

# Mind the skills gap: Information-handling training for researchers

A report commissioned by the  
Research Information Network



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## Foreword

The last decade has brought fundamental change in how researchers discover and gain access to information resources relevant to their research; and how in the course of their research they create and manage new information resources of many different kinds. Evidence from various sources, including previous studies published by the RIN, indicate that researchers are embracing the new opportunities with enthusiasm; and many have become highly-skilled in exploiting the opportunities that new technologies and services provide. But there is also evidence to suggest that researchers in many different fields lack the understanding and skills to make full use of the new technologies; and a widespread view – at least among library and information specialists – that even those researchers who regard themselves as competent often show alarming deficits in their skills.

Questions as to how researchers acquire the appropriate skills in discovering and handling research information resources and services, the training opportunities provided for them, and the take-up of those opportunities, are thus of the first importance. The RIN therefore commissioned a study in 2007 to investigate the range of current UK programmes, initiatives, policies and guidance aimed at developing the professional skills they need in research information methodologies and tools. We also sought to explore how training and development in these areas is located in the wider context of training and professional development for researchers, particularly in the early stages of their careers.

We commissioned the AIMTech Research Group at Leeds University Business School and Information Management Associates (IMA) to undertake the study, and this report is based on their work. We are most grateful to them for their contribution to this report. We are grateful also to the many researchers, librarians and information specialists, funders and administrators who responded to their call for information, in writing, in interviews, and through participation in focus groups and workshops.

This report points to the need for further work to ensure that training provision is more closely aligned with research strategies and agendas, and for a strengthening of the information elements within the portfolio of generic training and development opportunities provided for young researchers. We shall be consulting with Research Councils UK, the Funding Councils and others about these issues in the coming months.

*Michael Jubb*  
*Director, Research Information Network*

# 1 Introduction

- 1.1 There has been a growth of interest in developing the personal, professional and career management skills of researchers at all stages of their careers in the UK over the past few years. Much of the impetus behind this stems from the Roberts report<sup>1</sup> of 2002, which concluded that “unsatisfactory training in the skills required either in an academic career or in a business research environment means that [contract research staff] are poorly prepared for potential careers”. As part of the work to address these issues, the Research Councils identified a range of generic skills that they considered appropriate for researchers, and this formed the basis for a training initiative aimed at postgraduate and postdoctoral researchers. Key players in the new approach that emerged from the Roberts report are the RCUK Research Careers and Diversity Unit and its ‘major vehicle’ the UKGrad Programme (now renamed Vitae). The Unit addresses specific training shortages in relation to research as well as recruitment and retention issues. It allocates funds to universities to support transferable skills development, and it uses the Vitae team to encourage and facilitate appropriate provision in universities and colleges.
- 1.2 The Vitae Programme seeks to encourage generic skills training for researchers both through its national centre, which supports a database of good practice, and through its eight regional hubs<sup>2</sup>. Vitae claims that as a result of its efforts “most institutions have recognised the changing nature of researcher training and employment.”
- 1.3 Meanwhile, HE libraries have been seeking to extend to researchers the information training provision they have in place for undergraduates, and some have been invited to contribute to generic cross-institution training programmes. Several of the skills training requirements set out in the Vitae programme - notably, the focus on “relevant research methodologies and techniques and their appropriate application within my research field” - overlap with aspects of training in information skills and competencies as promoted by academic librarians, notably through the *Seven Pillars of Information Literacy* developed by the Society of College, National and University Libraries (SCONUL)<sup>3</sup>. Accordingly, there are substantial opportunities for collaboration within and across institutions between training providers and specialist library staff.

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<sup>1</sup> *Set for success: the supply of people with science, technology, engineering and mathematics skills* London: HM Treasury 2002  
[www.hm-treasury.gov.uk/media/0/9/ACF616.pdf](http://www.hm-treasury.gov.uk/media/0/9/ACF616.pdf)

<sup>2</sup> The East of England Hub states its aim as to “build local networks to support universities and supervisors in the delivery of needs-based quality skills training for young researchers, acting as a centre for the dissemination of good practice, advice, resources and materials.” Regional Hub activities include

- providing advice and access to materials and networks to local institutions
- linking with other institutions to increase provision, quality and student choice
- hosting regional good practice workshops
- building networks between academia and regional employers
- supporting growing networks of supervisors, tutors and alumni

“The Hubs work to

- build links between local institutions to promote good practice in generic skills training and support for postgraduate researchers
- assess the changing needs of postgraduate researchers and work with institutions to support them to provide the most appropriate training
- provide information on courses running for postgraduate researchers in the area
- give access to resources, online and through institutions and GRAD courses, providing useful information on personal development and future career options.”  
[www.grad.ac.uk/cms/ShowPage/Home\\_page/Regional\\_Hubs/East\\_of\\_England\\_Hub/About\\_the\\_East\\_of\\_England\\_Hub/plcddfXf](http://www.grad.ac.uk/cms/ShowPage/Home_page/Regional_Hubs/East_of_England_Hub/About_the_East_of_England_Hub/plcddfXf)

<sup>3</sup> See the most recent expanded version of the Seven Pillars model at [www.sconul.ac.uk/groups/information\\_literacy/headline\\_skills.html](http://www.sconul.ac.uk/groups/information_literacy/headline_skills.html).

- 1.4 This report focuses on the training provided for researchers by universities and other HEIs with significant communities of researchers. It attempts to include all the formal training and related support offered to researchers to help them in locating, obtaining, evaluating, organising, managing, transforming (e.g. into research reports or conference presentations) and preserving the information relevant to their research. The main providers of training and support considered in this review include central or faculty teams involved in generic research skills training (usually instigated as a result of the Roberts initiative); information skills development staff or subject liaison librarians employed by HE libraries who offer combinations of generic and subject-specific training; faculty and department staff offering subject-specific research skills training (usually, but not exclusively, to postgraduate students); and other staff with specialist research information interests, such as ICT specialists, providers of institutional repositories and archivists.
- 1.5 Our report tends to focus on training for young researchers at postgraduate and postdoctoral level. It is important to note, however, that there is an increasing realisation that the training and development needs of established academic staff have tended to be neglected. In research-active universities, new lecturers are often assumed to have all the skills and knowledge that they need. Currently, staff who attempt to address their own training needs have to be confident enough not to worry that this may be seen as a sign of their inadequacy. These attitudes may change as the Vitae programme extends to cover academic staff in their research role.
- 1.6 Key questions for this review are
- the nature and extent of the training in information skills and competencies provided to researchers, and the place that such training has within the wider provision of generic skills training
  - how such training is planned and delivered, and by whom
  - the resources provided for and used in such training
  - the role that librarians and other information specialists play in providing training
  - how researchers' training needs are assessed and how the impact of training is evaluated

We address these as well as more detailed issues and questions in the main body of this report.

*The objectives and scope of this project are given in Annex A, the methodology adopted is described in Annex B, and some examples of good practice are shown in Annex C.*

## 2 Key findings

### 2.1 *Strategies and responsibilities: UK and national level*

- 2.1.1 There are no clearly-identifiable UK or national bodies with explicit or overall responsibility for the development of the information competencies and skills of researchers at postgraduate, postdoctoral and higher levels in HEIs. The Research Councils clearly play an important role in setting standards and identifying best practice in research training in general, and they have framed a statement setting out the skills they expect to be developed during the course of a programme of doctoral research.<sup>4</sup> This set of skills is important in driving the former UKGrad research training programme; and further work in defining skill sets may be expected now that the renamed Vitae's remit has been extended to include academic staff of universities in their research role. It is important also to note that the Quality Assurance Agency for Higher Education (QAA) is actively encouraging implementation of programmes through its *Code of Practice*.<sup>5</sup>
- 2.1.2 The range of skills defined by the Research Councils is comprehensive, and includes several which would fall within definitions of "information literacy" used by librarians and information specialists (as well as most interpretations of 'research information methodologies and tools', although it is clear from our interviews that these terms are not synonymous).<sup>6</sup> But important dimensions of research information skills and competencies such as engaging with and understanding the scholarly information system are not included.
- 2.1.3 There is also a marked disparity between the language used by the Research Councils and Vitae to describe generic skills on the one hand and that used by library and information specialists engaged with information skills development on the other. The title of this project could be construed as an example of this difference in language, since most speak in terms of "information literacy" (often referring to the SCONUL *Seven Pillars*), while the academics we spoke to seemed happier with 'research information methodologies and tools' as a starting point. The lack of a shared vocabulary makes it harder for all concerned to recognise how potential contributions from different providers might fit in to a research training agenda. Some key elements of information skills and competencies are missing from the Research Councils' generic skills list, and some "information literacy" concepts that may be implicit in the list tend to be hidden to many who make use of it in developing and delivering training programmes.
- 2.1.4 On a more positive note, a Database of Practice has been developed by the former UKGrad as a tool to allow institutions and individuals to describe their practice in all areas related to skills and career development for researchers. The term 'practice' is interpreted as broadly as possible, to include, for example, training courses, coaching, survey/feedback mechanisms, support for supervisors, reports, and related research.<sup>7</sup> It is increasingly used in response to requests from the sector as a mechanism to share good practice. But until now it has been under-used by providers of information-related training.

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<sup>4</sup> See the statement at <http://www.vitae.ac.uk/cms/files/RCUK-Joint-Skills-Statement-2001.pdf.3063.download>.

<sup>5</sup> Quality Assurance Agency For Higher Education *Code of practice for the assurance of academic quality and standards in higher education: section 1: Postgraduate research programmes* QAA September 2004.

<sup>6</sup> See, for example, the discussion in: Streatfield, D.R. And Markless, S. 'Information literacy' in Bowman, J. H. (ed) *British librarianship and information work 2001-2005* Aldershot, Hampshire: Ashgate 2007, pp.413-430.

<sup>7</sup> <http://www.grad.ac.uk/practice>.

- 2.1.5 The key bodies representing library and information specialists, including RLUK and SCOUNL, have so far not engaged with the bodies that are taking a lead in developing policy and practice in skills training for researchers at UK level. This has given rise to a number of difficulties at UK and institutional levels which we set out in this report. We believe that RLUK, SCOUNL and the RIN should take the initiative in seeking to establish an effective dialogue.

### Recommendation

***RLUK and SCOUNL, along with the RIN should seek active dialogue with RCUK and the Vitae team about ways to secure appropriate coverage of information skills and competencies in training and skills development programmes for researchers.***

## 2.2 *Strategies and responsibilities: Institutional level*

- 2.2.1 Although some HEIs are making concerted efforts to rationalise and co-ordinate training for researchers, in many institutions there is little sign of strategic management of such efforts. A few HEIs are introducing researcher self-evaluation processes based on the Research Councils' list, but we found in many HEIs a lack of any coherent overview of who should be or even who had been trained, and in what. It is not surprising, therefore, that we found few signs of strategic thinking about the place of information training within the wider training provision; or of attempts to align library, information and training strategies with broader research strategies, at institutional or sub-institutional level.
- 2.2.2 Only twenty of the universities responding to our survey indicated that they had a relevant information strategy document, and only ten had a document covering information service provision to postgraduate and postdoctoral students. It would be inappropriate to read too much into this finding: some institutions make relatively little use of such documents. Nevertheless, it does suggest that a coherent and comprehensive approach to supporting the training and development of researchers is some way off in many institutions, a view supported by several comments we received. According to the Vitae national organisers "*The linkage to Roberts is not happening. There needs to be seamless provision for researchers; library and academic staff should be talking – there is a need for a strategy.*"
- 2.2.3 Most HEIs in practice adopt a piecemeal approach to information skills and competencies. This approach is exacerbated by the lack of a shared language referred to in Section 2.1. Central units responsible for developing and delivering training for researchers tend to emphasise the generic skills in line with the lead from RCUK and Vitae ("accessing and interpreting information; searching and systematic appraisal"). Library and information specialists emphasise a different set of skills and competences, based on the concept of "information literacy".
- 2.2.4 Some information training for researchers (especially relating to information seeking) is offered by library staff, and such training may be more or less in accord with the central training programmes that usually address some other information skills (especially those relating to report writing). But it is often unclear whether or where other aspects of research information, such as critical appraisal of research evidence and management of research information are covered (library staff tend to assume that these areas are addressed in central programmes or in faculty or department-based training; but it is not clear that this is always true). And in an independent study based

on a survey of institutional websites, Corral<sup>8</sup> found only two university library information literacy strategies where “... *connections were made between information literacy skills and the RCUK statement.*”

- 2.2.5 The role that institutions expect libraries and their staff to play in research training is particularly unclear, as are the strategies and expectations about libraries’ roles in the support of research more generally. In our consultations with senior library staff, several pointed to the need for advocacy to persuade senior institutional managers that library strategies, plans and resources should be more closely aligned with institutional research strategies and agendas. They recognised that such moves would in many cases require “*a step-change in provision and skills enhancement for library staff*”, and perhaps redeployment of library staff into research settings rather than the library building. Questions about libraries’ roles in research training are thus located in a broader set of questions about the strategies for developing libraries’ roles in support of research more generally.
- 2.2.6 With regard to training specifically, engagement with researchers as well as senior institutional managers is clearly critical. Many of those we consulted said that most academics do not see the Roberts agenda as relevant to their research environment in any way. Where engagement with academics is successful “*the people responsible for the Roberts implementation are working directly with faculties – working alongside academics to develop programmes to deliver generic skills in a disciplinary context*”. But just as there is little sign of strategic approaches to research information training at institutional level, so there seem to be relatively few examples of approaches that are rooted firmly in working with faculty staff. It will become increasingly important to address this issue as the former UKGrad remit is progressively extended – under its new Vitae brand - to cover training provision for established academics.
- 2.2.7 All but three of the 73 university libraries that responded to our survey are active in researcher training, and some are providing materials on websites or in VLEs. Much of this effort has been driven independently by the library, often as an extension of the provision they offer to undergraduates<sup>9</sup>. Virtually all the library managers we contacted see this as a natural extension, though one that is focused largely on training in information seeking. Some libraries report that they are actively looking to extend to other kinds of skills and competencies, such as systematic evaluation of research literature and management of the information that researchers accumulate in the course of their work. There is little indication that decisions to do so have been made centrally by the university or its training teams, although a few libraries are receiving Roberts funding to develop training or e-learning support.
- 2.2.8 Most (but not all) central training teams seem to share the view that developing information skills for researchers is a matter largely of training in information seeking. Hence it is not surprising that their calls on libraries have largely been restricted to that focus. Library staff are clearly seen as useful partners in training provision in many institutions, and there is some evidence to suggest that their contributions are well received by researchers. But library contributions to joint courses tend to be independently organised and delivered segments of a programme rather than an integral part of a fully-coordinated activity involving library staff, academics and others such as IT staff. The planning, management and control of the collaboration also seems usually to be linked to informal relationships within the university, rather than formal collaborative structures.

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<sup>8</sup> Corral, S. M. ‘Benchmarking strategic engagement with information literacy in higher education: towards a working model’ *Information Research* 12 (4) paper 328 <http://InformationR.net/ir/12-4/paper328.html>

<sup>9</sup> In some institutions, we noted a tendency for libraries to see the targeting of researchers as a marketing issue, drawing attention to training events, courses and content already provided for undergraduates. It is important to stress, however, that what works for undergraduates may be unsuitable for researchers

- 2.2.9 Lack of co-ordination is particularly important in a context where many different units are active in providing information-related training. Thus there is commonly a range of centrally-provided offerings (often organised by Heads of Graduate Schools or equivalents) including packages on research information, workshops on constructing theses and on writing for wider audiences, conference survival guides, and time management aspects of information handling. Patterns of provision vary: one graduate training unit started out with a series of two-hour sessions for first-year researchers, then moved to a set of events spread over two years, and is now planning to offer a succession of three- to four-day training blocks aimed at each cohort.
- 2.2.10 Subject-specific training is frequently organised by schools, departments or faculties, but again there is nothing approaching uniformity of provision. Where faculties also offer generic researcher training, the pattern of delivery is likely to vary substantially across the institution; and practical operational issues may make it difficult for library and other information specialists to become fully involved. Several libraries spoke about difficulties of this kind, and said that they are aware of information-related training activity elsewhere in the institution which does not involve specialist library or information staff. Given the general problem of lack of communication, there is probably more information-related training taking place in HEIs than libraries (or, indeed, any other units) are aware of.
- 2.2.11 As we noted above, a small but growing number of HEIs, including three of those we used as case studies for this project, are seeking to integrate their library-based offerings within a central research training programme. At one university all postgraduates have to follow a research training programme each year; at another the library offerings are part of the student personal learning and study hub; and at a third there is a one-day mandatory literature searching and reference management course (team-taught, repeated nine times a year, and evaluated by the Research Training Committee using a combination of qualitative and quantitative measures).
- 2.2.12 A small but noteworthy group of HEIs are going further, with concerted efforts to move towards a more integrated approach to information training for researchers. In terms of content, skills and competencies, such co-ordinated approaches are likely to cover not only information seeking, but other areas such as management of research information, critical appraisal of research findings, and even report writing. In terms of delivery, they involve joint planning (by central training teams, independent trainers, faculty staff, other specialists such as ICT and library staff); joint design and preparation of e-learning materials; and joint assessment of outcomes. In implementing such approaches, substantial work may be needed to achieve common understanding of roles and respective contributions (as well as of training strategies). It may be necessary to challenge entrenched views such as that expressed by one programme organiser:
- “It is difficult to contribute if you are not an active researcher. You need to be able to show how you would apply (for example RefWorks) in your own research. It’s about understanding the ramifications of research.”*
- 2.2.13 Nevertheless, we found widespread support for the development of this kind of collaboration, not least on the grounds that it *“avoids duplication of effort, helps achieve financial sustainability for the training, and encourages adherence to common standards.”* Such approaches are still rare in practice, however, and in many institutions provision remains unco-ordinated. These shortcomings are a matter of concern not just to library and information specialists. The Vitae team reports that concerns about working in silos, apparently oblivious of what others are seeking to provide, extend well beyond libraries to staff development units, careers services, faculty or discipline-based providers and IT services. They report that several institutions have been seeking over the past three-four years to secure strategic

approaches, with some setting up cross-boundary committees, including libraries, to address these issues.

- 2.2.14 Much depends on personal relationships between information and other training providers, and between them and key members of academic staff. The role of subject librarians in creating strong collaborative links is key in a number of HEIs, although such links are typically made with individual academics rather than with schools or departments. This is particularly noticeable in institutions where the formal mechanisms for co-ordination and providing resources for training are weak or non-existent. Organisational relationships can help, as in one institution where the central training manager reports to the head of library and information services. Elsewhere, more personal relationships and experiences may be critical, as in another institution where the central training manager benefited greatly from library support when doing her PhD, and is determined that other researchers should get similar benefits.
- 2.2.15 The staff we spoke to are aware of the need to develop and exploit such relationships. At present, it seems that library and other staff who are involved in delivering training often do not know about what is being covered in information methodologies and tools by trainers elsewhere in the institution; and there is the risk of false assumptions leading to gaps and duplication in coverage, or to conflicts in approaches.

### Recommendation

***Institutional and faculty research committees, as well as central training units and libraries, should make concerted efforts to***

- ***improve communications between all those concerned in the planning, organisation and delivery of training***
- ***develop more integrated approaches and strategies that are aligned with their research strategies, avoid both gaps and duplication, and secure the delivery of coherent programmes that meet the needs of researchers***

## 2.3 Resources

### UK Funding Sources

- 2.3.1 The pattern of funding provided to HEIs to support research in general and training of researchers in particular is complex. Public funds for research come from two main sources
- the Funding Councils for England (HEFCE), Scotland (SFC) and Wales (HEFCW), and the Department for Employment and Learning in Northern Ireland (DELNI)
  - the seven Research Councils (AHRC, BBSRC, EPSRC, ESRC, MRC, NERC, and STFC)<sup>10</sup>
- 2.3.2 Institutions also draw on a number of other public, charitable and commercial sources to fund research projects and research degree programmes. Some proportion of the funds from all these sources may be used by HEIs to support training activities.

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<sup>10</sup> The Research Councils estimate that they support about 25% of the 56,000 PhD students in UK HEIs.

- 2.3.3 Within the funds provided by the Funding Councils, specific elements are calculated by reference to the length and costs of research degree programmes, in order to meet at least a proportion of the costs of supervising home and EU research students<sup>11</sup>. From time to time individual Research Councils and other funders may make specific funding and other resources available to support the development of researcher skills. Awareness of such initiatives tends to be higher among researchers in the relevant disciplines, however, than among trainers and information specialists in HEIs. We learned, for example, about ESRC initiatives to develop researcher skills through our conversations with researchers rather than with trainers and librarians.
- 2.3.4 The major direct funding initiative to support the training of researchers is through the programme inspired by the Roberts Report, which currently provides £20m a year distributed by RCUK on behalf of the Research Councils. Funds are allocated directly to universities, and a link to current researcher numbers means that there is wide range in levels of funding between institutions (ranging from £400,000 to £7,000 in 2007-08 amongst the universities which responded to our survey). Some universities choose to add from other sources more or less substantial funding for researcher training as part of a strategy to enhance their research standing.

### HEI Resources

- 2.3.5 Generic research information training in HEIs is currently provided through varying combinations of central or faculty training teams, library staff and others including ICT or institutional repository staff. In addition, many faculties and departments organise their own subject-specific training which may include aspects of information skills and which frequently involves contributions from library staff.
- 2.3.6 The central and faculty-based generic skills training is usually supported by “Roberts money”. Funding is usually made available within the university through a competitive bidding process. But even though most HE libraries are engaging more heavily than hitherto in information training and support for researchers, and are planning to develop this work further<sup>12</sup>, we found only nine that were currently receiving any Roberts money<sup>13</sup>. Work supported by such funding includes the development of an information skills training programme, support for the activities of liaison librarians, library staff training, and in a few cases, employment of a staff member dedicated to support for researchers.
- 2.3.7 More often, however, the additional work being undertaken by libraries is without any addition to funding and resources. A typical comment is that “*There’s no internal exchange funding. The librarians do most of the information workshops, but that’s because we want to*”. This points to the lack both of integration with central university funding mechanisms and of strategic direction at institutional level.
- 2.3.8 It remains the case, moreover, that while a few libraries wish to change the balance between their support for teaching and for research, most still put their main emphasis in information training work on support for undergraduates. This may be partly because little of the training offered by library staff attracts Roberts funding. And at a UK level, Vitae organisers currently perceive that there is relatively little involvement by libraries in their programme. Hence it is important, if libraries are to develop their work in this area, that they should have more strategic engagement with the Vitae

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<sup>11</sup> The total provided by HEFCE in 2006-07 amounted to c £188m. Allocations within that total are made by reference to numbers of eligible students and are cost-weighted according to subject area.

<sup>12</sup> 70% of the library respondents to our survey indicated that they intend to increase provision in the coming year.

<sup>13</sup> This finding mirrors that of a survey conducted recently by the CURL (now RLUK) Research Support Task Force, which identified eight libraries in receipt of Roberts funds, with four posts supported from that source. *CURL Research Support Task Force Report on survey of skills training for researchers* CURL 2007.

Programme. In that context, however, we should note that significant amounts of current library-based provision (e.g. workshops on particular e-tools) probably do not qualify for Roberts funding under the rules as they stand at present, since that funding is intended to foster generic rather than subject-specific training, or training in the use of particular tools. This is an important issue for libraries and institutions to clarify with RCUK and the Vitae programme.

- 2.3.9 As they seek to develop their training provision, many library services are reaching (or, in some cases, have gone beyond) the limits of what they can provide on a sustainable basis. Further development will depend on decisions on resources at UK, institutional, or library level. Either the institution, perhaps making some use of Roberts funding, will provide additional staff and resources to the library to support such work; or the library will have to redirect staff and other resources currently focused on provision for undergraduates. In both cases, there will be additional demands on libraries, and there is likely to be a need for substantial retraining of library staff.
- 2.3.10 There is also a need to improve lines of communication and awareness of the support in kind that is available from the UKGrad programme. Few libraries are actively engaged with the Vitae regional hubs, or aware of its database of practice. In one university, none of the library and information staff we spoke to were even aware of the role of Vitae or of how the university is linked to the regional hub. In another HEI, however, one of our respondents had shown great ingenuity in teaming up with local “Roberts-rich” universities to develop joint training activities. These contrasting cases again point to the need and the potential for better communication and co-ordination of training provision.

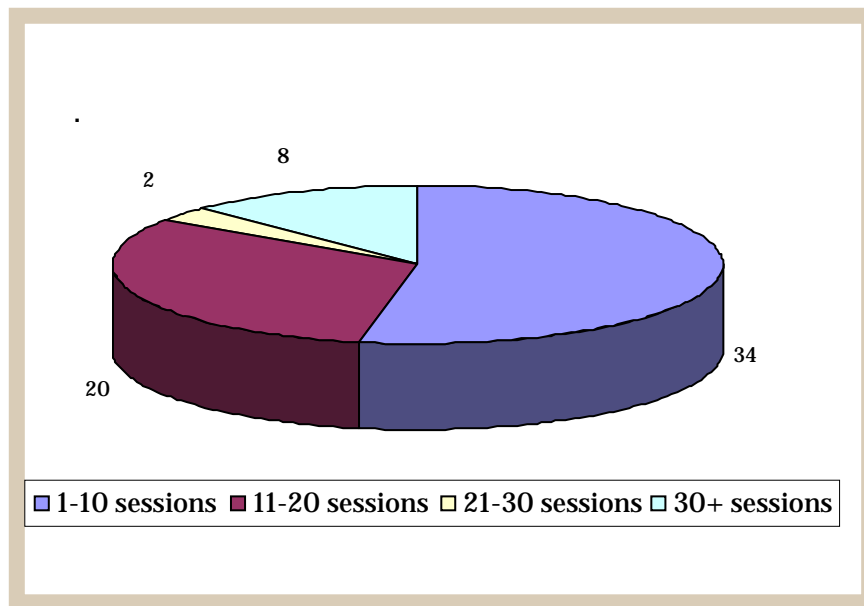
### **Recommendation**

***SCONUL and RLUK should seek to clarify with RCUK the kinds of information-related training that are eligible for support from “Roberts money”.***

## 2.4 *Scale, organisation and content of library provision*

### **Scale and organisation**

- 2.4.1 The volume of training activity by staff in the 81 HEIs that are currently offering any training to researchers varies substantially as Figure 1 shows:

Figure 1. Number of training sessions provided in 2007-08<sup>14</sup>

- 2.4.2** A few university libraries offer very substantial research information training programmes, sometimes with more than a hundred sessions offered annually. There is some variation in current provision between types of university, with 70% of “pre-1992” institutions and 30% of the “post 1992” universities offering 11 or more sessions a year, reflecting the difference in numbers and proportions of researchers in these institutions. The average duration of these sessions varies between one and four hours with the mode (24 responses) reported as two hours.
- 2.4.3** This is, of course, by no means the whole picture. In addition to the provision outlined above, many library staff (especially subject specialists) engage with faculties or departments, offering contributions to their training for researchers; and most offer one-to-one training, by appointment or on a drop-in basis, focused in specific research areas, again through subject librarians.
- 2.4.4** The nature and organisation of library training provision varies in accordance with institutional structures, cultures and strategies, and the place of the library within them. We offer a detailed typology in Annex D. In larger institutions in particular there are opportunities for varied forms of provision. In one university, a library manager organises a substantial central programme of library-based training to complement generic academic provision organised by a research staff forum. In addition, there is a range of training organised by a subject librarian, including an ‘information fair’ for graduate researchers and a similar event for supervisors and postdoctoral researchers, again complementing a departmental programme organised by the Director of Graduate Studies.

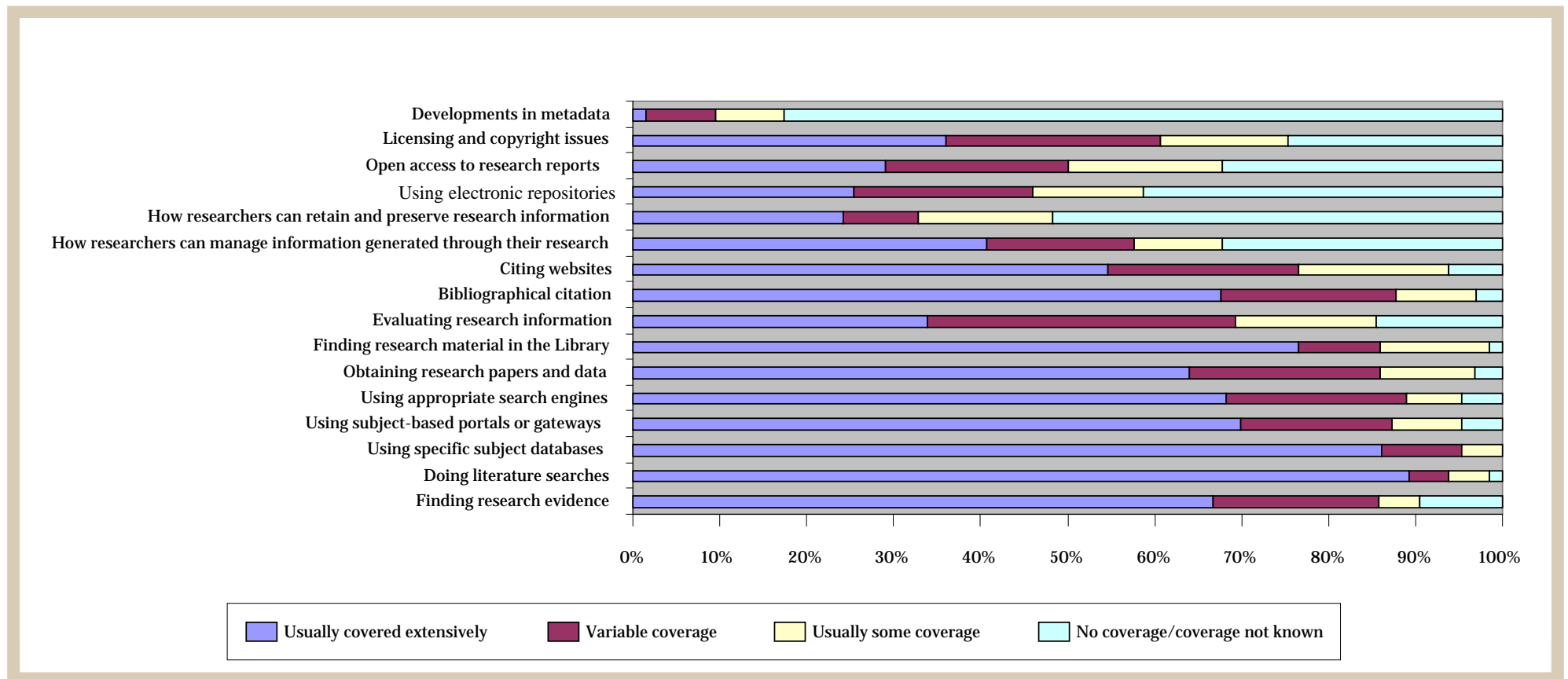
### Content

- 2.4.5** In general, as noted earlier in this report, libraries tend to focus in their training on information seeking, citation of sources, and the portfolio of services that the library

<sup>14</sup> Training sessions are here defined as formal inputs to groups of researchers provided as a free-standing event or as part of a larger event. Seventeen respondents could not estimate the number of sessions provided, usually because of cancellation or re-running of sessions and because some of these were arranged at short notice and provided by one of a number of liaison librarians for ‘their’ faculties or departments without central co-ordination.

itself provides. There is much less coverage of issues such as evaluating, organising, managing, transforming or communicating information, or of key underpinning issues such as copyright and open access. But libraries in individual institutions are covering in addition a wide range of other issues and topics. The picture of library activity that emerged from our survey is shown in Figure 2.

Figure 2. Topics covered in the training events which library staff provide or contribute to.



- 2.4.6 The focus on resource discovery and related issues is clear, while information management issues receive much less coverage. Only a few topics additional to those shown in Figure 2 were reported, of which avoiding plagiarism was most frequently mentioned (by 7 respondents).
- 2.4.7 Much of the training provided in relation to information seeking, citation and evaluating research information is focused on specific electronic tools such as *EndNote* or *RefWorks*; and many libraries do not yet address the more generic and conceptual skills and understanding in these areas, except by seeking to generalise good searching behaviour when introducing particular tools. But there is a widespread recognition that narrow approaches to skills and competencies are no longer adequate, since “*How researchers use information has changed a lot; we haven’t caught up.*” Hence there is a wish among many librarians to widen the scope of their training provision.
- 2.4.8 There is widespread agreement that *information management* is a key issue where there is great scope for enhancing researchers’ skills, and where many libraries believe that they have expertise to offer. Currently, the feeling is that the library contribution is neither systematic nor consistent, and that there is scope for enhancing that contribution in collaboration with specialists in the relevant research area.
- 2.4.9 Similarly, some libraries are contributing to training in *systematic assessment of research findings*. Such contributions are facilitated in those institutions where systematic review teams are located in the library.
- 2.4.10 As has been noted in earlier RIN reports, *metadata* is a term unknown to many researchers, and to others it is a source of confusion<sup>15</sup>. Once they understand what the concept encompasses, however, most researchers see its importance and relevance to their work; and they see the management of metadata as an important role for librarians<sup>16</sup>. One of the interesting results from our survey is that training in matters relating to metadata features so little in the training currently provided by libraries.
- 2.4.11 *Developments in scholarly communications*, including e-journals, institutional repositories, the growth of open access journals, and the use of Web 2.0 services, have been an important focus for libraries over the past five years; but as has been well-reported elsewhere, their efforts to educate and inform researchers about these developments have had at best mixed success. The extent to which such issues are systematically covered in formal training seems to depend largely upon the state of institutional progress in setting up repositories.
- 2.4.12 Where libraries are responsible for major *special collections and archives* relevant for research in the arts, humanities and social sciences, specialist librarians and archivists may be closely associated with training programmes, and their specialist expertise seen as particularly valuable in gaining the confidence of researchers.

### Good Practice

Through this project we identified, with the help of key informants and participants in workshops, a number of examples of good practice which are listed in Annex C. We also identified a number of general principles of good practice, including

- clear objectives and marketing to target audiences

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<sup>15</sup> *To Share or not to Share: Publication and Quality Assurance of Research Data Outputs*. RIN 2008, available at <http://www.rin.ac.uk/files/Data%20publication%20report.%20main%20-%20final.pdf>.

<sup>16</sup> *Researchers’ Use of Academic Libraries and their Services*. RIN and CURL 2007, available at <http://www.rin.ac.uk/files/libraries-report-2007.pdf>.

- regular communication with researchers, and exploitation of researchers' peer-to-peer networks
- collaboration between library staff and researchers
- inclusion of library-based events in central staff development programmes
- continuance where practicable of one-to-one support
- training provision that goes beyond information seeking to address broader information issues

2.4.13 The Vitae Database of Practice provides a mechanism for the sharing of good practice which is currently little used by libraries (although there has been a marginal increase in library-related postings as a result of this study). We believe that it could be exploited much more, not only to share good practice, but to help raise the profile of library-based information training.

### **Recommendation**

***HE libraries should seek to engage with their Vitae regional hub, and make use of the Vitae Database of Practice to share information about good practice.***

## *2.5 Approaches to training*

- 2.5.1 The training provided by central units in HEIs focuses on generic skills and tends to be based on approaches (sometimes termed constructivist), which lay heavy emphasis on learners' understanding, recognising and building upon their prior knowledge, skills and expertise, as well as on experiential learning. By contrast, most of the training provided by library staff focuses on demonstrating specific information sources and tools; and it tends to adopt an approach characterised by conveying information rather than constructing learning experiences.
- 2.5.2 These different kinds of approach may be entirely appropriate for different kinds of training, with different aims in view. Presentation and demonstration may be appropriate in order to get trainees to recall and produce a series of steps in using a tool or source; but a more experiential approach may be more appropriate if the aim is to enable them to derive meaning and understanding from their training, and to support them in problem-solving. Whichever approach is adopted, it must be recognised that there are limits to how much support can be provided to researchers in developing their skills within a (typically two-hour) information training slot within a larger programme.
- 2.5.3 Several university library teams provide substantially more intensive training, sometimes as an integral part of the central training programme, and a few are moving towards a blended learning approach, combining aspects of e-learning and face-to-face training. Such approaches have proved popular with undergraduates, and may prove an effective model for provision in institutions with high numbers of researchers, providing a managed and structured approach with a combination of self-paced and social learning. They may be particularly valuable in addressing the needs of postgraduate and postdoctoral researchers from overseas who lack good English language and computer skills and who may have different cultural attitudes towards such issues as copying and plagiarism.

- 2.5.4 At a more detailed and local level, subject librarians in most universities provide one-to-one or small group subject-focused support to researchers by appointment or on an ad hoc basis. Such support can provide flexible and highly-focused intervention at the time of need, especially where the total researcher numbers are relatively low. However, this level of support is likely to be impracticable on a larger scale, resulting in sporadic engagement and difficulties in effective monitoring.
- 2.5.5 The key point is that if training is to be properly co-ordinated and presented as an integrated programme, these different approaches and kinds of provision need to be planned; for it is important that all those involved in providing training should embrace its values, particularly where the training is mandatory for researchers and may be assessed. Thus if, for example, library staff were to increase their current levels of provision and engagement with other trainers, they may need for them training themselves in different approaches to learning and teaching, and to remodel their current approaches to “information literacy”. In one of the examples of good practice that we noted, at Glasgow Caledonian University, it is notable that library staff had been involved in ‘training the trainers’ sessions organised by the Vitae team.
- 2.5.6 In pointing to the need for co-ordination and integration, however, we are not suggesting an undifferentiated approach to information training for all researchers. Indeed, too heavy an emphasis on generic skills training, as apparently encouraged by the Vitae Programme, is at least open to question. There is now strong research evidence to suggest that information skills and competencies for researchers – as for undergraduates - are best developed within a specific subject context<sup>17</sup>. It is also important to recognise that researchers themselves are the experts in their field, and that they usually develop not only a considerable knowledge of the sources relevant to their work, but also sophisticated ways of finding, assessing and managing the information they need.
- 2.5.7 Subject-specific information training developed and delivered in partnership between library and information specialists on the one hand, and expert academic staff on the other has frequently proved a highly-effective model. Such partnership models can be challenging to develop, not least because of the barriers of perception and language to which we have already referred; but they can be of great value in enhancing subject-specific skills, and are likely to be as effective as more generic approaches in developing researchers’ understanding of broader information issues, as well as their problem-solving abilities. It is critically important also, as we note elsewhere in this report, that training is targeted appropriately at researchers at different stages of their research careers: what is provided for postgraduates may not be appropriate for established academic staff<sup>18</sup>.

## Recommendations

***Librarians and other information specialists, academic staff, and central training units should join in developing and delivering training programmes which recognise the strengths of different training approaches and techniques, and seek both to enhance understanding of the information landscape and to develop skills in the use of specific tools.***

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<sup>17</sup> e.g., Limberg, L. What matters: shaping meaningful learning through teaching information literacy. Paper presented at *Information: interactions and impact conference*, Aberdeen June 2007.

<sup>18</sup> See the typology of researchers set out in M Bent et al. “Information Literacy in a Researcher’s Learning Life: the Seven Ages of Research”, *New Review of Information Networking*, vol 13 (2), pp 81-99, 2007.

***All training programmes should be developed and where appropriate delivered in partnership with relevant members of academic staff, and should so far as possible take account of and exploit***

- ***the experience and expertise already acquired by trainees***
- ***disciplinary differences and cultures***
- ***differences in researchers' current roles and levels of experience***

## 2.6 *Exploitation of e-learning possibilities*

2.6.1 There is a readily-discernible trend towards greater use of e-learning technologies for the training of researchers. On the part of libraries, this is driven in part by their experience in developing e-learning packages for undergraduates, and in part by difficulties in identifying and communicating with researchers. There is little evidence as yet about the effectiveness of e-learning approaches; but they may be particularly useful in meeting the needs of categories of researchers (including contract research staff and part-time researchers) whom libraries find difficult to locate, contact, and engage. It is important, however, that e-learning developments are based on sound teaching and learning principles; and some comments we heard suggest potential pitfalls in constructing e-learning programmes.

- Development of e-learning materials is expensive and time-consuming. There may be scope to share programmes developed in other institutions, but these will inevitably reflect local priorities, cultures and practices and may have to be substantially adapted
- 'Real tasks with real consequences' are required to engage users with e-learning materials, but it is difficult to design tasks that will be relevant to researchers across a wide range of subjects and disciplines
- It is important to achieve the right level of communication for researchers at different stages in their careers (postgraduate, postdoctoral and beyond) especially if materials are being adapted from earlier undergraduate versions
- The emphasis should be on researchers' views of the guidance and support they need rather than library staff perceptions
- There is a need regularly to update and review e-learning materials (since minor adjustments cannot be made in the same way that face-to-face engagement allows)
- Only a minority of users will find an 'e-learning-only' approach effective, because such programmes may not appeal to the preferred learning styles of particular researchers

### **Recommendation**

***Libraries and other training providers should seek to exploit the potential of e-learning and blended learning approaches to training; but they should be cautious in seeking to avoid the many potential pitfalls in the way of constructing effective e-learning programmes.***

## 2.7 Meeting the needs of researchers

### The researcher demand for training

- 2.7.1 Evidence on researcher demand for generic skills training or help in using electronic tools is inconclusive so far: some libraries report heavy take up of open events and positive feedback about their sessions; others report disappointing uptake or that “no huge demand has been expressed”. These comments should be set in the context where most library service respondents do not have systematic evidence on levels of take-up (see Section 2.9 below).
- 2.7.2 An important question here is whether the researcher view of the situation should be preferred to the providers’ view. A recent report<sup>19</sup> showed that many researchers think that they know all they need to know about how to discover and locate the information resources they need; few librarians seem to share this view. Moreover, it appears that many universities assume that the academic staff they appoint have all the information-related skills and knowledge that they need, although this view is coming under increasing scrutiny.

### Needs assessment

- 2.7.3 Do researchers need training and, if so, do they perceive the need? Much of the current drive to enhance information training provision has been stimulated by local Roberts initiatives rather than systematic attempts to identify training needs. Indeed, there appears to be little training needs assessment work being conducted in relation to training in information methodologies and tools. This may be partly because of practical difficulties in identifying and communicating with researchers. In one university, the solution has entailed a member of staff visiting the administrative centre each term and extracting information about postgraduate and postdoctoral researchers; in another, relevant information is regularly circulated by the Graduate School. Unsurprisingly, the current hazy approach to needs assessment tends to translate into training that addresses what providers hope will be useful.
- 2.7.4 Another difficulty is the widespread perception that some research supervisors do not recognise the need for the types of training on offer to ‘their’ postgraduate students. Some supervisors are viewed by library and information specialists as a ‘lost generation’, overtaken by advances in research information, and not fully aware of the implications of some of these changes. Hence such supervisors are not well placed to guide the next generation of researchers towards appropriate help.
- 2.7.5 Whatever the practical difficulties, however, it is important that more systematic efforts are made to identify the researchers who need training, and what their training needs are. The current hazy approach tends to lead to training that addresses what providers hope will be useful, rather than a targeted approach to developing the skills, competencies and understanding that researchers need.

### Self-assessment of training needs

- 2.7.6 It is generally agreed that “surveys of users are of limited value and are unlikely to report specific training needs”. As part of the current project, three structured focus groups were conducted in different universities. By this means, the project team was able to show that the current areas of relative weakness in information-related skills

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<sup>19</sup> Researchers and Discovery Services: behaviour, perceptions and needs. Available at <http://www.rin.ac.uk/files/Report%20-%20final.pdf>.

and knowledge diagnosed by newer researchers (with an average of two years' experience at postgraduate or postdoctoral level) were more similar to those of the most experienced group (with average experience of 12 years) than might have been expected. Predictably, the newer researchers identified their weaker areas as '*how to write research reports and journal articles*' and '*how to prepare and submit conference papers*'. But both groups of researchers reported themselves relatively weak in use of digital repositories, in licensing and copyright issues, in developments in metadata, and in use of wikis and blogs in their research (although not all of them regarded such things as relevant to their work). Interestingly, across both groups, licensing and copyright issues were ranked sixth and electronic repositories eighth in importance out of twenty topics, suggesting two possible areas for further training.

2.7.7 Much more work of this kind, combined with fuller assessments of the relative importance of each of these and other information skills and competences would be required to constitute a proper needs assessment. But the approach adopted in these events demonstrates that it is possible to engage with researchers in exploring their needs and how they can be met.

2.7.8 A complementary approach is being tested in small but growing number of universities that are

*"rolling out an e-portfolio involving development of competencies and self-assessment of progress against objective criteria. This will reflect UK Grad competencies and the SQA Credit Framework in Scotland".*

2.7.9 If such efforts are successful, they should provide a user-driven basis for more targeted training provision which might complement the mediated focus group approach outlined above.

### **Recommendation**

***Libraries and other training providers should adopt more systematic and innovative approaches to identifying and assessing the needs of researchers to enhance their information-related skills and competencies.***

## 2.8 *Capacity and capabilities in libraries*

2.8.1 We have already pointed in Section 2.4 to a possible need for library staff to receive training themselves in different approaches to learning and teaching, and to remodel their approaches to information training. There has been an important shift in the roles of liaison or subject librarians in recent years, from a primarily curatorial role, through a subject-expert stance to a learning support role. One librarian told us that "*some liaison librarians would like to provide more intensive content for researchers, but lack the confidence to do so*". If that confidence gap is to be overcome, and library provision is to be enhanced and extended to new areas, libraries will need to ensure, through appropriate recruitment and through training and staff development that they sufficient expertise and capabilities in areas including

- new approaches to learning and teaching
- knowledge and understanding of the research process in a range of subject areas
- ICT and information management

- 2.8.2 We noted a view among some librarians, however, that “enhancing of staff skills runs counter to the recent tendency towards de-skilling of staff”. We also noted some operational difficulties that make some libraries put staff training in the “important but difficult” category, because of problems in withdrawing front-line staff from busy service points and other tasks in order to participate in training.

### **Recommendation**

***Libraries should review the capacity and the capabilities of their staff in providing, in partnership with academics and others, high-quality training that will be valued by researchers; and they should avoid any temptation to oversell what they can offer.***

## 2.9 *Take-up, value and impact of training*

- 2.9.1 Our survey showed little evidence of systematic evaluation of information training provision. Although most library-based respondents could provide estimates of average attendance at courses and events, only a minority kept precise attendance records. This lack of data is exacerbated because few respondents had full and up-to-date lists of current and new researchers at postgraduate and higher levels. Hence most respondents did not know how many researchers had graced their events or the proportion of the total researcher community that this represented. Securing even reasonably accurate figures on attendance is difficult because of
- overlapping participation: researchers often attend a series of events (and a few attend events on a specific topic more than once)
  - the range of sessions organised by different members of library teams
  - variable rates of attendance (sign-up levels are higher than actual attendance)
  - events that are open to, but not confined to, researchers
  - different views on what constitutes relevant training events
  - uncertainty about what training on information matters is being offered by the whole range of university providers
- 2.9.2 For all these reasons, it is not possible at present to provide reliable information about take-up of training. Nevertheless, there is a strong view that large numbers of researchers who would benefit from training in research information are slipping through the net.
- 2.9.3 There are similar gaps in approaches to assessing the impact on researchers information skills and competencies for those who do attend training sessions. Little seems to be done beyond post-event questionnaires: only three libraries reported that they administer pre- and post-event questionnaires in an attempt to identify changes brought about through their training, while one library (which was part of the LIRG/SCONUL Impact initiative) has undertaken systematic observation of researchers as part of their evaluation process.
- 2.9.4 Efforts towards original approaches to evaluation might best be described as variations on a theme. In one university, an experimental ‘audience participation’ method of assessment, using the kind of audience voting technology used in some television

programmes, has been used and found at least partially effective. In another, student evaluations are published in a programme review, which is available to supervisors, sponsors and employers.

- 2.9.5 In assessing the current position, librarians who attended a project workshop concluded that “Ensuring the effectiveness of training provided by libraries is very important, but we don’t do it.” They recognise a need for ‘longitudinal hard evaluation’ to ensure that training is relevant, and for “a shift from event evaluation to what seems to help researchers to develop skills that they need and to find ways for the Library to contribute to the research process.”
- 2.9.6 It is important to note, however, that the Vitae programme has identified similar gaps in approaches to the evaluation of skills training more generally. Monitoring of the effectiveness of training still relies heavily on post-event questionnaires, annual graduate surveys, and extracting incidental comments from annual faculty reports. One research training manager is planning to conduct ‘pre- and post-Roberts’ case studies; and the RCUK Research Careers and Diversity Unit is starting to conduct longitudinal tracking of PhD students over a ten year period. But the Vitae team and others recognise that there is a long way to go before effective evaluation systems are in place.
- 2.9.7 One of the principal outcomes from a Roberts Policy Forum held in Rugby in January 2005 was the establishment of a working party (under the aegis of the then UKGrad) to find ways in which the sector can evaluate the effectiveness of skills development in research degree programmes. The resulting “Rugby Team”<sup>20</sup> of trainers and others focuses on the evaluation of the effectiveness of skills development in research degree programmes and amongst early career researchers. To date, library and information specialists have not engaged with the work of this group. We believe it is important that key representative bodies such as RLUK and SCONUL (perhaps using the experience gained through its Value and Impact Measurement Programme (VAMP)), as well as the RIN, should engage with the work of the Rugby Team, now being taken forward by Vitae.

### Recommendation

***Libraries and information specialists should engage with the Vitae team that is exploring innovative approaches to monitoring and evaluating the effectiveness of the training they provide.***

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<sup>20</sup> [www.grad.ac.uk/cms/ShowPage/Home\\_page/Policy/National\\_policy/Rugby\\_Team/](http://www.grad.ac.uk/cms/ShowPage/Home_page/Policy/National_policy/Rugby_Team/)

## Annex A: Objectives and scope

The project proposal set out a two part programme to meet a very wide range of objectives specified in the call for tenders document. These objectives were summarised in the project proposal as to:

### *A Gather information on:*

- A.1 The range of current and recent UK programmes, initiatives, policies and guidance and the role of the organisations responsible.
- A.2 The level of investment and resourcing in the UK for these programmes and initiatives.
- A.3 Within these programmes and initiatives, the nature, extent, spread and take-up of training in research information methodologies and tools.
- A.4 The role and responsibility of the organisations.
- A.5 Any other survey or review, in the UK and internationally, that has provided evidence on researcher training in research information methodologies and tools.

### *B Identify and assess evidence on:*

- B.1 Current good practice on researcher training in research information methodology and tools in the UK and internationally.
- B.2 The demand for such training from researchers.
- B.3 The perception that researchers, their employers and funders have of such training, and their view of its relative importance within the overall framework of training and career development.
- B.4 The impact, usefulness and effectiveness of such training, and the extent to which it addresses the ambition on training opportunities set out in the Roberts Report.

### *C To consider and present conclusions relating to:*

- C.1 The value and impact of researcher training in research information methodology and tools in the UK.
- C.2 The extent to which the needs of the research community are being met by current UK activity in this area.
- C.3 The effectiveness of the various organisations and initiatives in identifying such need and delivering relevant training.
- C.4 The appropriateness and scope for extending or developing UK programmes, initiatives, policies and guidance relating to such training.

## Annex B: Project methodology

### *B.1 Website and literature search*

**B.1.1** A literature search was initially conducted using the following keywords: ‘research training’, ‘researcher training’, ‘information methodology’, ‘postgraduate training’ and ‘postdoctoral training’. The results of these searches, which yielded very few relevant results, are available [www.rin.ac.uk/training-research-info](http://www.rin.ac.uk/training-research-info) . To supplement these searches the keywords were expanded to include ‘information literacy’ which provided further relevant hits – results again shown at [www.rin.ac.uk/training-research-info](http://www.rin.ac.uk/training-research-info) . The databases used for searches included academic research databases, such as is used in ISI Web of Knowledge, as well as the popular Google Scholar and Google searches.

**B.1.2** The searches provided few results focused solely on postgraduate and postdoctoral training, with much of the research covering the broader area of student training, often focused on undergraduate training when referring to university-based education. There are a few examples of groups conducting investigations into issues such as “information literacy” in higher education. The most prominent of these include: SCOUNL’s work on information skills in higher education; and Manchester Metropolitan University’s Joint Information Systems Committee project that includes a focus on the information skills set of staff in higher education. Again the focus in such projects on postgraduate and postdoctoral training is limited.

A summary of the website and literature search results can be seen on the RIN website at [www.rin.ac.uk/training-research-info](http://www.rin.ac.uk/training-research-info) .

**B.1.3** Basic information about the Roberts Initiative funding was provided at the outset by the RCUK Research Careers and Diversity Unit.

### *B.2 Survey of HE Libraries*

**B.2.1** A brief e-mail questionnaire was sent in April 2007 to all UK universities and other selected HE libraries, asking whether they were organising or supporting relevant training of research staff or were planning to do so in the next academic year.

**B.2.2** The initial response (by completing the e-questionnaire signposted from the email) was weak, so a follow-up e-mail was dispatched in early May, concentrating on identifying potential respondents. Telephone interviews were then set up with these nominees to collect the data for the survey. Although this approach was much more time-consuming (the additional costs were absorbed by the project team) it resulted in a substantially better response rate. Direct contact was then made with participants at the LILAC Conference from HEIs where no response had yet been received and this provided further volunteers for interview. Finally, all other university libraries which had not responded were contacted by telephone, but with limited effect.

**B.2.3** One benefit of the transfer to an interview approach is that it was possible to get a more rounded picture of current and planned training provision, including the balance of content covered and the general approach to the training, during the course of these interviews.

**B.2.4** 73 responses were received from universities and a further 17 from other HEIs supporting sufficient postgraduate or postdoctoral researchers to make library-based training support likely.

### *B.3 Key informant interviews*

- B.3.1** Eight telephone interviews were conducted with key informants managing HE libraries. A parallel set of interviews was arranged with another key informant in the same HEI (usually the Head of Postgraduate School or equivalent) in order to find out how and how well research training is being provided and where training on research information methodologies and tools fits into the picture.
- B.3.2** A series of telephone interviews were sought with representatives of national organisations with roles in securing and developing training for postgraduate and postdoctoral researchers. The two most important of these interviews, with UK Grad and the RCUK Research Careers and Diversity Unit, were completed and interviews were also conducted with spokespeople from the National Postgraduate Committee and UK HERD (with further useful information about the roles of other organisations obtained from Websites and publications) but the response from other organisations was disappointing.

### *B.4 Case studies*

- B.4.1** Eight case studies were conducted in a range of universities in England and Scotland (Glasgow Caledonian, Hertfordshire, Imperial, Manchester, Newcastle, Oxford, Reading and Surrey) between October 2007 and January 2008 to explore some of the complexities in managing and providing training and e-support and the overlap between library-based and other institutional training provision. These entailed visits to the institutions, interviews with key respondents (usually including the Head of Research Training or equivalent) and sometimes, observation of training sessions. A summary of the case studies is included at [www.rin.ac.uk/training-research-info](http://www.rin.ac.uk/training-research-info).

### *B.5 Formative workshop*

- B.5.1** A formative workshop was organised in November 2007 and was attended by 33 LIS participants from 27 HEIs in England, Scotland and Wales. Two case studies, as well as headline findings from the research to date were presented, and participants identified good practice and gave structured feedback in response to issues arising from the research.

### *B.6 Structured focus groups*

- B.6.1** Three structured focus groups for researchers were held in December 2007 and January 2008 to collect views on the relative importance of this area of training and of current provision. Participants were asked to prioritise aspects of research information, to assess their own ability in these areas, both now and at the commencement of their research careers, as well as to evaluate the training they had received. These focus groups served to model one form of mediated self-assessment to demonstrate that needs analysis can be undertaken in this arena.

### *B.7 Strategic teleconference*

- B.7.1** A strategic teleconference was held between representatives of the SCONUL Information Literacy Group, the Director of the UK Grad Programme and members of the project team to discuss strategic issues arising from the research and suggested responses.

## Annex C: Examples of Good Practice

C.1 With the help of key informants and participants in the project workshop, we identified a number of examples good practice in relation to research information training and support as well as good overall training provision for researchers. This summary represents practice that was reported as good by respondents from at least three institutions (and sometimes by several).

C.2 Some of the good practice examples above are library service-generated (such as RESIN, the Kingston mind maps, the Speed PhD and PILOT), one emanates from elsewhere in the institution (the Skills Forge), but interestingly several emerged through collaboration between academic, library staff and others (e.g. the Information Fair and the witness sessions).

### ■ Electronic guidance

- The University of York Skills Forge is an interactive Website designed to help research staff to develop their professional skills and approach to research. The focus is on planning and reflection, and there is a self-assessment process linked to the Joint Research Councils' Skills Statement
- Newcastle University RESIN (Research Information at Newcastle) library website, redesigned to make finding information much easier, and to allow campus users to personalise, using 'MyLibrary'
- The Consortium of Irish University and Research Libraries Gateways to Information, offering support for researchers – places to go and profiles of support services for researchers

### ■ Interactive introductions to information resources

The Oxford University History Faculty offers introductions at two levels:

- an *Information Fair*, which is seen as a substitute 'gateway to information resources' replacing less successful introductory sessions for Masters and Doctoral students. The first event offered 17 stalls and was attended by 70 students (of a total of 180, 50 of whom were new that year). Stalls were staffed by library and IT staff, tutors and graduate students (whose stall was judged the most successful) and 15 minute inputs on various research information topics
- coffee mornings for supervisors and postdoctoral researchers, run on similar lines

Both events are backed by an extensive programme of WISER (workshops in information skills and electronic resources) events.

### ■ Using sound training principles

- Kingston University invites researchers to construct mind maps of their research, ensuring that information seeking sessions start from what the researchers bring to the training
- Glasgow Caledonian University witness sessions, based on an interview between a librarian and an experienced researcher on how to do a

literature review. This approach provides scope for the participants to empathise with the researcher and to ask her questions. The idea arose out of a UK Grad 'training the trainers' event attended by academic staff and library staff and based on a constructivist approach to learning

- **Focusing on supervisor training**

The University of Northampton offers research degree supervisor training centrally through its Knowledge Exchange, which is described as a development hub providing a one-stop shop for research and knowledge transfer services

- **On-line tutorials for postgraduates**

The University of Manchester *Speed PhD* – part of a “bespoke research training programme for postgraduates” known as SAGE, developed by the School of Arts, Histories and Cultures. The *Speed PhD* was described by an enthusiast as “The whole PhD experience in two days! It was like being on fast-forwarding DVD”

- **On-line tutorials for Postdoctoral staff**

Imperial College, London – *PILOT* (Post doc information literacy online tutorial) funded by a grant from the Staff Development Unit and developed from the undergraduate OLIVIA programme, but with a focus on individual rather than group learning, and a shift of emphasis to research topics)

- **Marketing of training for researchers**

Leeds University Library has produced a “bloody brilliant” introductory booklet and “names its courses to attract people – ‘Intelligent Searching Agents’ instead of ‘Internet Searching’”.

- **Administration**

Cardiff University Library activity is well-integrated into the Graduate Centre and Human Resources training programmes. Lists of new research students are gleaned from the central records each term and sent to the subject librarians

## **Annex D: Four models of HE Library training and support for researchers**

### *1.1 Cross-institution and departmental workshop interventions*

- 1.1.1 Substantial contribution to generic courses on 'research methods' or 'introduction to research' programmes<sup>21</sup>: these programmes are usually organised by the Graduate Centre or Learning and Teaching Unit (or equivalent) and may be 'mandatory'. Library staff typically contribute sessions on information seeking and use.
- 1.1.2 Sign-up or drop-in workshops on aspects of information seeking and use and/or using specific electronic tools (usually open to all, with voluntary attendance) often offered as part of a centrally-organised programme of events for researchers.
- 1.1.3 One to one and small group provision negotiated and provided by subject librarians.
- 1.1.4 A growing element of e-guidance and e-support for the provision, which may be accessed and used independently.

### *1.2 Faculty/school and departmental workshop interventions*

- 1.2.1 As A.1, but contributing strategically to the generic courses on 'research methods' (etc.) organised at the school or large faculty level; again the main provision may be mandatory.

## *2 Institution-wide e-provision*

- 2.1 Institution-wide Website or VCLE-based e-provision for researchers: self-paced e-lessons covering key areas of information seeking and use
  - may be generic (e.g., University of Hertfordshire) or broadly subject-specific (e.g., Imperial)
  - usually modifying and extending provision that was originally designed for undergraduates
- 2.2 Sign-up or drop-in workshops on specific aspects of information seeking and use or on using particular electronic tools (e.g., EndNote; RefWorks).

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<sup>21</sup> or Research Supervisor development programmes, etc.

### *3.1 Library-based provision*

- 3.1.1 Some or a substantial amount of training offered through information seeking and use workshops organised by the library. Possibly provide some contribution to generic 'introduction to research' programmes organised by Graduate Centre or Learning and Teaching Unit (or equivalent) – usually an introduction to the library and its services. (May instead be a short introduction to information seeking.)
- 3.1.2 Tailored contributions on aspects of information seeking and use or on using specific information tools delivered by subject librarians within most departments and faculties.
- 3.1.3 One to one support provided by subject librarians (usually by appointment).
- 3.1.4 Usually some Website materials aimed at researchers on specific information seeking and use topics.

### *3.2 Limited library-based provision*

- 3.2.1 Introductory presentations on the library service, offered as library induction or as part of a general introduction to research organised by Graduate Centre/ Learning and Teaching Unit (or equivalent).
- 3.2.2 One to one sessions (by appointment or ad hoc).
- 3.2.3 Occasional taught sessions on aspects of information seeking in various courses, by invitation.
- 3.2.4 May go alongside substantial amounts of library support for undergraduates in relation to information seeking and use.

## *4 Variant provision in smaller institutions / institutions with few researchers*

- 4.1 Sessions offered on specific aspects of information-seeking and use, arranged and delivered to meet needs identified by supervisors, researchers or library staff.
- 4.2 Other sessions may be organised for undergraduates but open to graduates.

## About the Research Information Network

### Who we are

The Research Information Network focuses on understanding and promoting the information needs of researchers. We produce evidence-based research into information and data issues that affect researchers and information management professionals.

### What we work on

We provide policy, guidance and support, focusing on the current environment in information research and looking at future trends. Our work focuses on five key themes: [search and discovery](#), [access and use of information services](#), [scholarly communications](#), [digital content and e-research](#), [collaborative collection management and storage](#).

### Who we work with

Our partners include the higher education funding bodies, the Research Councils, national libraries, researchers, information management professionals, universities and publishers. Our network extends across the United Kingdom and we also have links overseas, to give a global perspective to our work.

### How we work

Our [advisory board](#) and [consultative groups](#) provide strategic direction and user perspectives to ensure we engage our stakeholders fully in our work. Our collaborative approach means our key stakeholders are represented in all the work we do and that our agenda is driven by them.

### How we communicate

As an independent voice, we can create debates that lead to real change. We use our reports and other publications, events and workshops, blogs, networks and the media to communicate our ideas. All our [publications](#) can be downloaded free from our website at [www.rin.ac.uk](http://www.rin.ac.uk)

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