Information Literacy Training for Postgraduate and Postdoctoral Researchers: a National Survey and its Implications

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Abstract

Although higher education (HE) libraries have given increasing attention to information literacy, the information literacy requirements of researchers have been relatively neglected. This paper reports on the findings of a national survey on the training of postgraduate and postdoctoral researchers in the UK, focusing on the information literacy training provided by academic libraries, in the context of generic research skills training programmes provided by HE institutions. Significant differences between librarian-led and centrally provided training are highlighted as well as variation in the breadth of information literacy training provided. Key issues in training provision in this area are identified, and options for developing information literacy support for researchers are discussed.

Introduction

Over the past thirty years there has been a gradual reshaping and refocusing of interest in themes that were successively represented in the United Kingdom as library user education (mainly in schools and higher education (HE; Fox 1982), information skills for children in schools (Marland 1981) and later for students in further education (Markless et al. 1992), and information literacy for pupils in schools and more recently for students in HE (Bawden 2001; Streatfield & Markless 2007).

The past decade has seen a growth in UK interest in the training of postgraduate and postdoctoral researchers, stimulated by government initiatives such as the Roberts review SET for Success (Roberts 2002), which examined the general picture of postgraduate and postdoctoral researcher skills training and made recommendations for a more systematic approach. Soon afterwards the Quality Assurance Agency [1] Code of Practice (2004) set out standards for postgraduate research programmes. The response to the Roberts work was substantial: importantly it led to a Joint Skills Statement [2] of an agreed set of skills that the Research Councils expected to be developed during a doctorate. These skills have been important in driving the research training programme. The range of skills is comprehensive, but includes several areas that would fall within many definitions of information literacy.

Response to the Roberts report also included provision of additional funding for HE Institutions (HEIs) to support researcher training (1994 Group [3] 2009), and intervention at national and regional level by Vitae [4] (the UK national body set up to champion the personal, professional and career development of doctoral researchers and research staff) to encourage innovative training. Typically, HEIs responded to the additional funding by organising generic research skills training programmes for researchers through a central research training unit or at faculty level.
However, although some attention has been paid to researchers’ use of academic libraries (Research Information Network [5] and Consortium of Research Libraries [6] 2007), the information literacy needs of postgraduate and postdoctoral researchers and of HE academic staff in their research role have been relatively neglected until recently. Exceptions are the cluster of papers in the 1990s drawing attention to the effects of inadequate resourcing of IT training of research students, especially in medicine (e.g. Kinn 1996; Goldbergkahn & Healy 1997), which gradually evolved into calls for better and more integrated training for research students in IT skills (Stirling et al. 2000; Murphy et al. 2004), to counter perceived inadequacies in students’ skills (Henricks & Healy 2002; Tsai & Tsai 2003), or even students having received no formal information technology training at all (Clamp et al. 2007). More recently, Gomersall (2007) questioned the current system of information support for postgraduates and more established researchers. Generally, there appeared to be an inherent assumption that most people who had reached the postgraduate student level and beyond would have few issues, concerns and needs for training in relation to the information they required for their research.

Paying attention to the information requirements of postgraduate and postdoctoral researchers is important in the UK because much greater emphasis was placed on research by HE institutions in response to the Research Assessment Exercise [7]. This made systematic national research performance comparisons which were then linked to future provision of research funding. One result of this focus is an increasingly competitive HE market intent upon attracting postgraduate students.

There is also growing anecdotal evidence of rapid changes to the information-related behaviour of researchers, brought about by enhanced access to information through the Internet, with researchers in some academic disciplines relying heavily on the Internet to keep up-to-date with current research and to share their own research findings prior to (or instead of) formal academic publication, whilst others use the Internet primarily to access e-journals.

The national survey

The findings of a recent UK national study of the training of researchers in ‘information research methodologies and tools’ are reported here. This research, commissioned by the Research Information Network, was conducted in 2007-8 by the AIMTech Research Group at Leeds University Business School and Information Management Associates. The original research report (Research Information Network, 2008) focused on the national research information policy issues raised by the research. This paper for the first time draws conclusions and suggests action areas for researchers and other people interested in information literacy support, as well as for university library managers seeking to meet the demand from researchers.

The national survey was part of a cluster of research activities instigated by the team to find out more about HE training and other support for postgraduate and postdoctoral researchers. These also encompassed a website and literature search to identify research activity and current practice on information literacy support for researchers and related themes, strategic interviews with eight university library service managers and eight academic staff involved in providing for researchers and three focus groups for academic researchers. These findings and the results of the survey were fed into a formative workshop attended by 33 library and information service managers (representing 27 HEIs in England, Scotland and Wales), which in turn led to a strategic teleconference involving representatives of the Society of College, National and University Libraries (SCONUL) Information Literacy Group, Vitae, and the project team. That work was followed up by eight case studies looking at issues in providing library-based training for researchers from the library and academic standpoints. This report concentrates on the survey but draws upon evidence from other parts of the project at various points.

The survey was conducted in two parts. A UK-wide mini-survey was conducted by e-mail to locate HEIs that were active in researcher training in information literacy or who were planning to become involved. All but three of the 79 universities responding to the e-mail reported that they were active in this area (one of these – a pre-1992 university – was planning to do so in the next academic year; the other two said that they had too few researchers to provide specific training for this group); 11 other HEIs also reported being involved with researcher training. The positive respondents were invited to complete an electronic survey or, if they preferred,
to participate in a telephone interview which covered the same ground but provided the opportunity to probe more and build up a fuller picture of activities and issues.

The training provided

The volume of activity varied substantially as Table 1 shows.

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.

A few university libraries offered very substantial research information training programmes, sometimes with more than a hundred sessions offered annually. There is some variation in provision between types of university, with 70% of ‘old’ institutions and 30% of the ‘post 1992’ universities offering 11 or more sessions a year, reflecting the difference in proportion of postgraduate and postdoctoral researchers in these institutions. The average duration of these sessions varied between one and four hours with the mode (24 responses) reported as two hours. These time estimates excludes a university that offered a six-hour session and another that provided two events each of two days duration; also excluded are a number of institutions where the respondent could not make a sensible average estimate of duration because sessions varied widely in length.) Almost 70% of the 81 respondents to the full survey planned to increase their provision in the next financial year.

Twenty-six respondents were already substantially involved in providing on-line guidance, tutorials and other forms of support such as video clips to aid researchers and others were planning to do so. Whether such support can meet all the needs for skills development remains an open question.

We reported earlier that the typical university response to the additional funding was to organise generic research skills training sessions for researchers. These were often delivered centrally through ‘research methods’ or introduction to research’ programmes. These programmes were usually organised by the Graduate Centre or Learning and Teaching Unit (or equivalent) and might be ‘mandatory’. Some universities preferred to organise this type of training through faculties. One question for the survey was whether HE libraries were involved in delivering this training or whether they preferred to offer their own training sessions independently.

The 44 interviews conducted to complete the questionnaires, as well as the strategic interviews with librarians and the case studies, enabled us to look at this picture. Five broad approaches to HE Library provision for postgraduate and postdoctoral researchers were identified from the responses. These broad approaches are summarised in Table 2.

Three university libraries reported that they were moving towards a blended learning approach, combining the main elements of A1 and B below.

Content of library training sessions

Respondents were asked about the content of all their formal training provision and the picture that emerged is shown in Table 3.

Only a few additional topics were reported, of which avoiding plagiarism was most frequently mentioned (by seven respondents).

Table 3 shows that, in general, libraries concentrated their training interventions on traditional ‘library topics’ such as information seeking, citing sources and introducing researchers to the library services on offer rather than on issues in managing research information, such as evaluating the information obtained, management of information by the researchers, or issues underpinning researcher use of information, such as copyright and open access. This point is made clearer if the topics that were most and least frequently reported as being given extensive coverage are compared with those that were most frequently given some or no coverage. The topics usually covered extensively are shown in de-
scending order in Table 3. However, if the topics that receive little or no coverage and those for which there is 'usually some coverage' are combined to show the weaker coverage, the picture that emerges is presented in Table 4.

Similarly, when we explored with interview respondents the meaning of the original project brief, which was to investigate 'research information methodologies and tools', library service respondents tended to invoke the concept of information literacy, but with most of the emphasis on information seeking, rather than, for example, systematic evaluation of research reports or management by researchers of their own research information.

### Table 2: HE library approaches to training

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Number of responses</th>
</tr>
</thead>
</table>
| A1       | Cross-institution and departmental workshop interventions  
- Library staff typically contributed sessions on information seeking and use to generic skills programmes  
- Supplemented by 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 as part of the generic skills programmes  
- One to one and small group provision usually negotiated and provided by subject librarians  
- A growing element of e-guidance and e-support for the provision, which might be accessed and used independently | 15 |
| A2       | Faculty/School and departmental workshop interventions  
- 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 might be mandatory | 16 |
| B        | Institution-wide e-provision  
- Institution-wide Website or VCLE-based e-provision for researchers: self-paced e-lessons covering key areas of information seeking and use  
- Provision might be generic or broadly subject-specific, usually modifying and extending provision that was originally designed for undergraduates  
- Backed up by sign-up or drop-in workshops on specific aspects of information seeking and use or on using particular electronic tools (e.g. EndNote; RefWorks) | 5 |
| C1       | Library-based provision  
- Training offered through information seeking and use workshops organised by the library Possibly provide some contribution to generic training programmes organised centrally – usually an introduction to the library and its services (or a short introduction to information seeking)  
- Tailored contributions on aspects of information seeking and use or on using specific information tools delivered by subject librarians within departments and faculties  
- Backed by one to one support provided by subject librarians (usually by appointment)Usually some Website materials aimed at researchers on specific information seeking and use topics | 6 |
| C2       | Limited library-based provision  
- Introductory presentations on the library service, offered as library induction or as part of a general introduction to research organised centrally  
- One to one sessions (by appointment or ad hoc)Occasional taught sessions on aspects of information seeking in various courses, by invitation  
- May go alongside substantial amounts of library support for undergraduates in relation to information seeking and use | 6 |
| D        | Variant provision in smaller institutions/institutions with few Researchers  
- Sessions offered on specific aspects of information-seeking and use, arranged and delivered to meet needs identified by supervisors, researchers or library staff. Other sessions may be organised for undergraduates but open to graduates | 3 |
This coverage contrasts markedly with the headline skills of information literacy proposed by the Society of College, National and University Libraries in 1999 and since promoted to UK universities as the Seven pillars of information literacy (SCONUL 1999). These headline skills are the ability to:

- Recognise a need for information;
- Distinguish ways in which the information ‘gap’ may be addressed;
- Construct strategies for locating information;
- Locate and access information;
- Compare and evaluate information obtained from different sources;
- Organise, apply and communicate information to others in ways appropriate …; and
- Synthesise and build upon existing information, contributing to the creation of new knowledge.

The contrast is even stronger if other contributions to defining and interpreting information literacy are taken into account, where the emphasis is on making sense of information and its transformation into knowledge (Bruce 1997; Kuhlthau et al. 2007; Markless and Streatfield 2007), especially in the Web 2.0 environment (Markless and Streatfield 2009), or on “changing the relationship between a person and the world” (Limberg, 2008).

The interviews conducted to complete the questionnaires, as well as the strategic interviews with librarians, provided an opportunity to explore these responses more fully. These made it clear that much of the training provided in relation to information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Usually covered extensively</th>
<th>Variable coverage</th>
<th>Usually some coverage</th>
<th>Little/no coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing literature searches</td>
<td>61</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Using specific subject databases</td>
<td>59</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Finding research material in library</td>
<td>52</td>
<td>7</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Bibliographical citation</td>
<td>47</td>
<td>14</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Using subject-based portals/Gateways</td>
<td>47</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Using appropriate search engines</td>
<td>46</td>
<td>15</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Finding research evidence</td>
<td>45</td>
<td>13</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Obtaining research papers/data</td>
<td>44</td>
<td>15</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Citing websites</td>
<td>38</td>
<td>15</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Management of researcher-generated information</td>
<td>26</td>
<td>11</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>Licensing and copyright issues</td>
<td>23</td>
<td>16</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Evaluating research information</td>
<td>22</td>
<td>23</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Open access to research reports</td>
<td>19</td>
<td>14</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Using electronic repositories</td>
<td>18</td>
<td>14</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Retention and preservation of researcher-generated information</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Developments in metadata</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>56</td>
</tr>
</tbody>
</table>

Table 4: Topics receiving weaker coverage (descending order):

<table>
<thead>
<tr>
<th>Topic</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluating research information*</td>
<td>21</td>
</tr>
<tr>
<td>Licensing and copyright issues</td>
<td>25</td>
</tr>
<tr>
<td>Management of researcher-generated information*</td>
<td>28</td>
</tr>
<tr>
<td>Open access to research reports</td>
<td>34</td>
</tr>
<tr>
<td>Using electronic repositories</td>
<td>36</td>
</tr>
<tr>
<td>Retention and preservation of researcher-generated information*</td>
<td>43</td>
</tr>
<tr>
<td>Developments in metadata</td>
<td>61</td>
</tr>
</tbody>
</table>

*Our emphases.
seeking, citation and evaluating research information is focused on specific electronic tools such as EndNote or RefWorks and that many respondents do not yet address the more generic skills in these areas with researchers (except by seeking to generalise good searching behaviour when introducing particular tools).

However, several respondents recognised a need to engage more closely with critical appraisal of research evidence and management of research information and are “thinking about what to do with the information when you get it – management of personally-held information.” This shift is part of a larger recognition that “How researchers use information has changed a lot; we haven’t caught up.”

There were, of course, further variations on forms of provision, particularly in larger institutions. One of the case study universities had a library manager, designated as a User Education Co-ordinator, who organised a substantial central programme of library-based training to complement generic academic provision organised by a research staff forum. However, they also had a range of training organised by a Subject Librarian, supported by Subject Consultants, including an ‘information fair’ for graduate researchers and a similar event for research supervisors and postdoctoral researchers, again complementing a departmental programme organised by the Director of Graduate Studies.

Other training provided

The library service provision usually complemented a range of centrally-provided offerings (organised by Heads of Graduate Schools or equivalents) ranging from packages on research information and workshops on constructing theses to writing for wider audiences, and from conference survival guides to time management aspects of information handling. Patterns of provision varied: one graduate training unit started out with a series of two-hour sessions concentrated on first year researchers, then moved to a set of events spread over two years and was planning to offer a succession of three- to four-day training blocks aimed at each cohort.

More specifically subject-based training was frequently organised by schools, departments or faculties, but again there was nothing approaching uniformity of provision across the universities. Faculties might also offer generic researcher training. Where this training happened, the pattern of delivery was likely to vary substantially between faculties: for example, in one university postgraduate training was offered by all faculties, but with Art and Design opting for an event over two weekends, Social Sciences running weekly in-house sessions and Science preferring one day sessions sporadically throughout the year. Relatively low-level practical operational issues of this kind could affect the ability of library staff to get involved and might limit how they were involved. In at least one case study the maximum training numbers and hence the type of interaction that resulted was defined by the size of room and number of IT terminals available.

Twenty-seven library respondents reported that they knew of activity aimed at postgraduate and postdoctoral researchers going on elsewhere in the institution, which did not involve library staff but which addressed aspects of information seeking and use. Some of this activity centred on the development of institutional repositories; other training was organised independently by departments or schools. Several other respondents speculated that such activity might be happening without their knowledge.

The nature of the training

The library contribution to training usually seemed to be more focused on telling people about information sources and on specific electronic tools than the remainder of the training organised for researchers, which usually focused on generic skills and appeared to be more experiential in character. Attention to conveying information to researchers during training sessions rather than to constructing learning experiences was also indicated by the fact that only 45% of responding libraries had prescribed formal learning outcomes for their training sessions.

In general, much of the central training provision on offer was based on a constructivist approach to learning, with heavy emphasis placed on learners’ understanding, recognising and building upon their prior knowledge, skills and expertise, as well as on experiential learning. By contrast, (and with a few notable exceptions) most of the library staff training adopted a behavioural approach, characterised by teacher control and consisting of a combination of presentation and demonstration, taking people through heavily structured sequences of small steps and feedback, with progression triggered by success
with the current step. This process was usually supported by worksheets and computer-based tasks.

It should be emphasised that a behavioural approach to teaching may be appropriate, if the aim is to get students to recall and reproduce a series of steps, but not if the aim is to get people to derive meaning and understanding from the training and to support them in problem-solving by appropriate use of information.

It is obviously important for library staff to engage with significant institutional training initiatives aimed at researchers and to embrace the values of that training, especially when this training is mandatory for researchers and may be assessed. However, the apparent heavy emphasis on generic skills training encouraged by the Vitae Programme is at least open to question. There is now strong research evidence to suggest that information literacy skills are best developed within the researcher’s subject context (Limberg 2008). It is obviously easier and more efficient to intervene at a generic over-arching level but the efficacy of this type of training is yet to be demonstrated.

There is also a limit to how much support can be provided to researchers in developing their skills within a (typically two-hour) information seeking and use slot within a larger programme. Several university library teams undertake substantially more intensive training, usually 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.

**Strategies for library training**

Only twenty universities (including fourteen ‘old’ institutions) had a relevant information literacy strategy document to guide the work and only ten had a strategy document covering information service provision to postgraduate and postdoctoral students. However, some respondents noted that strategy documents were not greatly used in their organisation and others reported references to the library research support role in the university teaching and learning strategy (with two universities having a specific information literacy target for work with researchers).

The documentation collected from university respondents on information literacy strategies encompassing postgraduate and postdoctoral students, as well as strategies for providing them with information services, suggest that there is growing consistency in the local interpretation of these policies.

A key determinant of the broad approach to training adopted appeared to be the organisational structure (itself reflecting the organisational culture) in the institution. For example, one case study university had recently undergone major reorganisation, including restructuring of Departments into Schools (a process which had not yet settled down) and the standing down of a number of previous committees, including the library committee. Not surprisingly, there was no overall strategy for information skills training and no recognition at the university level of how the library could contribute to research and information skills training. Central training was organised by a Graduate Education Team; library involvement was down to the initiative of individual librarians.

By contrast, a second case study university had a university-wide information skills strategy in place and was systematically extending its e-learning provision (originally developed for undergraduates) by adapting and adding to the materials for its researchers. A member of the library staff had designated responsibility for supporting researchers across the university.

Library staffs were clearly seen as useful partners in many institutions and respondent comments suggested that their contributions tended to be well received by researchers. Even so, with a few honourable exceptions, there appeared to be little fully-co-ordinated provision of training (i.e., involving joint planning of training, team teaching with other academic staff and joint assessment of outcomes, as well as joint design of e-learning support) even when library staff contributed to programmes organised by other academic staff. Library staff contributions to joint courses tended to be independently organised and delivered segments of the programme rather than a fully-integrated, team-taught and collaboratively assessed activity (i.e., library staff, lecturers and IT staff tended to deliver distinct elements).

Library staff who were involved in delivery of training sometimes did not appear to know what was being covered in the area of research information by trainers elsewhere in the institution. More generally, there was usually a lack of any coherent overview of who should be trained or who had been trained in aspects of research skills. Unsurprisingly, in these
circumstances, most HEIs had adopted a piecemeal approach to information literacy, with some research information training (especially relating to information seeking) being offered by library staff, in more or less accord with the central training programmes that usually address some other research information skills (especially those relating to report writing). It was often unclear whether and where other aspects of research information, such as critical appraisal of research evidence and management of research information were covered, although library staff tended to assume that these areas were addressed in central programmes or in faculty or department-based training. Several HEIs were making concerted efforts to rationalize training provision for researchers and a few were going further in adopting joint planning and delivery of training and joint design of e-learning support.

Evaluation of library-based training

The survey showed a near total absence of evaluation of the training that was provided by library staff beyond participants being asked to complete post-event ‘reactionnaires’. Only three libraries reported that they administer pre- and post-intervention questionnaires in an attempt to identify changes brought about through their training and one library had undertaken systematic observation of researchers as part of their evaluation process.

The project workshop group that looked at impact evaluation similarly concluded that “Ensuring the effectiveness of training provided by libraries is very important, but we don’t do it.” They (and the other participants) recognised a need for ‘longitudinal hard evaluation’ to ensure that training was relevant. These comments were part of a growing recognition that “a shift is needed from event evaluation towards what seems to help researchers to develop skills that they need and to find ways for the library to contribute to the research process.”

Where efforts were made to be original in evaluation terms, the results might best be described as variations on a theme. For example, in one case study university, an experimental ‘audience participation’ method of assessment, using the kind of audience voting technology employed in some television programmes, had been used and found at least partially effective. (Inadequate evaluation is not solely an issue for libraries. Despite the current work of the Vitae impact evaluation team, monitoring of effectiveness at the university trainer level still appears to rely heavily on ‘reactionnaires,’ annual graduate surveys and extracting comments from annual faculty reports.)

Training needs assessment

Respondents reported little specific needs assessment work. This may be partly because of the practical problem (reported by several people) of identifying and communicating with researchers (unless they are in ‘official’ teams). In one university, the solution entailed a member of staff visiting the administrative centre each term and extracting information about postgraduate and postdoctoral researchers; in another, this information was regularly circulated by the Graduate School. Particular difficulties were perceived with connecting to part-time and solo researchers and, in terms of the types of support provided, engaging with graduate students from abroad, who were likely to have had substantially different prior experience of research information methods and using information tools.

Another major issue was the perception that some research supervisors do not recognise the need for the types of training on offer to ‘their’ postgraduate students. A view was advanced of older supervisors as a ‘lost generation’ who were being overtaken by advances in research information fuelled by ICT developments, and who were not fully aware of the implications of some of these changes, so that they were not well placed to guide the next generation of researchers towards appropriate help.

Three structured focus groups were conducted in different universities in the course of the project. By this means, the project team was able to show that the current areas of relative weakness in information-related skills and knowledge diagnosed by the newer researchers involved was broadly similar to those of the most experienced group. 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. Both groups of researchers reported themselves relatively weak in use of electronic repositories in their work, in licensing and copyright issues, in developments in metadata and in use of wikis and blogs in their research, if they regarded these as relevant to their research, which not all did.
Much more work of this kind, combined with fuller researcher assessments of the relative importance of each of these and other research information skills and competences would be required to constitute a proper needs assessment in relation to research information knowledge and skills.

Training of library trainers

There was widespread recognition of the need for a stronger and more coherent focus on staff training to support researcher-training efforts. The participants at the project workshop recognised the need for greater understanding by library staff of learning and of inter-personal skills, and enhanced transferable IT skills. They felt that library teams did not sufficiently understand research and that, in turn, academic staff did not understand “e-journals and scholarly communication”, suggesting areas for mutual exploration. More generally, a group of project workshop participants asked “Do our training the trainers courses really equip us to teach using constructivist approaches?” and all the participants accepted the view that “all staff training focused on research information should include impact evaluation.”

Other approaches to researcher support

Library respondents regularly emphasized that formal training sessions were only part of the service provided for researchers. Other elements of provision included on-line guidance and tutorials, development of institutional repositories, ad hoc one-to-one and small group training or information support and support based on special collections.

Summary of issues

What are the main issues emerging from this work?

- although nearly all the university libraries responding to the survey offered some training at postgraduate level they tended to concentrate on a relatively narrow subset of information skills;
- in addition, many libraries engaged with faculties or departments, offering contributions to their researcher training and most offered one-to-one training by appointment or on a drop-in basis to researchers, focused in their research areas, via subject librarians;
- on the other hand, training organisers responsible for postgraduate or postdoctoral provision tended to emphasise generic information skills;
- there were marked differences in the levels and types of support offered to researchers by university libraries – as shown in the four models of provision;
- there were also fundamental differences in the form of training offered – the library contribution to training was usually more didactic than the remainder of the training organised for researchers, which was usually based on a constructivist view of learning;
- although there are obvious advantages in library staff linking up with central training providers, there is a real issue about the efficacy of the generic skills training usually provided. There is strong research evidence to suggest that information literacy skills are best developed within the researcher’s subject context;
- more specifically subject-based training was frequently organised by schools, departments or faculties, but again there was nothing approaching uniformity of provision across the universities;
- there was little evidence of systematic management of this training: relatively few libraries had an information literacy strategy document to guide the work with researchers and fewer had a strategy document covering information service provision to postgraduate and postdoctoral students;
- respondents reported little impact evaluation beyond use of the limited post-event ‘reactionnaire’; and
- there was little evidence of systematic needs assessment of researchers in relation to information literacies.

Ways forward – some options

Presentation of these issues at the recent i3: information: interactions and impact conference in Aberdeen [8] suggested that some at least of these points were echoing the situation elsewhere in Europe. Respondents to our survey and other forms of consultation were clear that HE institutions and their
libraries have a range of choices about what to offer when seeking to enhance services for their researchers. Service managers will have to choose ways forward knowing that failure to effectively support researchers will result in marginalisation of the library and its services and in loss of ground by the institution in the highly competitive HE research area. Some of the difficult choices are to:

- adopt a training-based approach or concentrate on other means of support (such as embedding library staff in research teams);
- concentrate training content on traditional areas of expertise, notably information seeking, (but with some likelihood that advances in information technologies will render decision-making about information seeking largely redundant), or focus on other dimensions (such as managing research information and systematic appraisal of research);
- offer effective library-based training, or seek to integrate skills training management, delivery and assessment at university-level, or concentrate on department or faculty-based training; and
- concentrate on direct support to researchers (including training), or move towards e-learning, or move towards blended learning.

In each case, significant change of emphasis or type of service will only be possible if substantially more financial and staff resources can be secured or, more realistically, if substantial finance and resources can be diverted from other areas of library service provision.

If service managers elect to invest in development of effective training for researchers, they will have to contend with some of the underlying issues signalled above. In particular, they will have to get to grips with:

- Constructivist learning – secure staff training to encourage them to relinquish automatic reliance on didactic presentation in favour of experiential learning linked to prescribed learning outcomes;
- Co-ordinated planning and delivery of training, including but not limited to centrally organised provision;
- In the UK, taking advantage of national and regional training initiatives for researchers (Vitae and its Regional Hubs) – connect the library to these and other relevant networks;
- Ensuring the effectiveness of training offered by libraries – engage in needs assessment, evaluation, collaborative teaching, library staff training (again, but not confined to those delivering the training – marketing and support are also important); and
- Address inadequate resources – make the link to meeting university research targets (there is a rapidly reached finite limit to how much additional training staff can take on without additional resources).

The last issue, transfer of skills, deserves greater attention in any paper discussing information literacy. Much information literacy training is predicated on the notion that skills transfer to other problems or situations is unproblematic. But, as Perkins and Salomon (1992,) made clear:

Transfer is all the more important in that it cannot be taken for granted. Abundant evidence shows that very often the hoped-for transfer from learning experiences does not occur.

Or, as Grotzer (2005, 5) warned:

Even when students are able to demonstrate mastery of certain skills, they are unlikely to transfer these skills to new areas of learning on their own.

There are established ways of encouraging skills transfer that can be applied to information literacy training activities – but that is the theme for another paper!

Notes (All sites were viewed in October 2009.)

1. Quality Assurance Agency for Higher Education – www.qaa.ac.uk
2. The Joint Skills Statement has been translated into a Skills Audit by Vitae. This is available at: www.vitae.ac.uk/researchers/1603/Skills audit.html
3. 1994 Group of eighteen research-intensive UK universities – www.1994group.ac.uk
4. Vitae – www.vitae.ac.uk
5. Research Information Network – www.rin.ac.uk
7. The results of the 2008 Research Assessment Exercise can be found at – www.rae.ac.uk/pubs/2008/01
8. Training sessions are here defined as formal inputs to groups of researchers provided as a freestanding event or as part of a larger event.

References


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