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Theory and Practice: Reflections on Convergence in United Kingdom Universities

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This paper reviews the extent and nature of convergence of information services in the United Kingdom higher education sector. It traces the history of the process of convergence since the 1980s; considers the principal drivers behind it; outlines some of the implementation issues which have arisen; and evaluates its impact. Although drawing upon a fairly substantial published literature, and the author's personal knowledge of convergence in a number of institutions, extensive use is made, especially in the second half of the essay, of the experience of convergence at the University of Birmingham (through Information Services) since 1995. In this way, the paper updates and extends the description and analysis of Birmingham developments previously reported in Field (1996, 1999) and Pugh (1997a: 50-62). While the Birmingham model of convergence is certainly not being held up as a blueprint for other services to follow, it is of some wider interest for two reasons: in being the first major example of convergence in a very large, diverse, traditional and research-intensive British university (with an annual turnover of £250 million and 35,000 registered library users); and in adopting a fairly radical approach to management structure, one in which „existing departmental barriers have been completely removed and a quite new structure developed" (Law, 1998: 55). To facilitate further study, a select bibliography on convergence in the United Kingdom is appended. For those wishing to examine the phenomenon in comparative perspective, Hardesty (2000) includes a literature review and a series of case studies on the United States experience, while Bryson (1997) offers a more management text approach and Hirshon (1998) an implementation guide, both again from a North American standpoint.

Extent of Convergence

As the theory and practice described in the literature make clear, convergence is a term to which multiple meanings can be attached. It is as well, therefore,

to commence our own review with an agreed definition. Some writers (for example, Fielden Consultancy, 1993: 15; Sykes and Gerrard, 1997: 68) have distinguished between „organisational or formal convergence", in which services are brought together for management purposes; and „operational or informal convergence", in which the detailed functions or operations of the services are changed or merged. They have pointed out that it is not strictly necessary to have organisational convergence for operational convergence to take place; for instance, heads of services can work collaboratively – say, on joint strategic planning, end-user training, or provision of student computers – without any integration of management occurring. It is also the case that services can be organisationally converged while making slow progress with converging operationally. Combining both organisational and operational convergence, it would be hard to find many United Kingdom higher education institutions without some manifestation of converged behaviour. Accordingly, a rather strict definition has been applied here, whereby convergence is used to describe the situation in which the library and academic computing services, with or without other services, are brought together for managerial purposes under a common full-time executive director generally recruited from a professional information background. This maps on to the executive director model of convergence identified by Royan (1994: 18), while ignoring his four alternative models (goodwill and commonsense; peer co-ordinator; common chairperson; and common reporting to a Pro-Vice-Chancellor or Deputy Principal), and on to the definition recently propounded by Pugh (1997b: 50).

This restricted definition of convergence, centred on the merger of library and academic computing services under a single executive director, is important, since it dates the origins of convergence to the mid-1980s. The integrated academic services pioneered by Brighton and Plymouth Polytechnics in the mid-1970s were not converged on this criterion, since the learning resource centres, through which they were integrated, combined library, media and educational development within a common organisation but excluded computing (doubtless sensibly so at that stage, when the brief of computing was very limited, confined to number-crunching for scientists and to a few key administrative systems). Thinking and practice on „true" convergence, based upon the concept of the „chief information officer", can be traced back to *circa* 1980 in the United States, with early implementations at Columbia University, Carnegie Mellon University, California State University at Chico, and the Virginia Polytechnic Institute. Paradoxically, although convergence began in the United States, it has been proportionately more pervasive in the United Kingdom. One of the, if not actually the, first British pioneers of convergence was St Andrew's College of Education in Glasgow, where the process was described by Gray (1986). Other early implementers between 1987 and 1989

whose experiences have been described in the literature were Plymouth (Sidgreaves, 1988), Salford (Harris, 1988) and Stirling (Annan, 1992; Davis, 1998; Royan, 1990) Universities. It was symptomatic of the professional interest generated by convergence in the United Kingdom that the *British Journal of Academic Librarianship* devoted a theme issue to it as soon as 1988.

To start with, convergence was principally identified with what is now described as the „new" university sector, i.e. the pre-1992 polytechnics covered in Sutherland's survey for the Council of Polytechnic Librarians in 1992, or the smaller and more recently-established of the „old" (pre-1992) universities. However, as can be seen by the celebrated defensive letter from Fred Ratcliffe and David Hartley, respectively Librarian and Director of the University Computing Service at Cambridge, to *The Times Higher Education Supplement* in March 1993 (Ratcliffe and Hartley, 1993), even the ancient universities were becoming aware of the trend to converge. While recognising the growing complementarity of the library and computing services, Ratcliffe and Hartley cautioned against their „wedlock" and ended up with the extraordinary *ex cathedra* statement that: „At the very least the priorities and management needs in two such diverse bodies are incompatible. " Within a matter of months, the ground had been somewhat removed from under their feet by the steer towards convergence given by the Follett enquiry into higher education libraries. The main Follett report (Follett, 1993: 28-9) noted that „there are many advantages in organisational convergence", even though it acknowledged that each institution had to determine its own approach. The subsidiary report on human resource management issues (Fielden Consultancy, 1993: 22-3) predicted increasing organisational convergence and near universal operational convergence, at one level or another. The very substantial library and learning resource centre building programme which followed on from Follett, as one of the principal outcomes of his report, certainly greatly facilitated operational convergence, in enabling increased co-location of library, media and computer user services. At least one computing service director (Haworth, 1994: 98-9) felt called to question what she regarded as Follett's somewhat uncritical endorsement of convergence and asked to see the reasoned case for his committee's recommendation.

Various studies during the past decade have documented the spread of convergence in the United Kingdom higher education sector. Royan (1994: 18) found thirty-five institutions operating on an information supremo model, with a further eight actively considering moving in the same direction. Twenty-four of them gathered for the first residential meeting of heads of merged services, held at Buxton in September 1994, which Royan was instrumental in organising. Three years later, figures from Pugh's questionnaire survey of the

entire sector in January 1997 would suggest that around fifty universities and colleges had converged; based upon a 70 per cent response from the 162 institutions approached, Pugh reported that 42.5 per cent had converged according to his (and my) definition, with another 11.9 per cent actively planning it. Of these, two fifths had converged during 1988-93 and three fifths since 1994 or were planning convergence, with 31 per cent declaring the achievement of full convergence (embracing technological, managerial, administrative, operational and physical integration), 18 per cent describing more federal arrangements for service co-ordination, and 50 per cent still being at an evolutionary stage, sometimes missing a critical element such as physical convergence (Pugh, 1997a: 26, 29, 41; 1997b: 65). By May 2001, to judge from directory information published on the Web by the Standing Conference of National and University Libraries (SCONUL) and the Universities and Colleges Information Systems Association (UCISA) and collated by the author, the number of converged and non-converged institutions was roughly equal, at sixty-six and sixty-eight respectively. The most converged part of the sector were the higher education colleges (61 per cent), followed by pre-1992 universities other than those in the Consortium of University Research Libraries or CURL (55 per cent), CURL institutions (45 per cent with an executive information director), and „new" universities (38 per cent). The lower percentage amongst the former polytechnics may partly reflect the limitations of the Web-based survey (some of the directory entries are ambiguous), and/or the relative narrowness of our definition, but is nevertheless interesting, given their close historic identity with the convergence process; Pugh (1997a: 27-8) then had them outconverging the old universities, by 54 to 40 per cent. It is noteworthy that it is amongst these new universities that occasional examples of deconvergence, separating libraries and computing services, can be found: at Luton in 1997 (after five years of convergence) and Northumbria in 2000 (after seven years).

Nature of Convergence

Within this overall picture of the growth of convergence, considerable diversity may be observed, in respect of the title of the merged service and its head, the degree of inclusivity in the service make-up, and the internal structures of the service. Royan (1994: 19), for example, discovered no fewer than seventeen different service names in the converged environment, and, while Information Services (which we have also used at Birmingham) was the most common, it had still been adopted by only a minority of converging institutions. Much the same is probably true now. Director is the post title most often reserved for the head of service, but even here there are many exceptions; at Birmingham, Librarian and Director of Information Services is employed,

since it was felt important, both for reasons of University statutes and politics, not to lose the „librarian" element. Within the United Kingdom at least, it is notable that the majority of heads of converged services have been recruited from professional library backgrounds. Royan (1994: 20) reported that eighteen of twenty-seven heads of merged library and computing services were librarians, and Pugh (1997a: 38; 1997b: 64) that 63 per cent of converged services were led by librarians, 10 per cent by computer managers, and 8 per cent by academics. Law (1998: 54) found that „nationally the ratio of appointments appears to run at perhaps 5:1 in favour of librarians".

The inclusion list for merged services is equally susceptible to great variety, with a SCONUL investigation (Bainton, 1997) permitting no fewer than fifteen different service permutations, including a miscellaneous category. The presence of libraries and academic computing services in converged organisations is, of course, required by our working definition. Beyond this, if the May 2001 survey is correct, about two thirds also have responsibility for administrative computing or management information services (historically often the preserve of the Registrar or equivalent) and three fifths for media and related (increasingly technology-assisted learning) services. Telephony is also frequently converged. Especially in smaller and newer institutions, where lack of critical mass may inhibit the degree of professional differentiation that is possible, many student support services may be bundled into the convergence; careers, catering, chaplaincy, counselling, healthcare, housing and nursery services can all be found co-managed with library, computing and other learning services. About a fifth of converged services seem to have this sort of role. Yet, even in large and more traditional universities such as Birmingham, the inclusion list for a converged service can be long and broad. The services which have been incrementally brought together to form the Birmingham Information Services of today, with its five hundred staff and £16 million annual turnover, comprise (date of incorporation in parenthesis).

- Library (October 1995)
- Academic Computing Service (October 1995)
- Television Services (October 1995)
- Centre for Computer-Based Learning (October 1995)
- University of Birmingham Press (August 1996)
- Language Laboratories (August 1996)
- Learning Resources Accommodation (January 1997)
- Management Information Services (February 1999)

- Central Printing Services (February 1999)
- Orchard Learning Resources Centre, Selly Oak Campus (August 1999)
- Westhill Information Technology Commercial Services (December 1999)
- Continuing Studies Library (August 2000)
- Learning Development Unit (September 2000)
- Corporate Web Team (January 2001)

Given such diversity, it is not surprising that converged services are organised on many different management lines, making it difficult to discern overall patterns, still less to identify a possible blueprint for others to follow. Perhaps this is not altogether undesirable, since, in the final analysis, the structural implementation of convergence will owe much to the local political, cultural, financial and spatial circumstances in any given institution. However, one broad distinction may be observed. That is whether the internal arrangements of a converged service under a single executive director follow closely the contours of previous format-based (for instance, library, academic computing) approaches or whether a genuinely integrated structure is adopted, mixing and matching within new management units skills and expertise from a range of information professions. In 1994 Royan (1994: 19) found that only a third of his information supremos were managing their services in a truly integrated fashion. Three years later, Pugh (1997a: 42-3) detected more progress in adopting boundary-spanning structures that broke down distinctions between services (63 per cent as against 37 per cent of services that adhered to more conventional service boundaries). In May 2001 thirty-two of sixty-six converged services seemed to have a fairly traditional service structure, at least superficially (with preservation of an identifiably separate librarian being one obvious criterion), while thirty-four had a more boundary-spanning structure. Although nine of the twenty British universities in CURL had converged by this date, all but two were on very cautious lines, to the extent that they still had an identifiable librarian.

Birmingham is somewhat of an exception to this CURL norm since here a genuine attempt has been made to create an integrated and flat management structure, based entirely upon function and departing significantly from the traditional service boundaries and from subject or locational approaches. The six-divisional organisation which has emerged at Birmingham, each division headed by an Assistant Director of Information Services, is as follows:

- Collection Management Division: acquisition, cataloguing, storage and preservation of academic information sources in all formats, including

2,500,000 printed items, 3,000,000 manuscript and archival items and significant digital collections

- Corporate Information Services Division: co-ordination of the University's Web strategy and presence, and development and support of major corporate business systems, such as finance and personnel, student, and research management systems
- Information and Computing Systems Division: provision and support of corporate networks, servers, clusters and other central facilities, and research and development and hardware and software standards definition to support distributed computing within academic Schools
- Learning and Research Support Division: provision of library, computing, media and other advice and training to enable Schools to make optimal use of the central information services, and management of corporate facilities for learning development, multimedia production, teaching accommodation, and academic publishing
- Planning and Administration Division: provision of central service planning and reporting for the management of financial, human and spatial resources, for staff development and training within the service, for intra-service communications, and for the co-ordination of project management
- Public Services Division: provision of first-line library and information services to all 35,000 registered users of Information Services, including helpdesk and enquiry services, lending and document delivery services, printing, publications and marketing, and the management of the Main Library and twelve satellite libraries and resource centres

DRIVERS FOR CONVERGENCE

The circumstances which result in an institution's decision to converge (or not) are complex and variable and ultimately specific to the institution concerned, making generalisation difficult. As an example, we may note Field's account (1996: 34) of the thinking of the University of Birmingham:

The rationale for doing so was felt to lie in the need to maximize the potential of information technology, to facilitate the transition from teaching to learning, to foster the development of generic skills amongst students, to heighten the awareness and skills of academic staff about information issues, to reflect the increasing functional overlap between service providers, to counter a lack of strategic and operational co-ordination between providers, to address

certain deficiencies in management structures and service provision, and to optimize the use of resources at a time of decline in real levels of funding.

That said, it is possible to separate out the underlying factors which have been most commonly cited as determinants of convergence within United Kingdom higher education and to categorise them into three: those which are truly universal; those which are particularly relevant within the United Kingdom; and those which apply mainly at individual institutional level.

Not unnaturally, the principal global driver since the mid-1980s has been an increasing convergence of the technologies for producing, storing, retrieving, processing and transmitting text, data, image and voice, and the associated increasing dependence of libraries upon electronic information and network infrastructure. Under these circumstances, it no longer makes sense for investment and management of the technical infrastructure to be fragmented between different service providers, nor for information (whether purchased or institutionally-created) to be hoarded and not shared. The advent of the World Wide Web has produced a lowest common denominator for presenting information in a seamless fashion; the increasing popularity of managed learning environments such as WebCT or Blackboard has provided a framework in which a whole range of electronic information for students can be integrated and made interactive; and the development of hybrid libraries, such as the BUILDER exemplar at the University of Birmingham[1], has shown how traditional information formats may co-exist with the electronic. An especially important content convergence breakthrough in United Kingdom universities has been the recognition that administrative information systems (finance, student records, personnel and so forth) can no longer be seen as the exclusive preserve of the administration. Those systems, and the key data which underpin them, are increasingly required by staff, students and other service providers. In this way, institutions are realising the imperative for a single technical infrastructure to underpin all information needs, and for a holistic approach to the acquisition, creation, dissemination and preservation of content. Given such a scenario, what more natural outcome than to seek to place the management and delivery of both infrastructure and content into a single set of professional hands?

Within the United Kingdom, or certainly the British Isles, these overarching technological and information drivers have been given added impetus by the policies of Government and the four Higher Education Funding Councils which provide much of the finance for universities and colleges in England, Wales, Scotland and Northern Ireland. On the Government's part, regardless of political flavour, and reflected in Funding Council allocations, has been the commitment throughout the 1990s rapidly to expand student numbers (with a

50 per cent participation rate by the eligible age group now on the horizon) in ways which address lifelong learning, widening access and social inclusion, the development of transferable skills and employability of students, and which shift the emphasis from didactic teaching to self-paced learning. All this has had to be delivered without any commensurate increase in real-term resources (indeed, unit costs per student have fallen dramatically on the whole). At the same time, the abolition of student maintenance grants, the introduction of student tuition fees and the general spread in society of a „customer is king" philosophy have meant that the expectations which students and their parents have of the higher education system have increased. Integrated, effective and „one-stop shop" provision of facilities in general, and of information and learning resources in particular, is increasingly essential, if institutions are to cope with the needs of a much larger, more diversified and more demanding student population. Much of this context is evident from the massive report (1997) of the National Committee of Inquiry into Higher Education, chaired by Lord Dearing, and published under the title *Higher Education in the Learning Society*.

Funding Councils have sought to underpin these policy objectives by a variety of mechanisms to cajole or encourage institutions to comply with them. A particular characteristic of the British Isles has been the need for conformity with a national framework for quality assurance and accountability, largely delivered through the Quality Assurance Agency. Through that Agency institutions are subject both to periodic across-the-board inspections and to reviews of individual subject provision, both of which include a major emphasis on learning infrastructure and resourcing (in fact, in the subject reviews, learning resources – covering libraries, computing, teaching accommodation and so forth – account for one sixth of the points which are awarded). For research, there is a similar quinquennial audit process, in the form of the peer-review-based Research Assessment Exercise. The Funding Councils require institutions to prepare and publish, and to monitor the implementation of, strategic plans covering all of these areas. The compilation of a formal institutional learning and teaching strategy, for example, with clearly articulated deliverables, is now mandatory. Commencing with the Follett report in 1993, and facilitated by the Information Strategies Steering Group of the Joint Information Systems Committee established in 1994[2], universities and colleges have similarly been fairly heavily steered towards the production of integrated information strategies. This initiative, in bringing institutional management and service providers together with a common purpose, has been a driver for a good deal of organisational and operational con-vergence in the United Kingdom.

At the end of the day, convergence occurs in an individual university or college, and it is the cumulative impact of these external (international and national) drivers on institutional management which counts. To imply that the convergence decision is driven by institutional management is correct, for Pugh (1997a: 29-30, 36; 1997b: 56-9) has demonstrated that convergence in the United Kingdom is in reality very largely a top-down management process, usually initiated from the institutional centre and often implemented in only a partially consultative manner; in so far as service providers had any influence on decision-making, he found that libraries were more often involved than computer centres. It is hard to think of very many working examples of the collaborative and participative user-driven convergence which Collier (1996) favoured. Given this management-led approach, it is perhaps surprising, in view of the worsening economic position of higher education in the 1990s, that cost-cutting or the achievement of economies of scale through aggregation of service has not weighed more heavily in pushing forward convergence. This was again demonstrated by Pugh's research (1997a: 36-9); 48 per cent of converged services reported that budgets had actually increased after convergence, whilst 55 per cent saw growth in their staffing establishment. The Birmingham experience bore this out, particularly on the human resourcing side; the costs of establishing new hybrid posts, of giving personal protection of salaries to those displaced by convergence, and of funding early retirement and voluntary severance packages were high – and only met by judicious use of budget centre reserves and vacancy savings. At the same time, the consolidation of budgets from so many historically discrete service areas did provide much-needed opportunities for virement, rationalisation and cross-subsidy.

As to timing, institutions have often chosen to act on convergence when a natural vacancy occurs (thus, at Birmingham it was the announcement in March 1994 of the forthcoming retirement of the then Librarian that encouraged Strategy Planning and Resources Committee two months later to set up the Information Services Working Party that resulted in convergence); or when there is a performance issue or lack of confidence in one particular service or its head (a common perception has been the failing of some academic computing services to develop a service ethos at a rate sufficient to meet the increasingly mass higher education market for information technology applications and services). Hence the prediction of the Fielden Consultancy (1993: 22-3): „Organisational convergence will continue to take place, but it will be driven largely by personal and political factors within each institution."

OPERATIONALISING CONVERGENCE

Anybody who has lived through the implementation of convergence, especially as the manager responsible for it, will know that it is not an easy experience. Any major exercise in change management inevitably creates potential uncertainties and anxieties for service staff and service users alike, which need to be handled sensitively given that existing services have to be fully maintained alongside the restructuring. Service staff, in particular, therefore, perceive increased workloads and confusion arising from the parallel running which is an inevitable consequence of the first flush of convergence. However carefully-managed, that transition period can be long and painful. For instance, at Birmingham it took a whole year (September 1995-September 1996) after the convergence start-date to assimilate, in a staged and equitable fashion, sixty academic and related staff into the new structure, while reorganisation of computing operations did not take place until November 1996-July 1997 and of computing development until June 1997-June 1998. The detail is set out in Field (1996, 1999), and will not be repeated here. Nevertheless, almost six years after convergence at Birmingham was initiated, it is appropriate to reflect upon the measures and mechanisms that were devised for operationalising convergence, to get both service staff and service customers to identify with, and relate to, the new mission and structure.

In the Birmingham experience, the critical success factors in the implementation of convergence are preponderantly to do with the motivation and management of service staff and of associated human resource processes. The ten principal mechanisms which were adopted to break down barriers between historically separate groups of Information Services staff and to promote ownership of the service by them include:

- A comprehensive policy on internal communication, consultation and information flow, upward, downward and lateral (adopted in 1996/97, following a review conducted, through questionnaires and focus groups, by a representative working group of staff, and to be refreshed in 2001/02)
- A comprehensive and consistent approach to the preparation of job and person specifications and their evaluation for remuneration purposes (from 1995/96), revisited (in 1998/99 and 1999/2000) for support staff as part of a campus-wide job evaluation exercise
- A universal approach to staff appraisal, involving the supplementation of the University-wide process for academic and related staff with a local scheme for annual personal development reviews for all support staff (introduced in 1997/98)

- A comprehensive policy on staff development and training (adopted in 1996/97), addressing both generalist and specialist skills, and with a high priority for team-building, being taken forward by a staff development steering group (initiated in 1997/98) and including, for appropriate staff, multi-skilling and/or membership of the national Institute for Learning and Teaching
- A comprehensive, consistent, flexible and transparent approach to annual review of salaries and financial rewards, ensuring that the performance of all staff is covered, and that (from 1996/97) there have been clearly-articulated criteria for promotion and review
- A comprehensive policy on health and safety arrangements (adopted in 1996/97), underpinned by a health and safety action plan (1997/98) and building-specific health and safety manuals (1998/99)
- A rationalisation, harmonisation and codification of internal administrative, financial and other service procedures, culminating in the adoption of a staff manual (in 1997/98) and extensive development of staff intranet pages (from 1998/99)
- Extensive dependence upon inter-divisional, inter-team and inter-professional project teams, underpinned by a service-wide approach to project management methodology (adopted in 1998/99)
- Growing recourse to single-issue quality enhancement teams as a mechanism for involving front-line and support staff in problem resolution and service enhancement (successive rounds of teams from 1996/97 onwards)
- Creation, where appropriate (as for the discipline teams of the Learning and Research Support Division and the Enquiry Services Team of the Public Services Division), of truly hybrid and multi-skilled teams drawn from a range of professional backgrounds

The ten key measures which have been employed at Birmingham to enhance, and to demonstrate enhancement of, delivery of services to academic staff and students through an integrated approach to information provision have included:

- Mainstreaming of the service within high-level institutional management, planning and audit arrangements, ensuring that the service inputs to all major decisions and has access to all relevant documentation (including annual School financial and academic plans)

- Comprehensive range of consultation and feedback mechanisms, involving regular cycles of formal meetings (with the Pro-Vice-Chancellor for Learning and Teaching, Academic Office, Guild of Students, and Schools), Web boards, focus groups, and user surveys
- Publication, at the start of each session (commencing in 1997/98), of a service-wide list of thirty to fifty significant planned service enhancements to be undertaken that session, with subsequent published reporting of progress against the plan
- Publication (at the start of 1999/2000) of a generic service definition statement covering most elements of Information Services provision, and underpinned by an undergraduate charter (first introduced in 1998/99) and postgraduate research student charter
- Adoption by the University (in 1998/99) of a long-term learning resource centre strategy, seeking to concentrate over time in as few locations as much learning space of all types as possible (the first phase of a new learning resource centre on the West campus opening in September 2001)
- Adoption by the University (in 1998/99) of a good practice statement on the provision of learning materials in all formats for students, spelling out the relative responsibilities of Information Services, Schools and the students themselves
- Adoption by the University (from 1998/99) of a more corporate and consistent approach to information technology provision, reflected, *inter alia*, in successive editions of an hardware and software standards document, a long-term strategy for a Web-enabled campus, and a £4 million investment programme in the campus network
- Extensive integrated programmes of training and print/electronic documentation (from 1995/96), with *Information Services Bulletin* as the flagship publication, and research skills and information technology training increasingly embedded for probationer academic staff and students
- Development (from 1997/98) of a range of learning partnerships between Information Services and Schools, to promote the use of information technology-assisted learning, now extended through the Learning Development Unit
- Establishment (in 1997/98) of the BUILDER project, to develop a working model of the hybrid library, seamlessly integrating traditional and electronic information and services for learning and research, through a

modular-based pilot for six academic disciplines, elements of which are now being scaled up into production services

APPRAISING THE BENEFITS

As in the case of the operationalisation of convergence, it is hard to evaluate the success or otherwise of the implementation, except by reference to the experience of an individual institution. So, again we will draw upon the outcomes at the University of Birmingham since 1995. At all stages of the process of convergence here, Information Services senior management was acutely aware of the need to be delivering immediate or long-term advantages to key stakeholder groups. Although immediate and tangible returns from major organisational change on the scale that has been embarked upon at Birmingham are not always possible, it is strongly believed that the redirection of academic and administrative information services has been highly beneficial to all parties concerned.

Information Services staff as a whole have mostly been won over, through a balance of consensual and directive leadership, to identifying themselves as members of a converged service, rather than still of any of the predecessor services for which they may have worked. They are now in a position to appreciate both the service enhancements to users which have been brought about through convergence and the personal development and career opportunities for them as individuals arising from their employment in a large-scale and holistic information environment. A good number of them have benefited from promotion and/or from transfer to more challenging and fulfilling posts within the service. The anxiety and uncertainty which most staff inevitably experienced during the first half of 1995/96 have now largely been forgotten, and the small amount of overt opposition which was encountered – clearly far less than reported from Liverpool John Moores University (Sykes, 1998; Sykes and Gerrard, 1997) - has been overcome through a combination of diplomacy and resolute management. Indeed, the current concerns tend to come more from a few traditional groups such as cataloguers who feel that the nature of their work affords them insufficient opportunities to develop into hybrid professionals, and thus to derive the maximum potential from convergence.

Institutional senior management has substantially had delivered to them the agenda which Information Services was set up to pursue in 1995, and without any significant increase in recurrent costs, when comparing like with like (indeed, in 1996/97 and 1998/99 the service was required to make some

savings, as it will again be in 2001/02, as part of university-wide belt-tightening). No significant objective has been missed, and there has been no major failure. Although, in line with Law's predictions (1998: 59) that „there will be unrealistic expectations of the speed and impact of such a change", one or two members of institutional management have occasionally expressed frustration with the rate of progress in some particular area, this generally reflected an underestimation on their part of the enormous effort needed to effect a change of direction in such a large and complex service, and within the context of a university whose staff and students are generally still quite traditionalist in their outlooks. The fact that the mission of the service has been steadily widened during its short history is in itself testimony to the basic confidence of the management of the institution that the service has delivered and is capable of delivering still more.

Academic staff have generally been slower to engage with the notion of an integrated information service, and progress in this area has been patchier than hoped for. In some cases this reticence seems to have been bound up with negative perceptions of a service which is deemed to be very large, very expensive and very powerful within the university and to be an agent of „the centre". The politics relating to Birmingham's devolved budget centre system and to the recharging of service costs through the ICAM (Indirect Costs Allocation Model) are very rich indeed! More usually, this slowness is symptomatic of a reluctance on the part of some teachers and researchers to come fully to terms with the implications of the post-Dearing higher education agenda. However, from 1997/98 there have been very clear indications that Schools are beginning to respond positively to the opportunities which Information Services affords and to factor them into their academic planning. This has taken many forms, including: a more positive and collaborative tone towards Information Services in School implementation plans; a willingness to modify internal School structures to map on to those of the service and to invite Information Services staff on to those structures; a readiness to enter into partnerships to advance the use of information technology in the curriculum; and an increasing demand for Information Services' training activities and for their formal embedding within undergraduate and postgraduate teaching. These successes reflect a combination of advocacy and liaison by Information Services itself, promptings of Schools by institutional senior management, and the desire of Schools for assistance from Information Services in coping with a range of external pressures (not least those of the subject review process, which, as already noted, does presuppose an holistic approach to learning resources).

The student body, as represented by the Guild, has been strongly supportive of Information Services throughout. The officers of the Guild of Students, in their evidence to the Vice-Principal's Information Services Working Party in 1994/95, endorsed wholeheartedly the concept of convergence and have subsequently heavily backed a shift in information technology provision away from Schools and towards Information Services, on the grounds that such a shift will enhance both quality and equity of provision. The President and Vice-President of the Guild meet monthly with the Librarian and Director of Information Services and the Assistant Directors of Information Services for Learning and Research Support and Public Services for strategic briefing purposes and a constructive dialogue about service priorities. Getting the Information Services message across to individual students has, inevitably, proved a bit more difficult. However, the annual user satisfaction surveys reveal the students overall to have positive views of the service, even if the all too familiar appeals for more books, more computers and more photocopiers are consistently made.

Information Services plays an active role on the regional, national and – to a rather lesser extent – international information stages, and the views of external stakeholders are accordingly also important to us. The Birmingham experience of convergence has attracted considerable interest from universities in the United Kingdom, Western and Eastern Europe and Australia, and there is a fairly regular stream of enquiries and visits from senior institutional or service managers in them, probing either the general management of the convergence process or some particular aspect of the operation. It has been rare for such enquiries and visits to result in anything other than strong validation of the changes that have been made at Birmingham, even if not every university necessarily wishes to replicate them. Inevitably, there has been some suspicion expressed by senior library and computing service managers in some of the older and non-converged universities, who have tended to view the Birmingham example as something akin to writing on the wall for them! However, even this has lessened over the years, as an increasing number of Birmingham's comparators in the Russell Group and CURL also move towards more integrated structures for the planning and delivery of academic services.

Finally, in considering external perceptions of the service, it would be appropriate to refer to two independent professional assessments of Birmingham's convergence. One is by Lyndon Pugh (1997a: 50-62), who reviewed the Birmingham process after barely eighteen months. He described the Birmingham implementation of convergence as „a textbook approach to change management" (1997b: 52) and was particularly struck by the fact that „This is an example of an open organisation. It operates on the basis of a consensus

backed up by a developing communications system, and has a strong emphasis on the learning experience of all its staff." (Pugh, 1997a: 55) The second is by Lynne Brindley, at that time Pro-Vice-Chancellor at the University of Leeds, who was invited by the University to undertake a service review of Information Services in May 2000, as it neared the end of its fifth year of operation. In her unpublished report, Brindley concluded: „Overall there is overwhelming support for the level of Information Services' achievements over the past five years. The University has a service it can be proud of and a high-quality baseline from which to move forward." There was particular commendation for the way in which Information Services had embraced its ever-growing portfolio of responsibilities and „managed so professionally the integration of staff from a range of cultures and backgrounds". Its staff were found to be „enthusiastic, committed and energetic", „well-motivated and informed", and with „a feeling of belonging to IS as a converged service" – all attributes which were linked to excellent internal communications. Within the University, Brindley's report continued, Information Services was widely regarded as „a well-managed service", winning praise „in terms of its perceived value-for-money and recognition of how much is achieved within resources available", regarded as „good at getting involved with major University strategic issues", and held up as „probably the most receptive area in the University in considering student requirements and demands".

CONCLUSIONS

Despite the plaudits, Brindley still found some further opportunities for service enhancement, addressing twenty-three recommendations to the service management and seven to the University. Together with the service response, these are available on the Birmingham Web site[3]. So, the Birmingham experience of convergence is not yet complete, and there is still work to be done. Areas of current preoccupation include the recruitment and retention of high-calibre, hybrid middle and senior managers, where our leadership of the national Hybrid Information Management Skills for Senior Staff project (HIMSS[4]) is indicative of sector-wide problems in this area.

There is still an unduly competitive spirit between staff in some parts of the service, especially in computing-related areas, which occasionally inhibits the presentation of as seamless a service to our users as we would wish. We are now wrestling with the challenges of delivering services across two main campuses, in Edgbaston and in Selly Oak, whereas in 1995 there was only one, and in providing access to our resources and services to an increasing off-campus and distance-education audience. Progress in implementing the

learning resource centre strategy of 1998/99 has been less extensive than hoped for, so our buildings and service points are still proliferating in number, impacting adversely upon our effectiveness and economy. The level of resources generally continues to be a difficulty as manifested in the University's relatively indifferent performance in published national league tables of library and computing expenditure, and there are anxieties about the affordability of the service's ambitious five-year strategy for 2001/02 to 2005/06. There also remains scope for strengthening service representation at the top tier of institutional management and governance (for example, unlike some other United Kingdom converged services, Birmingham's Librarian and Director of Information Services is not a member of the Vice-Chancellor's executive group, nor does the post report directly to the Vice-Chancellor, whereas in the United States chief information officers invariably report to the provost or president).

Six years on, despite its unfinished nature, Birmingham is still very positive about its convergence experience and believes that it has been substantially beneficial. This concurs with the findings from Pugh's national survey in 1997 (1997a: 39-41) in which 67 per cent of converged institutions considered that the management of their services had improved as a result of convergence, 79 per cent felt that technological convergence had brought benefits, 61 per cent believed support for learning and teaching had improved, 55 per cent reported a positive impact on courses using integrated information services, and 67 per cent felt that support for student-centred learning had been enhanced. Convergence is probably not suitable for every institution, and the combination of circumstances applying in United Kingdom higher education have probably been especially conducive to it, but in most instances – and certainly at the University of Birmingham – it has been a major force for successful change and culture management, and has helped to reshape the information profession along hybrid and multi-skilled lines.

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2 <http://www.jisc.ac.uk/info_strat/>.

3 <http://www.is.bham.ac.uk/publications/audit.htm>.

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