and prepare for the big challenges or cliffs. Therefore, rather than spending significant time analysing 'why we are here' this chapter focuses on the path ahead.

My simple view of our starting point is that the purpose of higher education is to service, enable and deliver teaching, learning and research.

Information professionals and universities have an exceptional capacity to exploit uncertainties to thrive. In the same ways as professionals in agriculture and manufacturing changed what was possible during their respective revolutions, university library and information services staff have developed services and tools that exploit the advancing information age.

By playing our part in this revolution, we've seen creativity, communication, ingenuity and collaboration in ways that we couldn't have dreamed of. More people now browse university library journals from their homes and offices than ever used the paper copies. Timetables are accessed via the web and travel times to meetings are cut down to a stroll to a video-conferencing suite on campus or a Skype™ call in the park on a mobile device. We simply can't imagine a time when we were restricted by paper needing to be transported from one place to another – try to think back to times when memos hadn't yet become e-mails and written feedback from conferences was delivered months after the event, as opposed to real-time Twitter feeds.

So how does it feel?

When attempting to develop models for the future I recognize that we work within a context where we can be certain of our uncertainties – so, in the future universities will service, enable and deliver teaching, learning and research for students and academics who they don't yet know (so can't understand), who will want to use technologies that have not yet been developed, and will be working under policies and governments not yet formed. Working with uncertainty is our new 'normal state', so for each of the areas considered in this chapter which form part of our working environment I have identified key opportunities where collaboration can help future success.

Decisions we make today have an impact decades from now; the library buildings cherished (or despised) on our campus may have been built before we were born, yet influence the National Student Survey (NSS) scores we receive in 2012. The decision today to cease a particular discipline or to introduce a new one will affect the choices available to a child born tomorrow when choosing to apply, or not, to our institution.

It takes a particular approach to be content living within such an uncertain state, where decisions have such long-term impacts. David Watson, in his book *The Question of Morale: managing happiness and unhappiness in university life*, cites a strategic discussion he had with senior academic leaders of one of the world's 'top universities' and provides the following edited statements:

- We don't have enough money to do our jobs properly, but we are really good at them.
- We are severely oppressed, but we are also happy in our work.
- The government should support higher education better, and it should do this by giving us (our university) more than them (than that other university).
- We can't give students what they really need, but it is our duty to attract the very

best to come to study with us.
- In attracting these highly qualified students, what counts is the quality of our research, not of our teaching.
- The league tables are terrible, but we must climb them, and the higher we climb the less publically we shall criticize them.

(Watson, 2009, 3)

Reflecting on these statements with some international colleagues, we all agreed that we both recognized and empathized with these statements; it appears that in my experience this is a global 'state of mind' of academic leaders.

In simple terms, as members of staff in an HEI in the 21st century we work with contradictions and make decisions which can have impacts beyond our lifetime.

Predicting the future, based on the present

Don't worry about what anybody else is going to do. The best way to predict the future is to invent it.

(Alan Kay, father of the software commercialized into the Apple Macintosh, 1971, cited by Herzfeld, 2005, 2)

I am not overconfident in my skills as a clairvoyant, but was comforted when reflecting on the work I undertook in 2000 when I was working in Library and Information Services at Swansea University. I was an advocate of (what was then) 'computer-based learning' (CBL) and I took an active role in collaborating with Dr Mike Tait (Head of Health Informatics and E-learning) and his team to exploit and understand the use of emerging technologies for learning. We conducted a review of CBL in nurse education (Lewis et al., 2001) and concluded that the most probable future use of CBL is that it:

. . . has great potential as an aid in future nursing education, with regard to:

- meeting students' educational requirements more effectively
- achieving these requirements more efficiently
- providing students who have differing learning styles with alternative representations of knowledge and with methods of assimilating that knowledge
- providing nurses with the opportunity to develop skills and confidence in the use of CBL and computers in general
- nurturing a desire to use such resources in their future careers.

Future chapters of this book explore in great depth the changing context for technology and learning – but from this simple list constructed at the turn of the last century it is interesting to reflect on the external factors, which could not have been predicted in 2000, that have affected the realization of the great potential of CBL.

The biggest 'miss' from the list is that aspirations (and hopes) for the reductions in cost (even in 2000 we used the code name 'efficiency'!) have not materialized. For example, education has not reduced in price and staff teaching-loads have not been cut. I also suspect that the desire to use eBay™ and Facebook has done more to develop 'confidence in the use of . . . computers in general' (Lewis et al., 2002, 36) than CBL ever did.

If we were using this small study to plan for libraries, teaching rooms and learning spaces, would we have got anything wrong? The list suggests we'd be saving money by using CBL, but that we would have students who demanded increased access to technology. The predicted technology requirements would have been around PC workstation rooms and network points. Who'd have figured out that the actual global demand we'd have been facing in 12 years' time was for mobile connectivity (both 3G and, increasingly, Wi-Fi only) and power sockets. If only we'd known that installing an extra couple of dozen power sockets year on year would have been a huge hit in our comments and feedback forms!

So, following that cautionary tale on my clairvoyant skills, I have sought to add some definition and colour to the future landscapes we will inhabit by considering:

*   Development and decline? The globalized economic and political environment
*   From local to global: changes in knowledge access and exchange
*   From student experience to student expectation
*   Never mind the quality, look at our rank: the influence of the league table.

Within each of these areas consideration is given to the changing and challenging context for the future of higher education. No single service or isolated individual will have the capacity to come up with solutions in our complex environment. Working alone is a risky strategy as complex issues which change rapidly require elegant, thought-through solutions which no one has the capacity to deliver alone.

Development and decline? The globalized economic and political environment

Universities operate under their institution's, their nation's and the global, political

and economic arenas. Politics and economics influence our ability to service, enable and deliver teaching, learning and research. The dependence on public funding, with responsibilities to the sometimes tacit and sometimes explicit policy agendas, mean that universities react to (and with varying levels of success influence) their nation's ambitions.

Within the UK the process of devolution (with devolved governments in Northern Ireland, Scotland and Wales) has brought different policy agendas into focus. Tony Bruce noted:

> The devolution process has given the devolved countries the powers to make their own policy choices with the overall aim of securing the long term future of the United Kingdom. Whether this broader objective will be achieved seems increasingly doubtful but there is no doubt that devolution has provided the four countries with the opportunity to shape their own higher education sectors in a new direction even though these choices may have been constrained by the complexities of the devolution settlement, the existence of a UK market and the dominance of England. Whether those policy choices will lead to stronger and more competitive national systems remains to be seen.
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> (Bruce, 2012, 101)

Students from England, Northern Ireland, Scotland and Wales face differing fee regimes for undergraduate study and a climate where the devolved nation's policy agendas are influencing the structure of universities, admission policies and social participation. The Research Councils, which administer the majority of competitive public research funding, remain predominantly at a UK-wide level. For universities used to collaborating (and/or competing) with each other there are now distinct policies which need to be taken into account when working across the devolved borders.

Beyond UK borders we are now working in an increasingly international educational community, as depicted by other writers in this book. For students there could be some significant opportunities – potentially a global market can lead to increased choice and improved quality. As globalization matures, and if universities follow the experience of other sectors, we will see the domination of a few select brands and a possible 'franchise' model created by international mergers and acquisitions sitting under a small number of huge, global corporations akin to global fast-food outlets and/or shopping malls. Quality and customer experience in global corporations are carefully policed to ensure the same look and feel wherever you are; brand identity is protected, with occasional acknowledgements of local custom or culture. A university which operates as a multinational corporation would have a consistent product at numerous campus

locations as well as offering 'home delivery' but would lose the artisan, local flavour that we believe adds diversity and creativity. The franchising of educational delivery will attempt to achieve consistency, but I am unsure if it will be either successful or desirable as student choice will be restricted to a few global brands.

The desire to be or to have a 'world-class university' is an aspiration that seems to be shared across the globe and is often one of the key messages in educational policies and institutional strategies. Looking from a global perspective, we can see that the delivery of higher education is becoming an increasingly crowded market, with suppliers emerging across the world.

In the UK we are resting on our 'brand identity' developed over decades and centuries but, if we sleep too deeply, we could overlook that students and academics are increasingly recognizing the growth of HEI sectors in countries we would never have considered as part of our peer group. Aspiring countries are taking the development of a higher education sector seriously as a long-term strategic decision to develop their economic and global standing. A recent World Bank study (Altbach and Salmi, 2011) explored the experience of 11 leading public and private research universities from Africa, Asia, Latin America and Eastern Europe. The study concluded that there are common characteristics for the top performers, without which 21st century universities cannot hope to survive, let alone excel:

- a high concentration of talented academics and students
- significant budgets
- strategic vision and leadership.

The optimist in me recognizes that two of these characteristics are within the gift of our own institutions: a high concentration of talented academics and students and strategic vision and leadership. So, for services in universities and the information professionals who work in them, there is a clear challenge: if we want to thrive, we must focus on the services and support which will facilitate an increased concentration of talented academics and students and we must actively contribute to the institution's strategic vision and leadership. Routes to achieve this lie in the excellence and relevance of our services to a global academic and student population. National or even regional trends for 'world-class services' should take a second place to international benchmarking to search for the best service solutions. When considering the question 'what do academics and/or students want?', accessing global research will be key; we are not playing to a national market, and our academics and students are mobile and will expect the best in class from India through to the USA in the services we provide.

However, there remains the final characteristic as defined by the World Bank study – significant budgets. These can no longer be achieved without a significant

focus on collaboration. Making sure that your service and institution has a 'significant budget' is a more tricky (or even potentially an iniquitous) problem. In the UK we are seeing an increasing shift to student-financed teaching with the introduction of the fee regime, so we can argue that our teaching budgets lie within our sphere of influence. Conversely, the allocation of student numbers and commitments to particular aspects of government admissions policies (also explored in Chapter 5) means that the supply of students is regulated so that 'market forces' and our ability to react are restricted. Research income across the globe is highly publicly funded by nations, regions and global institutions. Even significant aspects of the availability of private funding relate to (often global) policy decisions, for example, policies to decrease carbon production result in manufacturing- and energy-industry-funded research to deliver innovations to help meet these targets. Accessing research income is increasingly a collaborative venture, so to achieve research funding success we need to be part of a group of, usually international, collaborative partners – and we need to be able to bring our international peers together at short notice in response to tight timescales in calls for funding.

The only route for success in securing a 'significant budget' is to ensure the concentration of talented academics and students via 'best-in-the-world services' and to have the strategic vision and leadership to deliver. Using collaboration we can develop 'best-in-world' services rapidly – exchanging knowledge and experience and exploiting opportunities to share services. We need high-level financial and budgeting skills to deliver savings, however, as budgets will not expand, and to negotiate almost always in collaboration with other institutions results in better prices for the services and resources we procure. Therefore a successful, collaboration-rich library and information service will:

- provide relevant, valued and world-class services, so that academics and students are not only attracted but also retained by our institution
- work to influence the strategic vision of the institution through strong professional leadership and to align local strategies to ensure the institution's vision and leadership is supported
- have high level skills in financial management and budgeting to negotiate collaboratively with suppliers and within their institutions to secure the best possible budgets for services – all focused on services to attract and retain academics and students in alignment with the university's strategy and leadership
- be able to group together, at short notice, a collaborative peer group for research income success.

From local to global: changes in knowledge access and exchange

The monopoly model we have been working within to deliver knowledge access and exchange is increasingly being challenged not only between universities but also outside our sectors' walls via technological innovations. The university on the far side of the globe is not our only competitor; it is also the access to information on desktop PCs and mobile devices and the creation of content using those same devices at any location across the globe. In the *The Edgeless University*, Bradwell explores the fact that universities are experiencing an edgeless sprawl:

> The function they perform is no longer contained within the campus, nor within the physically defined space of a particular institution, nor, sometimes, even in higher education institutions at all. This is driven by people finding new ways to access and use ideas and knowledge, by new networks of learning and innovation, and by collaborative research networks that span institutions and businesses. It is an increasingly international phenomenon. Across the globe, countries are pushing for greater advantages in education and innovation. There is an ever-growing environment of learning, research and knowledge exchange of which universities are one part.
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> (Bradwell, 2009, 8)

So collaboration for knowledge exchange means working both within and outside our professional and institutional boundaries. We need to develop projects where we are part of a multi-service team, so collaborating with other services and academic departments within our universities and delivering information where we work in collaboration with groups outside our perceived sector walls.

As we embark into an edgeless environment, knowledge access, creation and exchange are being transformed through the use of technology. In this era key questions are being asked, which potentially undermine preconceptions and foundations of the HEI and its library services: 'Can't we just use Google?'; 'So why do we have a library (or even a university)?', and there is growing debate about the sustainability of the scholarly publishing model as highlighted by the publication in late June 2012 of the Finch Report (Finch, 2012) suggesting the tantalizing opportunity for the UK to become the first open-access nation. See also Chapter 7.

When I spoke recently to an alumnus who had attended Aberystwyth University in the 1960s, they stressed their gratitude on being allowed to enter the library, and regaled me with tales of the power of the librarian who could decide to help or hinder individuals in their quest for knowledge. The locked doors in our stacks have been prised open as the new methods for information access and exchange

have created an environment where universities and their libraries no longer enjoy a monopoly on access to information:

> . . . the competitive market environment is the most significant change libraries face today. . . . Until the advent of the Internet, academic libraries had no competition and their patrons were a captive audience. Students and faculty either learned the protocols and organizational principles of the library . . . or did without. In today's environment simplicity, efficiency and transparency, combined with savvy marketing, have become critical factors in patrons' decisions in selecting information resources. Ease of access is often considered more important than quality. . . . Librarians must now confront disruptive innovation as a matter of routine.
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> (Ross and Sennyey, 2008, 146)

There is a direct link in the disruptive innovations in access to information and in the creation of content. Try explaining to a taxpayer, unrelated to academia, why we expect them to pay at least twice for the same effort in salaries to the author and in subscription fees to the publisher, and all of this *for the same information.* Our complex reasoning on the quality, standards and reputational requirement for this 'pay twice to access the research' model cannot respond to such scrutiny.

There is also the issue of 'fairness' – the outputs from universities could only be accessed by other universities with the budgets to pay for the subscriptions. Most of the world's population would never be able to access the content because of cost.

I believe that most universities recognize that we have lost our 'access to information monopoly' – but we are not yet comfortably and routinely 'confronting disruptive innovation' (Ross and Sennyey, 2008, 146). Our first gentle attempts to recognize our loss of control resulted in huge efforts to create 'helpful links' pages and we catalogued web pages in a Sisyphean attempt to replicate the safety of our shelves in a digital environment. We have looked, mainly, to commercial suppliers to innovate and replicate the 'simplicity, efficiency and transparency, combined with savvy marketing' (2008, 146) of Google for our card catalogues, but our marketing efforts are a little less savvy than multinationals' so real competition is challenging, to say the least.

Any prediction in print format on the future changes in knowledge access and exchange will be out of date before the cover of the book has been selected. Nevertheless, I believe that open access will become the dominant route for publication; if reputation and quality are the last-resort arguments for the expensive pay-twice scholarly publishing model, then they will hold back open access as

successfully as reading in the bath was expected to prevent the growth of e-books. Reputation will still be important (as will be reading in the bath) but we cannot hold back the genuine, common sense momentum that open access is gaining. Reputation will be delivered, just not at the cost of open access. Journals were created to allow knowledge exchange, which then progressed into opportunities for researchers to collaborate. We can be confident that the technological tools for open access publication in 2020 will have collaboration embedded from the moment of knowledge creation – even now an academic research blog on the use of library resources and the Twitter feeds of the researchers enable services, research projects and intuitions to collaborate from the earliest stages of the research, as suggested in Chapter 7. In my view, the certainty of the dominance of open access has one caveat – the technological tools used for open access publication in 2020 will be wholly different from the tools used today.

How can universities and their library and information services become comfortable in confronting disruptive technologies, in this new edgeless era? Guthrie and Housewright suggested evolution was needed:

> As faculty research and teaching practices continue to shift in response to their rapidly changing information environment, their uses of the library also change, as does their perception of the value the library offers. Faculty used to rely almost exclusively on the library for the scholarly materials they needed for research and teaching, and librarians guided faculty to and otherwise facilitated the discovery of these materials. As scholars have grown better able to reach needed materials directly online, going to or using the library is not essential to carrying out research and so faculty are turning to other options.
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> (2010, 84)

It is important to note when advocating evolution that, while not backing one theory over any belief, adaptation takes generations (to simplify to the extreme: the giraffe's neck grew over time to reach the higher leaves) while mutation (a freakishly long-necked giraffe was born to standard, short-necked parents) is fraught with risks of swift natural selection but could potentially give a more rapid solution.

Hence, I would back the entrepreneurial librarian in an HEI who will remain committed to the concept of academic libraries as 'complex institutions with multiple roles and a host of related operations and services . . . '[whose] fundamental purpose has remained the same: to provide access to trustworthy, authoritative knowledge' Campbell (2006, 16). So the entrepreneurial librarian who will mutate services, risking failure, to push forward innovations will eventually succeed in exploiting disruptive technologies. Therefore a successful, collaboration-rich library and information service will:

- be part of the shift to open-access scholarly communication
- be entrepreneurial and mutate services, take risks, and learn from (regular) failures to confront disruptive technologies
- collaborate within and outside our professional and institutional boundaries, working as part of multi-service teams and with organizations and businesses outside our perceived sector walls.

From student experience to student expectation

In an earlier section, I described a 1960s alumnus telling me how grateful they felt to be allowed to use the library at Aberystwyth, and as a student I can recall my genuine feeling of being excited to be 'allowed' to attend. On reflection, both I and the alumnus are stereotypes – we left school, and university formed the bridge to our start in 'life'. There was a perception that the student experience was a journey for our generation and demographic. We were here to learn and to learn how to live, and if lecturers and librarians were wonderful that was nice but, if they weren't, we would tolerate it and make little comment during any staff–student consultative committees.

In the UK, the introduction of loans, fees and I predict the soon-to-be-introduced 'Compare my course.com' mashed from the KIS (Key Information Sets) has converted grateful experience to firm expectation. The KIS web pages, published by government funding council requirement in the UK from late 2012 (www.hefce.ac.uk/whatwedo/lt/publicinfo/kis), will allow students, parents and competitors to view metrics about each degree course, from student satisfaction ratings through to employment levels of graduates and teaching contact hours.

The expectations of the pre-'loans, fees and comparison site' students were low and the demographic was, for some, largely homogenous; they were 18, studying full time and they lived on campus. Delivering a student experience for a relatively uniform demographic with low expectations meant that course structures, pedagogic techniques and services to support learning and living could be delivered with relative ease and take little notice of the student voice as one size almost always fitted all. For the post-'loans, fees and comparison site' students this is not the case – they are a diverse community by age, gender, nationality and mode of study. One size *cannot* fit all. Now our reality is that diverse students are our customers. This creates a complex transactional relationship fraught with high expectations – and when we try to plan for the future to meet expectations with our services, we are trying to do that for individuals who we do not even know yet.

In the 2011 Annual Higher Education Policy Institute (HEPI) Lecture, Dr Jamil Salmi describes an encounter, for illustration purposes, where he asked a passer-

by about the future of higher education and the kinds of expectations that we could (shortly) be trying to meet:

> In the future, it will be compulsory to go to university. . . . Students will take open internet exams and the validity of their degree will be only five years . . . no more physical libraries or labs; it will be all i-labs and e-libraries . . . if [graduates] don't find a proper job within six months, you will have to reimburse them the costs of their studies.
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> (Salmi, 2011, 1)

If this is the future then we are already experiencing increasing expectations in the present. One of my favourite moments during recent student induction events was one student who was sitting on her rucksack, with all of her belongings on the floor beside her, intent on setting up her computer access account for the five different devices she intended to use. When I asked if she wanted to get to her accommodation and to sort out her luggage first, she exclaimed, 'It's more important to get the internet than a bedroom.' This might be an extreme example, but it demonstrates the shifts in living and learning expectations. Library and information services are part of people's lives – and this is a responsibility that we can't take lightly. I recognize that students and academic colleagues have incredibly high expectations of services – when they see a news report on a new technology they think this is a promise and that it will be available on their laptop in the morning. We can only understand student expectations by listening to students – not as feedback but as part of the service development process.

For the future, delivering the right technology will be as important as providing effective study spaces, and you can't do one without the other in our edgeless environment. Therefore a successful, collaboration-rich library and information service will:

- recognize that our students are customers with strong, diverse and even competing expectations, which rapidly change
- develop services through collaboration with students.

Never mind the quality, look at our rank: the influence of the league table

In a globally competitive market where our market segment has become edgeless and our customer expectations are rapidly changing, the prospective student, our governments, the funders, our competitors and the press have focused on league tables as a measure of rank, value and success. Metrics are mashed and

world rankings are formulated – high scores are proclaimed by 'successful' institutions on marketing materials. Rankings have meaning for our reputation and increasingly our income. As noted by Li, Shankar and Tang (2011, 923), 'league tables increasingly have real resource implications for universities. This is because, despite the criticisms of their accuracy, reliability and usefulness, university rankings have been quickly adopted as a quality assurance mechanism around the world.' Evidence suggests that international students are increasingly using league tables to make decisions on where to study (Hazelkorn, 2008; HEFCE, 2008).

Criticism of league tables focuses on their perceived subjectivism, what they don't measure and the attempt to compare unlike with unlike. David Watson (2012, 6) described the narrow elements which count in the league tables as including research, graduate destination, infrastructure and international recruitment. Aspects which had little, or no, influence on league table scores included social mobility, collaboration and services to business and the community.

On one level it is tempting to channel energies on improving aspects of our universities that influence the scores, without a real or sustainable strategy for improvement. Working to exceed targets to leap up the league tables has led to some interesting ways of working in the National Health Service, where targets were met and performance was assessed as 'improved', but patient care suffered. As league tables measure such limited elements of a flourishing university then I am content to predict the failure of an institution where strategy and energy is focused solely in these narrow areas.

Students are also creating their own league tables and measures of success using social media tools (e.g. www.ratemyprofessors.com) so there are some real opportunities for us to collaborate to address the league table deficits indicated by Watson (2012). Why should universities rely on recognized flawed processes to define their success? Openly publishing our own rich content that we have created to help measure and enhance our performance, our internal metrics and key performance indicators (KPIs) will add definition and context to the broad-brush (and thus limited) view given by the league tables and social media sites. So, given that league tables will not reflect all of an institution's strategy or delivery, internal KPIs that flow from the strategy keep an institution grounded, allowing it to learn from the league table scores/social media, and consider ways to improve, while keeping the KPIs at the core of institutional performance measurement. If we work collaboratively on openly published performance information we can create our own valid and vibrant league tables, recognizing the opportunities for 'benchlearning', a way to share knowledge *and* experience, rather than just benchmarking using metrics as an indicator of success, as suggested by the European Commission (see www.epractice.eu/community/benchlearning). Therefore a successful, collaboration rich library and information service will:

- celebrate KPI successes and positive social media feedback with as much effort as the league tables and create its own media hype
- learn the lessons from KPIs, negative social media feedback and league table rankings to identify where improvements can be made but recalibrate their importance against its strong strategic plan
- collaborate through the open publication on our measures of success to create relevant and vibrant opportunities for rapid improvements through following best practice.

Conclusions – some options for future success

In our edgeless world we compete with multinational corporations, individuals using social media and other universities, based anywhere in the world. No single service or individual can come up with the solutions and innovations needed. The benefits of shared services, one of the deepest forms of collaboration, have been described in the JISC toolkit on Shared Services (2009) as including: continuity and resilience of service, raised quality and added value to existing services, secured cost savings and sustainable efficiencies, staff time made available for more customer facing activities, improvements to the scalability of systems, ensuring improved and more up-to-date systems, gaining competitive advantage and lastly the ability to offer otherwise unsustainable services.

These benefits can be easily translated as applying to all levels of collaboration – which at its simplest level would be knowledge exchange across our peer groups – so the ability to collaborate by emailing a discussion list or posting a conundrum on a blog and receiving answers from our international colleagues can all help achieve benefits where alone, in our complex edgeless world, we would struggle or fail.

There are some significant and exciting options as to how higher education can respond to the changing and challenging environments ahead. Governments, media and corporations have high expectations of how universities will rise to these challenges, for example as Eric Schmidt, the CEO of Google, said, 'we are going to have to innovate our way out of this thing [the economic crisis] and our great universities will have to lead the way' (cited in Thorp and Goldstein, 2010, 1). As reiterated previously, in the future universities will service, enable and deliver teaching, learning and research for students and academics who they don't yet know (so can't understand). They will want to use technologies that have not yet been developed, and will work under policies and governments not yet formed.

In this chapter I have touched on four main environmental factors: emerging globalization, the edgeless nature of knowledge access and exchange, the transformation of the student from experience to expectation, and the influence

of league tables. In each of these areas I have offered some options for future success and how library and information services can become fit for the future, with a focus on collaboration as a catalyst for rapid change. The changing higher education context will mean that we need to mutate or face potential natural selection and/or extinction. I am confident that we have the ingredients, through collaboration, in our shared, talented staff and knowledgeable students to succeed. Creative and entrepreneurial working across services will be required to exploit our global and edgeless environment. We are competing locally, nationally and internationally with other universities and other sectors. If we plot our course and continue our journey together by focusing on a long term, clear strategic direction we can traverse the difficult paths to success.

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