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The Assessment of Research Quality in United Kingdom Departments of Library and Information Management

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ABSTRACT

Purpose Provides an historical overview of assessments of research quality conducted by the United Kingdom funding councils in the period 1986-2008, with special reference to the assessments that have been carried out of departments in the library and information management (LIM) sector.

Methodology/approach A literature review covering both LIM-specific material and more general sources discussing the assessment of research quality in UK universities.

Findings There is clear evidence of an increase in the general quality of the research carried out by the LIM sector over the review period. This has been accompanied by a decrease in the number of traditional LIM departments submitting themselves for assessment, with these being replaced in the assessment process largely by information systems departments. The rankings over the review period have been dominated by a small number of departments with long-established research traditions.

Originality/value of the paper While there is an extensive literature describing research assessment in general, and a few articles describing individual assessments in the LIM sector, there is no overview of the involvement of the LIM departments over the whole series of assessment exercises that has been carried out.

KEYWORDS

Librarianship and information science, Library and information management, Research Assessment Exercise, Research quality, Research Selectivity Exercise, Transbinary Group on Librarianship and Information Studies, University departments

CHAPTER CHARACTERIZATION

General review

INTRODUCTION

Funding for academic research comes from a multitude of sources, both public-sector and private-sector, both national and international, but the most important single component in most countries is the funding provided by central government. A combination of rising research costs and an increasingly unfavourable financial climate has resulted in governments world-wide taking a significant degree of interest in the nature and the quality of the research that is carried out in the universities that they fund. This has resulted in a general acceptance that the limited resources available should be selectively channelled to those universities (and their constituent departments) that have previously demonstrated their ability to carry out high quality research. The United Kingdom (UK) has pioneered the development of systematic procedures for quality assessment in higher education (in teaching as well as research (Harvey, 2005; Harvey & Green, 1993; Salter & Tapper, 2000)), and the results of regular and detailed evaluations of research quality have now been used by the government for over a quarter of a century to inform the allocation of research funding (Bence & Oppenheim, 2005).

The evaluations in the UK have been carried out six times thus far: the Research Selectivity Exercise (RSE) was held in 1986, and the Research Assessment Exercises (RAEs) were held in 1989, 1992, 1996, 2001 and 2008. The seventh of these, called the Research Excellence Framework (REF), is currently under development, with publication of the results scheduled for December 2014. In each case, the evaluation has been designed and implemented by the funding council charged by the UK government with the allocation of funding to the university sector. This was: the University Grants Committee (UGC) in 1986; the UGC and then the Universities Funding Council (UFC) in 1989; the UFC in 1992; and the four UK funding councils (the Higher Education Funding Council for England, the Higher Education Funding Council for Wales, the Scottish Funding Council and the Department for Employment and Learning, Northern Ireland) for the three subsequent RAEs and the forthcoming REF.

The evaluation of research quality hence plays a regular and important role in the life of all UK library and information management (hereafter LIM) departments¹, and forms the focus of the current chapter. The next section describes each of the evaluations to date, summarizing the evolution since the mid-Eighties of the procedures that have been used to measure research quality, hopefully in an effective and transparent manner. This is followed by a description of the outcomes when these procedures were applied to the LIM departments, with mention also being made of a separate evaluation of LIM departments (the Transbinary Group on Librarianship and Information Studies) that preceded the 1986 RSE. The chapter includes a forward look to the REF, and highlights the increases in research quality that have taken place in the sector over the review period.

¹ We shall use 'department' in this chapter, irrespective of the precise title of the academic grouping that is being discussed at that point; and use 'library and information management', rather than the more common 'librarianship and information science', since it is the former term that has been used consistently in the RAEs.

THE RESEARCH SELECTIVITY AND RESEARCH ASSESSMENT EXERCISES

Background

In this section, we summarize the six evaluation exercises that have taken place to date, so as to provide the background to the discussion of LIM research quality in the following section. Further discussions of the evolution of the evaluation procedures over the period 1986-2008 are presented in several reviews (Barker, 2007; Bence & Oppenheim, 2005; Gilroy & McNamara, 2009; Martin & Whitley, 2010; Morgan, 2004).

Government funding of academic research in the UK has long been organized using the ‘dual support’ system (Parliamentary Office for Science and Technology, 1997; Research Information Network, 2010). As the name suggests, this system involves two types of financial support. One type comes from the funding councils, and is given to universities to provide the basic research infrastructure and to support their individual research strategies: this comes as a block grant that can be used as a university thinks fit. The second type comes from the research councils (such as the Arts and Humanities Research Council or the Economic and Social Research Council, which are those councils most likely to fund LIM research) and is awarded on the basis of competitive peer-review of individual grant applications. This chapter focuses exclusively on the first part of the dual support system, i.e., the contribution from the funding councils.

Prior to 1986, funding council support for research was allocated to universities largely on the basis of their student numbers, i.e., on the basis of institutional size, with little account being taken of the quantity or (more importantly) the quality of the research carried out with the funds provided. The aim of the 1986 RSE (and of the subsequent RAEs) has been to provide evidence of research quality that could then be used for selective channelling of the available funding. Specifically, this QR (for quality-related) funding “.....provides a foundation allowing university leaders to take strategic decisions about the research activities of their own institutions. It funds the basic research infrastructure – including the salary costs of permanent academic researchers, support staff, equipment and libraries – that gives institutions the base from which to undertake research commissioned by other funding sources; the flexibility to react quickly to emerging priorities and new fields of enquiry, and the capacity to undertake ‘blue skies’ research. QR allocations reflect the excellence of individual departments within institutions, using the results of the peer review based Research Assessment Exercise” (Department for Education and Skills, 2004).

As a result of the RSE, the UGC decided that 40% of the total research funding to a university should be based on that institution’s RSE result. The percentage rapidly increased to over 95% by the time of RAE1992² and it has remained at broadly this level ever since (Parliamentary Office for Science and Technology, 1997). There is thus a massive incentive

² The literature uses both RAE 1992 and RAE1992 (and similarly for the other exercises): in this chapter we use the latter form.

for each university to enhance the quality of the research conducted by all of its constituent departments, so as to maximise the QR funding that it receives as a consequence of their efforts. Given the financial importance of the allocations, it is of the utmost importance that the funding councils' evaluations are seen to be carried out fairly, rigorously and transparently. It is hardly surprising that it took some considerable time before these criteria were met in a manner that was broadly acceptable to the academic community.

RSE1986 and RAE1989

The 1986 exercise was organised by the UGC without any prior consultation with the academic community, and required universities to complete a short (500-600 word) profile of each of their cost centres (*vide infra*) together with details of five publications that exemplified the quality of the research carried out therein; these profiles were complemented by a request for information on numbers of research studentships, grants and contracts, and details of honours awarded to members of staff. The submissions were evaluated by the UGC's existing subject committees, who graded each cost centre as 'Outstanding', 'Above average', 'Average', or 'Below average'. The exercise and the resulting gradings were very widely criticised, as described in detail by Phillimore (1989), with three particular problems being noted. First, although the final grades were expressed on a four-point scale, individual subject committees used between three and five points, with these gradings subsequently being translated in some undefined way to the final four-point scale. Next, the basis of the comparisons was never stated so that if, e.g., a cost centre was graded as average, it was not clear whether this meant that it was comparable in performance to its national or to its international competitors. Finally, the exercise was based around cost centres and these might or might not equate to individual departments within a university; for example, mathematics was a cost centre, but so were 'modern languages' and 'other biological sciences' (both of which could span several individual departments within a single university). The five requested publications were thus often totally inadequate to represent the range of research that was being carried out in the departments comprising a particular cost centre within a university.

When the 1989 evaluation exercise was first announced by the UGC in 1988, it was described as a further Research Selectivity Exercise, but the title had changed to Research Assessment Exercise by the time that the new UFC produced its final report at the end of the following year (Universities Funding Council, 1989), and we hence refer to this as RAE1989. The widespread criticism of the 1986 exercise resulted in substantial changes being made for 1989, the modifications including extensive consultation with the academic community, the creation of panels of experts in 70 different subject areas, a common grading scale across the panels, and submissions that focused on individual departments rather than on agglomerated cost centres. Importantly, there was also a formal definition of what was meant by research, it being defined for the purposes of the exercise as "*original investigation undertaken in order to gain knowledge and understanding. In the humanities, it includes scholarship which leads to new insights. In science and technology, it includes the use of existing knowledge to produce new materials, devices, products and processes, including design and construction.*"

It excludes routine testing and analysis of materials, components and processes – eg for the maintenance of national standards – as distinct from the development of new analytical techniques” (Universities Funding Council, 1989). This statement has been steadily extended and formalized over the years so that research is now defined for the forthcoming REF 2014 as “a process of investigation leading to new insights, effectively shared. It includes work of direct relevance to the needs of commerce, industry, and to the public and voluntary sectors; scholarship [which has its own, separate definition]; the invention and generation of ideas, images, performances, artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and routine analysis of materials, components and processes such as for the maintenance of national standards, as distinct from the development of new analytical techniques. It also excludes the development of teaching materials that do not embody original research. It includes research that is published, disseminated or made publicly available in the form of assessable research outputs, and confidential reports” (HEFCE, 2011).

It is rather remarkable that although the assessment of quality was the principal focus of the exercise “no guidance on how to identify or recognise “quality” was given, and the exercise assumed that academics would know what they were looking for” (Universities Funding Council, 1989). To assist them in their endeavours, the panels were given the following information on each submitting department: staff details; total numbers of publications; the bibliographical details of up to two publications for each member of the academic staff; the number and value of research grants and contracts, and the number of research studentships; and a short textual narrative summarizing past and future research priorities, the management of research, and marks of external recognition. On the basis of this information, additional confidential advice that could be obtained from external subject experts, and their own professional judgement, each unit of assessment (UoA)³ was graded on the five-point scale that is listed in the 1989 column of Table 1. It will be clear that the procedures in RAE1989 were radically different from those for RSE1986; indeed, Tapper and Salter suggest that the changes introduced in the subsequent 1992, 1996 and 2001 exercises were much less significant than those in 1989 (Tapper & Salter, 2003).

RAE1992 to RAE2008

The 1992 exercise was broadly similar to RAE1989 in terms of the data required for a submission, the only notable difference being the requirement for a description of a department’s research environment; however, more fundamental changes arose as a result of the passing of the Further and Higher Education Act of 1992. Discussions of higher education in the UK often make reference to the ‘old’ and the ‘new’ universities. The former

³ The reader should note that UoA is used with two slightly different meanings (although it is hoped that the meaning will be obvious in what follows). To the funding council, a UoA represents a subject area and the associated subject panel to which departments make their submissions for evaluation, whereas universities tend to use the term to refer to departments that they are submitting for evaluation.

are the long-established, pre-1992 universities (i.e., the institutions that had been evaluated in 1986 and 1989), while the latter are institutions (mostly former polytechnics or colleges of higher education under local, rather than central, government control) that were granted university status in 1992 (or subsequently) as a consequence of the Act. The passing of the Act made the new universities eligible for QR funding, with the result that no less than 170 institutions submitted to RAE1992.

A side-effect of the Act was the first appearance of the concept of the 'research-active academic', i.e., a member of staff whose research record was sufficient for inclusion in his/her institution's RAE submission. Universities have increasingly chosen to submit only those staff they consider will make a positive contribution to their departmental research profiles, and it is likely that the steady increase that has been observed in average UoA grades over the RAEs is due, in part at least, to the deliberate exclusion of those who are perceived to be less productive in research terms, an action that may well have morale and career implications for those not chosen. Other reasons that have been suggested for the observed increase in average grades include grade inflation, and the ability of universities to make increasingly convincing cases as one exercise has followed another (Barker, 2007; Martin & Whitley, 2010). That said, one would hope that at least some of the upwards trend in grades that has been observed has come about as a result of real increases in the quality of the research that is being assessed.

There were four principal changes for RAE1996. Each research-active member of staff was required to submit four publications, rather than two plus total numbers of publications, hence emphasising a focus on quality rather than quantity. A seven-point scale was used as listed in the third column of Table 1, with the previous grade-3 being sub-divided into 3a and 3b and with a new 5* grade being introduced at the top of the ranking. More space was provided for the textual component describing the environment, future plans and esteem indicators. Each panel had to produce a statement of the criteria it would use to evaluate the submissions, thus providing institutions with a much clearer idea of where it would be most appropriate to submit a department. Many of the new universities had developed a flourishing research culture by 1996, and this was reflected in submissions from no less than 192 institutions.

The RAE1996 procedures were repeated in large part for RAE2001, the principal addition being the introduction of five 'Umbrella Groups'. These groups were set up to enable the chairs of cognate UoA panels to meet on a regular basis to ensure consistency in the assessment process, something that had caused considerable concern in previous exercises (Johnes & Taylor, 1992). The five Groups covered Medical and Biological Sciences, Physical Sciences and Engineering, Social Sciences, Area Studies and Languages, and Arts and Humanities (which included the LIM panel, UoA 61). Given the focus on international comparisons in the quality gradings (see Table 1), a benchmarking exercise was carried out in which a number of non-UK experts reviewed the top-ranked submissions for each panel before publication of the final results.

The submission procedures were little changed for RAE2008, and the review procedures were also very similar, the main difference being the replacement of the five umbrella groups by 15 panels that each coordinated the work of (typically) three or four sub-panels. However, the grading scheme was radically different and represented a break with that used in all of the previous exercises. A five-point scale was used (unclassified and grades 1-4), with the quality definitions (see the RAE2008 column in Table 1) dominated by international, rather than national, comparisons, and with each department receiving a profile that showed the percentage of their submission that had been awarded each of the five grades. The profile was obtained by cumulating individual profiles representing a panel's assessment of the publications (four for each person submitted), of the research environment, and of indicators of esteem. The three individual profiles were weighted: the relative importance varied across the sub-panels but the publications always weighted highest, typically contributing ca. 70% to the overall assessment. Thus, whereas a department would previously have received a single grade, it here received a profile containing five percentages; however, the lack of a single figure did not prevent the media immediately converting the profiles to weighted mean grades and thus producing league tables analogous to those resulting from the previous assessments (Tomlin, 1998).

Funding implications

The principal rationale for the evaluation exercises has been the need to allocate the limited QR funding to the best-performing departments, and the degree of selectivity has increased steadily over the series of exercises. For example, a department needed to receive a grade of at least 2 in RAE1989 to receive any QR funding, with the grades 2, 3, 4 and 5 receiving funding in the ratio 1: 2: 3: 4. However, after RAE1996, a minimal grade of 3b was required for support (the grades 3b, 3a, 4, 5 and 5* receiving funding in the ratio 1: 1.5: 2.4: 3.75 and 4.05), and the threshold for funding was further raised to 4 after RAE2001. Indeed, in 2001, most departments that maintained their RAE1996 grades of 4 or 5 experienced a loss in funding, while a new 6* grade was created (after the completion of the exercise) for those departments that had achieved the 5* grade in both 1996 and 2001. In like manner, governmental ring-fencing of research funding for STEM (Science, Technology, Engineering and Medicine) subjects after the completion of RAE2008 meant that even the very best non-STEM research (including the LIM departments) experienced a significant drop in QR funding when compared to 2001.

The threshold below which there will be no funding and the ratios of funding between one grade and the next are determined once the results of an exercise are available, since it is only at that point that the funding councils know the precise distribution of grades that has resulted. The funding received by a department is then largely determined by multiplying the appropriate ratio by the number of research-active staff and by a factor describing the relative costs of research in different subject areas. Universities are hence "*being asked to participate in a game with a blindfold on*" (Johnston, 1993) when they make a submission since they do not know what the rewards are likely to be for taking part (Talib, 1997). It would seem that an increasing number have decided that the game is simply not worth the candle: from a peak

of 192 universities participating in RAE1996, the number fell to 173 in RAE2001 and then to 159 in RAE2008 (the smallest number since RAE1989). It may well be that REF2014 will see a further fall.

REF 2014 and beyond

The general framework for the 2014 REF has recently (mid-summer of 2011) been published (HEFCE, 2011), with the finalised working methods for each of the panels and sub-panels due for release in January 2012.

The same five-point scale of quality definitions will be used as in RAE2008 and the general format of the submissions will remain the same, with one major exception. This is that esteem, which previously provided one of the three main strands of a submission, becomes a minor part of the environment strand, and is replaced by a strand describing the ‘impact’ of research that will contribute 20% of the final profile given to each submission. This development has occasioned much discussion in academe, especially in the arts, humanities and social sciences, since the initial proposals seemed to suggest that impact was largely considered in terms of the economic impact of research. In fact, the final definition is far more inclusive, with impact being defined “*as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia*” (HEFCE, 2011). There are to be two other major changes: a much greater degree of control of the UoA sub-panels by the main panels, with the aim of increasing the consistency of the assessment process; and significant reductions in both the number of sub-panels (from 67 to 36) and the number of main panels (from 15 to 4, these representing the life sciences, the physical sciences and engineering, the social sciences, and the arts and humanities). It will be interesting to see the effect of these new procedures since, as one might expect and as has been observed elsewhere (Butler, 2003; Abramo *et al.*, 2011), changes in evaluation criteria can result in significant changes in academic behavior.

However, perhaps the most dramatic suggestion for change has not occurred. The evaluation process has been remarkably cost-effective over the years; for instance HEFCE has “*estimated the costs of RAE2008 in England to be some 0.5 per cent of the value of public research funding that was subsequently allocated with reference to its results*” (HEFCE, 2011). That said, there is no doubt that the process is extremely time-consuming for the entire sector (see, e.g., McCormick’s collection of short papers by university administrators (McCormick, 2007)), and the UK government hence suggested in 2006 that QR funds after RAE2008 should be allocated on the basis of bibliometrics rather than on the detailed peer-review processes that had been used up to that point. This suggestion seems to have been based on purely financial grounds, with little consideration as to whether appropriate procedures were already available or could be developed (Joint, 2008; Oppenheim, 2008; Warner, 2000). After much discussion, and an extended pilot study of the use of bibliometric data by 22 higher education institutions (covering 35 of the RAE 2008 UoAs), the funding councils concluded that citation-based methods were not yet sufficiently developed to supplant peer review (HEFCE, 2009). Accordingly, peer review is to remain as the principal

means of assessment, though some sub-panels may choose to use citation data as a supplementary source of information when making their assessments.

The changes planned for REF2014 further exemplify the continuing, significant effort that has been expended by both the funding councils and the universities themselves to ensure that the evaluation of research quality takes place in an appropriate manner. However, the evaluations continue to attract significant criticism (see, e.g., (Macdonald & Kam, 2007; Paul, 2008) and comments quoted by Bence and Oppenheim (Bence & Oppenheim, 2005)), even though it is unlikely that there would now be widespread support for Williams' view in 1998 that the RAE was "*a dysfunctional juggernaut, lumbering on under its own momentum and threatening to crush research creativity, careers and scientific integrity*" (Williams, 1998). As Velody (1999) notes "*no better device than this objectified subjectivity has been elevated as a candidate for the function required in this terrain of research selectivity*", and it is certainly the case that RAE-like procedures are becoming increasingly used elsewhere, as exemplified by Excellence in Research for Australia, Valutazione Triennale della Ricerca (in Italy), and the Performance-Based Research Fund (in New Zealand). We should, perhaps, simply accept that, to misquote Churchill's famous comment on democracy, the RSE/RAE/REF is the worst form of research evaluation except for all those other forms that might be tried: it has played a very significant role in higher education in the UK for over a quarter of a century and is likely, in one form or another, to be playing a comparable role for the foreseeable future. This has certainly been the case in the LIM sector, to which we turn in the next section, which describes the results obtained when the procedures above were applied to the research carried out within the UK's LIM departments. The focus here is the assessments; the reader is referred to the reviews by Wilson (1997) and by Feather (2009) for discussions of the LIM research on which those assessments were made

RESEARCH EXERCISES AND LIM DEPARTMENTS

TYGLIS, RSE1986 and RAE1989

We have noted above that the university sector consisted only of the old universities until the passing of the Further and Higher Education Act in 1992. Prior to that date, there had been several subject reviews carried out jointly by the funding bodies for the universities and the polytechnics (the University Grants Committee and the National Advisory Board on Higher Education, respectively). One of these was the Transbinary Group on Librarianship and Information Studies (more commonly known as TYGLIS), which was established in 1985 and which sought to review "*all aspects of the education and training provided by the library and information science (LIS) schools in the UK*" (Transbinary Group on Librarianship and Information Studies, 1986). The Group visited all of the LIM departments in the UK (no less than 17 of them at that point) and received a large body of submissions from individuals, academic and professional bodies, and employers of LIM graduates. The resulting TYGLIS report focussed on teaching and manpower planning, with only limited reference (less than six pages from a total of 130 pages) being made to the research carried out by the departments. What little the Group did say was notably unflattering: "*the overall quality of*

research appears questionable in most LIS schools” and “too much of this research is of marginal interest and resembles the indulgence of an interesting hobby rather than a rigorous pursuit of a new insights and a contribution to the development of library and information services” (perhaps unconsciously recalling Jowett’s description of research as “*A mere excuse for idleness; it has never achieved, and will never achieve any results of the slightest value*” (Smith, 1939)). The Group did, however, grade the 17 departments, with one (Sheffield) being judged as ‘Well above average’, and five (City, Loughborough, Aberystwyth, Leeds and Newcastle) as ‘Average’. No rationale was given for these rankings, and it is not clear what ‘average’ was being used as the basis for comparison.

It is hardly surprising that comments such as those above meant that the Group’s work was poorly received by the LIM community when copies of the TYGLIS report became available in 1986, and its weaknesses (which were both carefully dissected (Feather, 1986) and amusingly parodied (Anon., 1986)) meant that it has never been formally published (Feather, 2009; Wilson, 1997). In fairness to the Group, it should be recognised that much LIM education of the time had a strongly professional bent, which was often at variance with that offered in conventional academic disciplines where research and scholarship were much better established. Indeed, as Feather notes, this practitioner-researcher divide is inherent in the discipline and continues, albeit probably in less extreme form, in departments to the present day (Feather, 2009). Despite the many criticisms of TYGLIS, it is of importance since it provided the first sector-wide, comparative study of LIM research in the UK (and probably in the world) and it did have one important, beneficial outcome. This was the recommendation, subsequently implemented by the UFC, that the level of funding provided to computer science departments should be extended to LIM departments. This stood departments in good stead as IT-related research and teaching blossomed (although subsequent funding council policies soon removed the equivalence). In retrospect, it is perhaps unfortunate that the report was not published since its conclusions regarding research might usefully have acted as a wake-up call to those departments and/or individual academics with a purely professional educational focus, thus better preparing them for the UK-wide research evaluations that were soon to follow.

As noted above, RSE1986 was carried out at the cost-centre level, rather than the department level that has characterized all subsequent evaluations. This meant that the LIM departments in the pre-1992 universities were not submitted separately by their parent university but as part of a much larger grouping of departments. In Sheffield, the Department of Information Studies (as it then was then called), was submitted in cost centre 31 (Other Social Sciences), and it may well be that other LIM departments were submitted using the same cost centre. In Sheffield, this centre comprised not only the Department of Information Studies, but also three other departments: Economic and Social History, Political Theory and Institutions, and Sociological Studies. Each of the departments provided the University with a three-page planning document listing research grants and research staff, summaries of current work and of possible future areas for research, and five individual publications, and these documents provided the input for the University’s submission to cost centre 31. For the record, this submission received the grade ‘Above average’ but this of course says nothing specific about

the quality of the LIM research then being carried out in the University (or, indeed, of the quality of the research in the three other departments). The Information Studies planning document is interesting from an historical perspective in highlighting the relative ease (ten funded research workers in a department containing the same number of academic staff) with which it was then possible to obtain funding. This funding came either from the British Library Research and Development Department (whose active support enabled UK researchers areas to be world-leaders in several important areas of LIM at that time (Baxter, 1985)), or from industry (in the case of much of the computerised information retrieval research conducted in Sheffield).

The evaluations for RAE1989 were provided by 67 advisory groups and panels, covering a total of 152 UoAs. One of these, UoA 143 for Palaeography, Library and Archive Studies, would seem to have been most appropriate for LIM departments, and UCL did submit to this UoA, achieving a grade-5. However, other LIM departments involved in RAE1989 all appear to have submitted to UoA 112 (Other & Combined Social Sciences), with Sheffield achieving a grade-5, City and Strathclyde a grade-3, and Queen's Belfast a grade-2⁴. The exercise occasioned little general interest in the profession, with the *Library Association Record* making only the briefest passing mention of it when the results were announced by the UFC in August 1989. It was, however, of considerable importance for the submitting departments since it was the first time that their research quality could be assessed using procedures that were designed for use across the entire higher education sector, and that were hence analogous to those used to assess other departments in their parent institutions.

RAE1992 to RAE2008

Much of this section is based on the articles (Elkin, 2002; Elkin & Law, 1994, 1997; Feather, 2009) and panel overview reports (RAE2001a, RAE2008a) by Elkin, Feather and Law. They were the chairs of the LIM panels for RAE1992-RAE2008, and the reader is referred to these publications for further details of the four exercises. Table 2 contains the final gradings that were awarded on each of these occasions (RAE1992; RAE1996; RAE2001b; RAE2008b): the table gives a single grade for each department for the RAE1992-RAE2001 exercises, while the RAE2008 entry contains the scores for each of the five parts of the final profile, as well as the weighted mean grade computed from that profile by *Times Higher Education* (Corbin, 2008).

RAE1992 was based on publications that had been produced in the period 1988-92, with two publications being required for each research-active member of staff, together with that staff-member's total number of publications during the review period in each of several categories

⁴ The grade for Sheffield is certainly correct. The other UoA 112 grades have been taken from a UFC circular letter that lists the institutional results for each UoA but that does not specify the precise department involved in each institutional submission: hence the use of the word 'appear'. Discussions with colleagues at City, Queens and Strathclyde (for which grateful thanks) suggest that the listed grades are correct. Of the other pre-1992 universities, the College of Librarianship Wales was in the process of joining the University of Aberystwyth in 1989 and data for Loughborough are not available.

(e.g., academic journal articles, book chapters etc.). Departments were allowed to provide a three-page textual description that described the research environment within the department, future research plans and marks of esteem that had been gained by their staff. Information was also provided to each panel on numbers of research students, research income, completion rates, but the LIM panel generally found this much less useful than the textual narratives in forming their judgements.

There were 72 UoAs in RAE1992, with a few UoAs being paired so that there was a total 62 separate panels. One of these paired panels included Library and Information Management (UoA 64) and Communication and Media Studies (UoA 68). The panel received a total of 50 submissions, with 19 of these being graded in UoA 64 as listed in the RAE1992 column of Table 2, as against just five in 1989, demonstrating very clearly the effect of the Further and Higher Education Act on the sector. Of these 19 submissions, 13 came from institutions with active LIM teaching departments (offering education programmes at undergraduate and/or postgraduate level), with the remainder mostly from institutions that had active research programmes being conducted by, or in association with, their library and information services.

The panel's decisions are listed in Table 2 where it will be seen that two departments (City and Sheffield) achieved the top grade-5, three departments (Loughborough, Strathclyde and Aberystwyth) achieved a grade-4, and there was a fair spread of the three lowest grades across the other 14 departments. Elkin and Law (1994) commented critically on the quality of some of the submissions, noting the (surprisingly) poor level of bibliographic citation, the problematic research character of some of the listed publications (such as book reviews or internal reports), and even frequent mis-spellings in one case. They also discussed the characteristics of the successful submissions, noting in particular that "*a climate of positively and strategically managed research.....provided the best guide to the quality of the department*" (Elkin & Law, 1994). Writing in 1997, Wilson (1997) noted that many universities were still evolving their research strategies at that time and it is hence hardly surprising that institutions where research was well established (typically in the pre-1992 universities where the academic staff had always been expected to carry out both teaching and research) stood to benefit in RAE terms; in the new universities, conversely, most staff had only had a teaching function up to 1992, with research being much less developed at both a personal and departmental level.

As Elkin and Law (1994) note, RAE1992 provided the first quantitative evidence of the extent of the LIM research sector, although the figures (both those that they quote, and those that can be gleaned from the reports for the subsequent exercises) are necessarily incomplete since they consider only the research carried out in the academic sector by the institutions submitting to the LIM panel. The RAE1992 returns, covering the period 1988-92, showed a total of 123.8 research-active staff (FTEs) attracting a total of £4.6 million of research funding. By 1996, these numbers had increased to 214.2 FTE staff and £10.2 million of funding, with the corresponding figures in 2001 being 299 and £14 million, and in 2008 being 297.3 and £36 million. Thus, while the numbers of staff submitting to the panel have

broadly stabilized, there appears to have been a significant growth in the level of earned income. It is, however, difficult to draw substantive conclusions from these income figures given the effects of inflation and of the rapidly changing environment for research income, where large funding streams may appear for a short time only to then disappear as political or educational policies change. However, the most important factor is probably the significant changes that have occurred in the make-up of the submitting departments (*vide infra*). Thus, of the five departments that attracted the most research income in RAE2008 (RAE2008, 2008c), only one (Sheffield, the third largest earner at £4.7 million) had submitted to all of the RAE LIM panels: of the other four, Salford (£5.1 million) first submitted in 1996, Brunel (£5.8 million) and Glasgow (£3.2 million) first submitted in 2001 and Kings College London (£3.2 million) first submitted in 2008.

In RAE1996, there was a distinct LIM panel (UoA 61) for the first time and, like all the panels, it was required to publish its working methods and criteria prior to the submission date. These included the ‘descriptor’, a specification of the subject areas that the panel would expect to review, and UoA 61 invited submissions in “*information systems and services; information management, business information studies, health information management, scientific information systems; information storage and retrieval; information policy and related areas; librarianship; library studies, archive studies and records management*” (RAE1996, 1995)). The explicit mention of ‘information systems’ here was undoubtedly why the 23 submissions included not only established teaching departments and research centres allied to an institution’s library and information services (as had been the case in RAE1992), but also three submissions (from La Sainte College, the University of Salford and the University of the West of England) that focused on information systems (IS), rather than traditional LIM. All three of these institutions had submitted to the Computer Science panel (UoA 27) in RAE1992, and the number of IS departments increased further in RAE2001 and then in RAE2008 (*vide infra*).

Elkin and Law (1997) provide a detailed account of how the LIM panel went about the assessment of the 23 submissions that were received for review (with one further submission later being withdrawn). Credit was given to departments on the following grounds: where there was evidence of a research strategy and a managed approach (building on the criteria adopted by the corresponding panel for RAE1992); where developments had been in line with the future plans outlined in the RAE1992 submission (where that was available); and where the submission showed a clear link between inputs and outputs, as reflected in terms of research income and publications, respectively (Elkin & Law, 1997). The final gradings are listed in Table 2. There was little change at the top from RAE1992, in that both City and Sheffield achieved the new 5* grade, Loughborough a 5 and Strathclyde a grade-4; but it is interesting to note that Salford, one of the IS departments, also achieved a grade-4 in its first submission to the LIM panel. At the same time, the panel noted continuing problems in some of the submissions, not just in an inability to spell or to cite correctly but more seriously in “*demonstrating complacency and apparent unpreparedness to expose a research culture, research plans or where the department was going*” (Elkin & Law, 1997).

The UoA 61 descriptor for RAE2001 was notably more inclusive than in 1996, and invited “*submissions in those disciplines concerned with the management of recorded knowledge, namely librarianship and information science, record and archive studies and information systems. This may include: information communities and the use and management of information in all forms and in all contexts; all aspects of archive administration and records management; all aspects of information policy in the information society; information systems; systems thinking; systems development; information retrieval (including interfaces and gateways); preservation and conservation of recorded information; and the information industry (including publishing). In addition the Panel will welcome the submission of research into the learning and teaching process in any of the above*”. There were again 23 submissions to the panel, but the overall composition was rather different, in that the specialist research units that had figured prominently in 1992 and 1996 were largely replaced by IS departments ⁵, and there was also a submission, from Glasgow, that focused on work in humanities computing.

Reference to the RAE2001 column in Table 2 will show that all of the submissions, with the sole exception of that from Thames Valley (a very small unit), achieved at least a 3b grade, reflecting the panel’s view that there had been a notable improvement in quality since 1996 (RAE2001a, RAE2001b) (although other factors may also have played a role, as discussed previously). The panel noted a mis-match in some cases between what was claimed in the submissions and the quality of the listed outputs, with many low-level conference papers being offered as support for claims of international excellence, a rather sorry comment given that this was by now at least the third opportunity that departments had had to submit to the RAE process. A factor that was common to a number of the weaker submissions was the presence of “*a long tail of staff whose research output appeared to have little or no research content*” (Elkin, 2002), i.e., the submitting department had focused on quantity rather than on quality as reflected in the definitions in Table 1. It may, of course, be that this was the result of an institutional or departmental policy to maximise the size of the return, despite the possible financial implications of such a strategy (Johnston, 1993; Talib, 1997). The three leading departments in the previous exercises – City, Loughborough and Sheffield – maintained their presence at the top of the rankings, but they were joined by two IS departments: Sheffield shared its grade-5* rating with Salford, and City and Loughborough shared their grade-5 with Brunel, which was making its first submission to the LIM panel.

For RAE2008, Library and Information Management (UoA 37) was a sub-panel of Panel I, which also contained Economics and Econometrics, Accounting and Finance, and Business and Management Studies. That apart, the procedures were very similar to those used for RAE2001, as was the number of submissions for review. However, while the sub-panel reviewed 21 submissions, Table 2 reveals that only 14 of these came from departments that were amongst the 23 that had been assessed in RAE2001. The new departments that

⁵ It should be noted that characterising a department as IS or LIM is a trifle arbitrary: some of the LIM departments, such as Loughborough and Sheffield, included substantive IS research in their RAE2008 submissions, while the Brunel submission provided several examples of LIM work being carried out in a predominantly IS department.

submitted to the LIM sub-panel for the first time included Kings College and Wolverhampton (specializing in humanities computing and bibliometrics, respectively) and four IS departments (Coventry, London South Bank, Sheffield Hallam, and West of Scotland). A notable absentee was the Strathclyde LIM department, which had performed consistently well in obtaining a grade-4 in all three of the previous RAEs. However, university restructuring meant that the merged Department of Computer and Information Sciences submitted to UoA 23 (Computer Science and Informatics) in RAE2008.

The results of RAE2008 for UoA 37 are listed in the final columns of Table 2, which contain not just the overall quality profiles but also the weighted mean grade for each department: this was the criterion used by the press (such as *The Guardian* and *Times Higher Education*) to publish 'league tables' for each UoA. On this criterion, Sheffield again came top, with a weighted mean grade of 2.85 that put it marginally above the figure of 2.75 achieved by Kings College, University College, Wolverhampton and Robert Gordon. However, other criteria could equally well have been used to provide a ranking: for example, Kings College had the largest grade-4 percentage (35% world-leading as against 30% for Sheffield and University College); and Robert Gordon had 0% for both grade-1 and unclassified, meaning that its entire submission was judged to be at international levels of quality, with City ranked second on this criterion (having 5% at grade-1 and 0% unclassified).

Overview

What can the submissions and panel results tell us? One obvious point is the increasing proportion of institutions with an IS, rather than an LIM, focus. In 1996, just three out of the 23 submissions came from IS departments, but by 2008 the fraction had grown to eight out of 21 submissions. This growth in IS representation, both in the submissions and in the composition of the panel reviewing those submissions, has been at the expense of LIM submissions from specialist research units (e.g., Central Lancashire), from departments that had been merged (or submerged) into larger institutional groupings (e.g., Strathclyde), or from institutions that had discontinued LIM education (e.g., Central England at Birmingham). RAE2008 also saw two humanities computing submissions.

Inter-departmental comparisons are highlighted in Table 3, which is restricted to those eight institutions (all LIM ones) that have submitted to all of the last four RAEs (i.e., since the new universities became eligible for consideration and since the assessment procedures became more robust and transparent). The scores in Table 3 have been obtained by converting the grades in Table 2 (with the weighted mean grades used for RAE2008) to ranks to remove the scale changes that have occurred since 1992. For example, in RAE1992, both City and Sheffield achieved a grade of 5: they thus occupied positions 1 and 2 in the ranking and have hence been given the shared rank of 1.5= in Table 3. The table demonstrates clearly the high level of performance of these two departments and of Loughborough throughout the period, and the re-emergence of University College London in the last two exercises. All of these departments are from pre-1992 institutions, but post-1992 departments have moved up the learning curve and are now very much in evidence; for example, Robert Gordon had an

excellent RAE2008 outcome (as did also Wolverhampton on its first submission to the panel).

Instead of comparing one LIM department with another, it is also possible to compare the sector as a whole with other UoAs. As part of a detailed statistical analysis of the results of RAE1992, Taylor (1995) listed the mean grade when averaged over all of the departments submitting in each of the UoAs. The mean grade for UoA 64 was 2.63, placing it in 62nd position when the 72 UoAs were ranked in decreasing order of mean grade (the highest and lowest values were 4.00 and 1.69 for Genetics and for Nursing, respectively). We must hence conclude that the LIM sector in 1992 performed well below the average for UK academic subjects when taken as a whole, and there have been only moderate improvements since that time. In RAE2008, the mean for UoA61 was 2.43 (where the average has been calculated over the weighted mean grades in the final column of Table 2), hence placing it 54th of the 67 UoAs (the highest and lowest mean values were 3.01 and 2.04 for Economics and Econometrics and for Allied Health Professions and Studies, respectively)⁶. These comparisons are hardly reassuring, but it should be noted that LIM is not the only discipline with a strong vocational component that received a low weighted mean grade in RAE2008: other such UoAs included Accounting and Finance (weighted mean grade of 2.34), Agriculture, Veterinary and Food Science (2.41), Art and Design (2.35), Education (2.29), Law (2.48) and Sports-Related Studies (2.11) (Corbin, 2008).

CONCLUSIONS

This chapter has described the development of systematic evaluations of research in the UK higher education sector. From the simple, arguably crude, procedures used in RSE1986, the funding councils and the universities have devised and implemented national approaches to research evaluation that have attracted widespread international interest. The first panel aimed specifically at LIM departments was established for RAE1992, although, as has been noted above, there had been some degree of research evaluation prior to that exercise. What conclusions can be drawn from these evaluations?

Examination of Tables 2 and 3 demonstrates the existence of a small number of departments that have dominated the rankings over the review period, in much the same way as a small group of elite football clubs have dominated the Premier League. Having a well-established research culture in a department is a necessary pre-requisite for it to continue producing high-quality research, and the situation is hence likely to continue in the future, given strong departmental leadership and appropriate institutional support. For the good of the discipline as a whole, it is to be hoped that these departments are joined in the future by others that are currently on an upwards trajectory.

⁶ Inspection of Table 2 will show that the IS departments tended to perform less well than the LIM departments in RAE2008; when calculated over just the non-IS departments, the mean value improves slightly to 2.56, which would equate to a position of 40th (equal with Pharmacy).

This hope is surely not an idle one since, even allowing for factors that have been noted previously such as grade inflation and selective staff submission, there has been a significant change in the quality of the LIM research that is carried out in the UK over the review period. While the TYGLIS report was poorly received by the sector, one cannot simply reject out of hand its view the panel's view that most research was of only questionable quality; and it would seem that there were only limited improvements in the subsequent decade. As reflected in the RAE1992 and RAE1996 LIM panel reports. Thus, in RAE1992, ten of the 19 submissions received grade-1 or grade-2 with a further four receiving grade-3, i.e., just five institutions achieved the top grades of 4 or 5. The RAE1996 outcome was only marginally better, with the corresponding figures for the 23 submissions being eight grade-1/2, ten grade-3 and five top grades (two grade-4, one grade-5 and two grade-5*). By RAE2001, however, there had been a marked increase in the performance of the sector. The sub-panel report noted that "*there had been a genuine improvement in the library and information sector*" and that the sector as a whole was "*beginning to give greater priority to research and infrastructure support*" (Elkin, 2002), with just one grade-1/2 submission, 12 grade-3 submissions and all the remaining ten (representing 43.5% of the total submissions) in the top grades (five grade-4, three grade-5 and two grade-5*). These trends are still further evident in the RAE2008 report where the best departments had "*a significant body of work being published which is comparable to the best work in its field or subfield at an international level*" RAE2008a (2008).

It is unfortunate that the increase in research quality across the sector has been accompanied by a decrease in the number of departments submitting their research for evaluation. This has come about as a result of both specialist research units and entire departments being closed or merged by their parent universities. However, increasing interest from IS departments has meant that the number of submissions to the LIM panel has remained broadly constant since RAE1992. Given the large number of such departments in the UK, it may well be that the proportion of (solely or predominantly) LIM departmental submissions will fall still further in future evaluation exercises if LIM and IS continue to be assessed by the same panel.

Looking to the future, LIM submissions to REF2014 will be assessed by Sub-panel 36, representing Communication, Cultural and Media Studies, Library and Information Management (which is part of Panel D encompassing the arts and humanities). Sub-panel 36's remit is similar to that of the joint panel (UoA 64 and UoA 68) that was set up for RAE1992 and is clearly very broad in scope, especially if, as was the case in 2008, it receives submissions not just on LIM but also on IS and humanities computing. One of the other changes is the introduction of the impact sub-profile. This has occasioned much anxiety in the general academic community, but it may well prove beneficial for LIM given the practical nature of much of its research, with work in areas such as geographic information systems, health information management, knowledge management, public librarianship and social computing having application far beyond the academic sphere. This and the improvements noted above should enable the sector to score highly when the REF results are announced in December 2014.

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Grade	RAE1989	RAE1992	RAE1996	RAE2001	RAE2008
5*			Research quality that equates to attainable levels of international excellence in a majority of sub-areas of activity and attainable levels of national excellence in all others	Quality that equates to attainable levels of international excellence in more than half of the research activity submitted and attainable levels of national excellence in the remainder	
5	International level of excellence in some areas of activity and national level in virtually all others	Research quality that equates to attainable levels of international excellence in some sub-areas of activity and to attainable levels of national excellence in virtually all others	Research quality that equates to attainable levels of international excellence in some sub-areas of activity and to attainable levels of national excellence in virtually all others	Quality that equates to attainable levels of international excellence in up to half of the research activity submitted and to attainable levels of national excellence in virtually all of the remainder	
4	National level of excellence in virtually all sub-areas of activity, possibly showing some evidence of international excellence; or to international level in some and at least national level in a majority	Research quality that equates to attainable levels of national excellence in virtually all sub-areas of activity, possibly showing some evidence of international excellence, or to international level in some and at least national level in a majority	Research quality that equates to attainable levels of national excellence in virtually all sub-areas of activity, possibly showing some evidence of international excellence, or to international level in some and at least national level in a majority	Quality that equates to attainable levels of national excellence in virtually all of the research activity submitted, showing some evidence of international excellence	Quality that is world-leading in terms of originality, significance and rigour
3a (or 3 in 1989, 1992 and 2008)	National level of excellence in a majority of the sub-areas of activity; or to international level in some	Research quality that equates to attainable levels of national excellence in a majority of the sub-areas of activity, or to international level in some	Research quality that equates to attainable levels of national excellence in virtually all sub-areas of activity, or to international level in some and to national level in others together comprising a majority	Quality that equates to attainable levels of national excellence in over two-thirds of the research activity submitted, possible showing evidence of international excellence	Quality that is internationally excellent in terms of originality, significance and rigour but which nonetheless falls short of the highest standards of excellence
3b			Research quality that equates to attainable levels of national excellence in the majority of sub-areas of activity	Quality that equates to attainable levels of national excellence in more than half of the research activity submitted	

2	National level of excellence in up to half of the sub-areas of activity	Research quality that equates to attainable levels of national excellence in up to half the sub-areas of activity	Research quality that equates to attainable levels of national excellence in up to half the sub-areas of activity	Quality that equates to attainable levels of national excellence in up to half of the research activity submitted	Quality that is recognized internationally in terms of originality, significance and rigour
1	National level of excellence in none, or virtually none, of the sub-areas of activity	Research quality that equates to attainable levels of national excellence in none, or virtually none, of the sub-areas of activity	Research quality that equates to attainable levels of national excellence in none, or virtually none, of the sub-areas of activity	Quality that equates to attainable levels of national excellence in none, or virtually none, of the research activity submitted	Quality that is recognized nationally in terms of originality, significance and rigour
Unclassified					Quality that falls below the standard of nationally recognized work. Or work which does not meet the published definition of research for the purposes of this assessment

Table 1. Quality definitions used by the funding councils for RAE1989, RAE1992, RAE1996, RAE2001 and RAE2008. It should be noted that: (a) RAE 2001 also allocated a 6* grade for those departments that received a grade of 5* in both RAE 1996 and RAE 2001. This grade did not have a specific quality definition associated with it and was assigned retrospectively on completion of the exercise without any additional peer review; (b) The grades for RAE2008 were assigned to individual parts of a submission, rather than to the whole submission as in the previous RAEs (see main text).

Institution	RAE1989	RAE1992	RAE1996	RAE2001	RAE2008	
					Profile	Weighted mean
University of Bath		3	2			
Bath College of Higher Education			1			
University of Brighton		3	3b	3b	10/30/35/20/5	2.20
Brunel University				5	20/30/35/15/0	2.55
University of Central England in Birmingham			3b	3a		
University of Central Lancashire		2	2			
City University	3	5	5*	5	15/50/30/5/0	2.75
Coventry University					5/35/45/10/5	2.25
De Montfort University		3	3b	3a		
Kings College London					35/30/15/15/5	2.75
La Sainte College of Higher Education			1			
Leeds Metropolitan University			2	4	10/35/45/10/0	2.45
University of Leicester		3				
Liverpool John Moores University		1	2		5/20/30/45/0	1.85
London South Bank University					0/15/30/45/10	1.50
Loughborough University		4	5	5	15/40/30/10/5	2.50
Manchester Metropolitan University		2	3b	4	0/20/45/35/0	1.85
University of Northumbria at Newcastle		2	3a	3b		
Royal Free Hospital School of Medicine		1				
University of Salford			4	5*	25/20/30/20/5	2.40
University of Sheffield	5	5	5*	5*	30/35/25/10/0	2.85
Sheffield Hallam University					5/20/35/40/0	1.90
South Bank University				3b		
Staffordshire University				3a	0/25/35/35/5	1.80
Thames Valley University		1	1	1		
University College London	5	2	2	4	30/25/35/10/0	2.75
University of West of England, Bristol			3b	3b		
University of Wolverhampton					25/40/20/15/0	2.75
University of Glasgow				3a	25/30/35/10/0	2.70
Napier University				4	10/50/25/10/5	2.50
University of Paisley				3b		

Queen Margaret University College Edinburgh		1	3b	3b		
Robert Gordon University		2	3a	3b	15/45/40/0/0	2.75
University of Strathclyde	3	4	4	4		
University of the West of Scotland					0/20/40/25/15	1.65
University of Wales, Aberystwyth		4	3b	3a	10/40/35/15/0	2.45
Queen's University of Belfast	2	2	3a			

Table 2. Gradings of departments submitting to LIM UoAs in RAE1989-RAE2008.

Institution	RAE1992	RAE1996	RAE2001	RAE2008
University of Brighton	7.5=	12=	19=	15
City University	1.5=	1.5=	3.5=	3.5=
Loughborough University	3.5=	3	3.5=	9.5=
Manchester Metropolitan University	13=	12=	8=	17
University of Sheffield	1.5=	1.5=	1.5=	1
University College London	13=	18=	8=	3.5=
Robert Gordon University	13=	7=	19=	3.5=
University of Wales, Aberystwyth	3.5=	12=	13=	11.5=

Table 3. Rankings (see main text) of departments submitting to all LIM UoAs in RAE1992-RAE2008.